REVIVING THE ROOTS: A QUALITATIVE PHENOMENOLOGICAL STUDY OF BLACK WOMEN IN AGRICULTURE AND THE INFLUENCE OF POST-SECONDARY EDUCATION

by

Alvianna Woodard-Davis

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

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Abstract

The purpose of this qualitative phenomenological study was to explore the perceptions and lived experiences of twenty Black women in the southern United States and the influence of post-secondary education on agricultural science. Two theories guided this study, Maslow's hierarchy of needs and Crenshaw's intersectionality theory. When considering the five levels of Maslow's hierarchy, coupled with Black women's marginality as identified by the intersectionality theory, the results from the research helped to define better the relationship between Black women in agriculture and the referenced theories. Criterion sampling was used to identify ten experienced Black female producers and ten agriculture students to determine the trend. Data were collected through semi-structured interviews, a focus group, and photo narratives. The setting was primarily in the southern United States. Resources from the U. S. Department of Agriculture were also reviewed to understand the perceived interest in sustainable agriculture nationally. Data analysis of this transcendental phenomenological research included the Epoché/bracketing and phenomenological reduction to allow for dissecting the experiences rather than relying on intuition. Five major themes were identified from the analysis of the participant experiences. The major themes were love and belonging, education, safety, physiological and esteem needs. Additional research is required to continue exploring the impact that education and training, coupled with fair and equitable opportunities, can have in helping Black women producers to transform communities through food security and diverse business opportunities.

Keywords: Black female, agriculture, intersectionality, food poverty, phenomenology

Copyright Page

Dedication

This dissertation is dedicated in memory of my beloved mother and father, Robert and Juanita Woodard, who instilled in me the importance of education and taught me moral lessons through both their words and actions.

To the memory of my dear brother Luster Boyd, who always believed in my abilities and allowed me to be his scrappy little farm hand.

To my children, Camryn and William, your unfailing love and support were afforded to me throughout this process, and I could not have achieved this goal without your support. I pray that this achievement serves as an example to enthusiastically pursue God's will in all areas of your lives. I hope you know how much I love each of you. You bring me joy. May this work bring you honor.

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First, I acknowledge God, my Way Maker, Miracle Worker, Promise Keeper, and Light in the Darkness. Your guidance has kept me humble, opened my eyes to the need for my service, and placed my feet on this doctoral journey. You bring joy in my hope, patience in my affliction, and faith in my prayer. It is Your voice that will continue to guide me as Your servant.

I am grateful to my committee chair, Dr. Sharon Michael-Chadwell, and committee member, Dr. Susan Quindag. Thank you for accepting the task of serving on my committee. I sincerely appreciate your guidance, feedback, and prayers.

I want to acknowledge Sherel Riley, my prayer partner, AKA sister, Links sister, cousin, and friend. I will forever cherish our Wednesday morning motivations. Thank you to Indira Lewis and Sonya Brothers for your enduring support and encouragement through this process. I could not have done this without you and our occasional visits to Moody Rooster for meals fresh from the farm.

To my sisters, Barbara, Cynthia, Carolyn, Linda, and Sue, God knew exactly what he was doing by placing me as your baby sister. Continue to be the light for the next generation.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

Food and Agriculture Organization (FAO)

Historical Black College and University (HBCU)

National Agricultural Statistics Service (NASS)

National Black Feminist Organization (NBFO)

National Institute of Food and Agriculture (NIFA)

Socially Disadvantaged Farmers and Ranchers (SDFR)

U. S. Department of Agriculture (USDA)

Women's Empowerment in Agriculture Index (WEAI)

CHAPTER ONE: INTRODUCTION

Overview

Agriculture has been the hallmark of human civilization since the beginning of time. While there is a significant amount of research examining the gender and racial sectors in agriculture, notably, there is a gap in the literature specifically relevant to the complexities associated with Black women. Chapter One provides the framework for researching the underrepresentation of Black women in agriculture while also considering the impact of post-secondary education. The background offers a historical, social, and theoretical context of the most relevant literature upon which the research is founded. The research was conducted in the southern region of the United States. The chapter concluded with the research questions being introduced and definitions pertinent to the study defined.

Background

Agriculture is defined as the art and science of cultivating the soil, producing crops, raising livestock, and, in varying degrees, the preparation and marketing of the plant and animal products for use (National Geographic, 2023). The Rural Development Economic Development Division expounded on this definition by identifying agriculture through four main categories: (1) livestock and crop production; (2) processing which includes hauling, packaging, and marketing commodities; (3) agricultural economics, which involves the utilization of resources aimed at maximizing output while minimizing cost; and (4) agricultural engineering which deals with the use of maintenance, tools, machinery, and structure.

Advanced knowledge of these activities is essential for transforming the production of animals and plants into human consumption. The National Institute of Food and Agriculture (NIFA) has been created as part of the United States Department of Agriculture (USDA) to

stimulate and fund research and technological innovations needed to enhance agriculture's productivity and environmental sustainability (U. S. Department of Agriculture, National Institute of Food and Agriculture, 2021b). Since their inception in 1862, the U.S. land grant colleges, 19 historically Black universities, have trained the nation's and the world's agriculturists (Bastedo et al., 2016). With the increased opportunities for growth and science development, the vocational aspect of post-secondary education has expanded to offer degree programs in agricultural sciences, agricultural economics, agricultural technology and management, animal science, crops and soils, and horticulture. Although the research conducted by rural development showed that the number of U.S. farms is dropping, in recent years, there has been a dramatic expansion of women and Blacks in agriculture, as reported by the U. S. Department of Agriculture.

In 2017, the United States had 1.2 million female producers, accounting for 36% of the country's 3.4 million farmers (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). The same report highlighted 48,697 producers identified as Black, either alone or in combination with another race, reflecting a 7% increase between 2012 and 2017. Despite the rise, Black farmers still only account for 1.4% of the country's 3.4 million producers (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). The report further revealed that female producers were slightly younger, more likely to be beginning farmers, and lived on the farm they operated. In contrast, Black producers were older and more likely to have served in the military than U.S. producers overall. In addition, Black farmers had smaller farms, and the value of their agriculture sales was less than 1% of the U.S. total (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a).

While this showed a significant amount of research examining the gender and racial sectors in agriculture, notably, there was a gap in the literature specifically relevant to the complexities associated with Black women. The research extended the existing knowledge provided by USDA to support claims that while there is perceived gender discrimination in agriculture, the disparity is more widespread for women of color.

Historical Context

Black women have been tilling the soil, working in low-wage agriculture and domestic service without reaping the full economic benefits (Jones-Branch & Petty, 2019). The narrative created has been that of subjugation, hardship, and danger (White, 2018). To understand how the problem evolved, it is necessary to reflect upon the complexities of preserving Black culture. Historically, Blacks took pride in land ownership with its associated economic and political benefits after the Civil War. In 1920, as reported by the U. S. Census of Agriculture, Black farmers had acquired over 16 million acres of farmland, accounting for 14% of all U.S. farmers. In 2017, when the most recent agricultural census was done, that figure had declined to just 4.7 million acres (Francis et al., 2022)

Less than 1% of farmers today are Black (Mitchell, 2014), and several factors contributed to the decline. Newkirk (2019) documented that Blacks have lost millions of acres of farmland across the South during the last century, propelled by economic forces, racism, and political power. In a study conducted by the American Economic Association, the present compounded value of that loss was approximately $326 billion worth of acreage (Francis et al., 2022). In addition, many literary accounts detail the unethical business practices associated with the crimes of Jim Crow. Kennedy and Henderson-Lawson (2020) investigated land theft in Freestone County, Texas, which ironically was one of the counties ranked nationally in the top three Black-

operated farms in the 2017 Census data (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). The researchers identified the structural part of the ill-gained land acquired through legal and coercive practices and occasionally violent crime. Mitchell (2014) also conducted a study that tracked processes by which Black rural landowners gradually lost more than 90% of the land held by their predecessors in 1910. The study concluded that a thorough contextual analysis is necessary to understand how laws contribute to Black rural land loss in this country (Mitchell, 2014).

Another problem contributing to Black farmers' decline was the impact of systematic racism by private and public institutions (Cusick, 2019; Rosenberg & Stucki, 2019). Most notably, discrimination by the USDA federal farm policy was particularly effective in driving Black people from farming, as detailed in the Supreme Court Case of Pigford v. Glickman. The lawsuit alleged discriminatory practices by USDA against Black farmers, such as denying Black farmers access to credit, intentionally delaying the release of funds, ignoring loan applications, utilizing inflexible loan terms, and employing other efforts to disrupt loan distributions. Based on the settlement's consent decree, in favor of the plaintiffs, more than 16,200 Black farmers were compensated (Pigford vs. Glickman, 1999). The 1982 U. S. Commission on Civil Rights supported the findings and concluded that discrimination virtually eliminated Black farmers and seriously damaged rural Black communities. However, Wright (2020), a farmer and conservationist, believed that the lawsuit did not go far enough to protect Black farmers and argued that discrimination had become a fact of life for Black farmers that must end (Wright, 2020).

The loss of family-owned farms also contributed to the decline. Family-owned farming has been an essential part of the social and economic development of the United States,

accounting for 96% of U.S. farms. As reported in the 2017 Census of Agriculture, small farms make up 88% of all U.S. farms, yet, many Black families are not included in that majority. Gaither and Zarnoch (2017) explained that many Blacks did not access the legal system during Reconstruction because they were suspicious of the southern court system. As a result, many Blacks did not leave a last will because they assumed that ownership would automatically transfer to their descendants.

The lack of trust in the legal system is consistent with findings by Kennedy and Henderson-Lawson (2020), which confirmed that these practices jeopardized property ownership because, without proper legal documents, the Black landowners were vulnerable to laws and loopholes that allowed opportunists to acquire the property. Gaither and Zarnoch (2017) reported that heirs' property makes up over a third of Southern Black-owned land; however, with "clouded title," it is difficult for heirs to leverage such assets to enhance land improvement. Failure to leave a will and an inability to pay property taxes often result in a forced sale of land and farmland loss, which placed Black farmers at a political and economic disadvantage. According to Kennedy and Henderson-Lawson (2020), the land loss was also the loss of their voice, future, and opportunity for many Black farmers and ranchers.

Finally, farming, decades later, specifically in rural regions, had a negative connotation because of the association with slavery, sharecropping, and the disappointing history of land loss of legacy property (Kennedy & Henderson-Lawson, 2020). This legacy has hindered many Blacks from reclaiming history and promoting cultural and community healing. Pennick (2019) defined the cultural connections which Black Americans hold with agriculture as Black Agrarianism. This connection, linked to agriculture, has helped shape aspects of Black culture

such as kinships, folk music, and even church attendance on Sunday but is often neglected by academics and most land-grant universities (Pennick, 2019).

The legacy of Black Americans and the institution of slavery and exploitation of labor has profoundly impacted succession planning due to a lack of knowledge, capital, and access to resources. The extraction of resources further contributed to a downward trend as young people failed to recognize the opportunities. Horst (2019) reported that from 2012 to 2014, White farmers generated 98% of all farm-related income from land ownership. In contrast, farmers of color comprised less than 4% of owner-operators. Horst (2019) further stated that farmers of color were more likely to be tenants than owners, owned less land and smaller farms, and generated less wealth from farming. The experience is compounded for Black women in America, revealing overwhelming evidence of persistent and ongoing discrimination because of gender and race.

Social Context

Women play a vital role in maintaining a sustainable food source essential to physical and environmental health, affecting society at large. According to Terefe (2021), women constitute 43% of the global agricultural workforce, yet, rarely are women decision-makers. Domestically, family structure and socioeconomic conditions are often used as a barometer to determine success, and for this reason, gender and racial equality have become increasingly important topics in the field of agriculture. The intersection of race and gender creates a unique experience for Black women. Goodman et al. (2021) documented that between 1990 and 2019, female-headed families grew from 52.0% to 60.2%. They further suggested that more than half of all Black families are headed by women (Goodman et al., 2021). The origin of the female

head of household can be attributed to different factors, yet, social mobility has been the main sociological speculation.

Swedberg (2021) argued that sociological speculation could be an essential tool in helping to understand the economic and emotional dependence that makes women fearful of the loss of financial security. An example of this characteristic can be seen in the population shift, known as the Great Migration, which compromised family structure and decimated many cultural traditions previously the Black community's stronghold. The transition of rural Black families from the simpler agricultural lifestyle in southern states to the faster-paced, unfamiliar lifestyle in industrial cities in the North disrupted many family structures (Thomas, 2019). From 1915 to 1970, more than 6 million Blacks migrated from the rural South in search of opportunities in the manufacturing economy of the North (Hegeman, 2021).

Additionally, many Blacks left the South to escape poor working conditions, Jim Crow segregation laws, political disenfranchisement, and racial violence. According to Godwin and Ricketts (2019), this material instability further resulted in mothers being heads of households. An analysis by the Center for American Progress found that in 2019, nearly two-thirds of mothers were primary, sole, or co-breadwinners for their families (Glynn, 2019; Solomon et al., 2019). Notable findings also revealed that 84.4% of Black mothers were primary or co-breadwinners in 2019, compared with 60.3% of Latina mothers and 62.4% of White mothers (Seeberger, 2019). The context highlights the importance of centering race within the discussion to understand better the unique challenges affecting women of color. More Black women have had to work to ensure their families' economic stability while also addressing childcare challenges. A study conducted by Inwood and Stengel (2020) examined the relationship between childcare, the farm business, and the farm family while probing more significant questions

related to the quality of life, labor market outcomes, and the gendered nature of work as families negotiate on-and off-farm roles and household needs.

Adding the perspective of agriculture, data provided by the Census of Agriculture confirm the critical role of women in the evolution of agriculture; however, little information is available regarding the specific contribution of Black women. Godwin and Ricketts (2019) used statistical data to show that women's roles are vital to economies. In addition, the quantitative research highlighting school-based Agriculture education revealed that through self-sufficient farming and soil conservation education, women could help eradicate hunger and poverty (Godwin & Ricketts, 2019). Additionally, an analysis of 2017 Census Agriculture data showed that compared to men primary producers, women primary producers represent greater racial and ethnic diversity. Women stand out as drivers of local economies since women tend to be more successful in running smaller, more diversified operations that sell directly to consumers. Yet, the study did not go far enough in determining how Black women farmers and ranchers help to contribute and keep dollars circulating in local economies and support regional job growth.

Globally, the Food and Agriculture Organization (FAO) estimated that women comprise, on average, 43% of the agricultural labor force in developing countries. Therefore, whether international or domestic, women impressively demonstrate that they are willing and able to learn the skills needed to increase social prosperity and preserve natural resources. However, lack of access to land, unequal access to resources, financing, market, suitable working conditions, and equal treatment are just a few gender constraints that continue to exist but can be diminished with adequate agricultural training and education.

Theoretical Context

The theories underpinning the issue were Abraham Maslow's hierarchy of needs and Kimberlé Crenshaw's (1989) intersectionality theory. When considering the five levels of Maslow's hierarchy: physiological, safety, love and belonging, esteem, and self-actualization (McLeod, 2020), coupled with the marginality of Black women as identified by the intersectionality theory (Collins & Bilge, 2016; Faktorovich, 2020; Lorde, 1984), this research further defined the relationship between agricultural science and the referenced theories.

Intersectionality theory is an analytical framework developed in the late 20th century to identify how interlocking power systems affect those most marginalized (Crenshaw, 1989). According to Crenshaw (1989), the intersecting and overlapping social identities of gender and race may contribute to the systemic disenfranchising of Black women from a broad spectrum geographically. In the context of social norms in the agricultural sector, Crenshaw (1989) emphasized that race and gender are not mutually exclusive and should be viewed through multiple paths of discrimination. Examining the various ways of bias is important, specifically to Black women, because, as Crenshaw revealed, the social identities of Black females can be manifested in these areas of discrimination, thus, influencing their perceptions and engagement, in this case, the field of agriculture. These identities are relevant to the study because they affect women’s choices and opportunities to improve their lives, families, and communities. Finally, the literature revealed the overlapping identities associated with intersectionality that impacts social comparison, cognitive dissonance, stereotype formation, social identity multidimensionality, and racialization.

Problem Statement

The problem related to the proposed qualitative phenomenological study is that it is not known how the perceptions and lived experiences of Black women's post-secondary education influenced their involvement in agriculture. Black farmers comprised less than 1% of all farmers in the U. S. in 2019 (U. S. Department of Agriculture, Economic Research Service, 2019). Female farmers now make up 36% of farmers. There is much research addressing Black farmers; likewise, several resources address female farmers' plight. However, there is a deficiency in the literature, theory, and practices specific to Black women's unique challenges in agriculture. Drawing on the understanding that lack of training and opportunity has contributed to gender and race disparities of Black women in agriculture, this study seeks to argue that with adequate training and equal opportunities, Black women can contribute to sustainable farming as farmers, researchers, and industry professionals, developing and implementing solutions that will impact lives locally, nationally, and globally.

Prior research supports the need for increased visibility and leadership roles of Black women to create and build a more equitable food system. For example, rapid changes in the agriculture industry over the last century due Green Revolution's innovations have led to various environmental impacts, from soil degradation to compromised water quality (Currier & Robinson, 2018). By exploring Black female farmers' lived experiences, we can better understand the perceptions and misperceptions of agriculture sustainability.

Additionally, the present study sought to explain how higher education can influence Black women's perception of agriculture. The Smith-Hughes Act was adopted in 1917 to provide federal and state legislation to promote agricultural vocational education programs (Moore, 2019). According to the California Department of Education, the extent to which educational

agencies can promote the development and use of curriculum and instructional material, and strategies to help prepare students in all aspects of the agricultural industry will help foster critical thinking, problem-solving, and leadership.

The question explores to what extent rural or urban upbringing influenced career decisions in agriculture. The Hatch Act of 1887 provided for disseminating practical agricultural information in public schools and funds for colleges to conduct agricultural research (Connors, 2019; Moore, 2019). However, few, if any, women of color established a foundation for career and personal success. The study explored whether the past racial and gender bias of post-secondary education aimed to discourage or deny Black women opportunities in agriculture is parallel to the practices of today. Furthermore, the research examined how childhood experiences in rural and urban environments have impacted Black women's perception of agriculture.

Agricultural institutions, including land grant universities, are challenged to confront gender and racial inequalities by partnering with agencies to help make land accessible for food cultivation (U. S. Department of Agriculture, Economic Research Service, 2019). Closing the gender gap in agriculture would increase food production and help to build a sustainable future for women. For example, because of persistent gender bias in agriculture, female farmers such as Lorie Fleenor, 33, an eighth-generation Bristol, TN native, and a farmer, find it easier to have a male handle business transactions and phone calls. Even though she runs the farm and makes the decisions, the male farmers are reluctant to do business with females. Another problem is that access to credit, cultural norms, and lack of collateral often prevent women from borrowing money. Without adequate capital investments, female farmers are less likely than men to procure and use fertilizer, and drought-resistant seeds, employ sustainable agricultural practices and utilize advanced farming tools and techniques that increase crop yield.

Many Blacks experience diet-related health disparities due to diets high in fat, specifically saturated fat, low intake of fruits, vegetables, and whole grains, and high salt content. As Brown and Zappala (2019) stated, nutrition health disparities (NHDs) arise from multiple factors, including social determinants of health (SDHs) that operate within biological, behavioral, and environmental domains. The structural drivers of inequitable policies and distribution of resources are the root causes of nutrition health disparities. In addition, environmental influences contribute to diet-related health disparities because of the lack of healthy food options and the inconvenience and high cost of purchasing healthy foods. For this reason, the rapid expansion of farmers' markets and other efforts to increase productivity will allow more Black female farmers to interact directly with consumers to provide healthier food options that can reduce malnutrition and obesity while improving livelihood.

Black females continue to align with activism and mission-driven initiatives to help address food disparities. White (2018) referenced the term Sankofa, "which means studying the past to understand the present, and from that, to forge a future of our own making" (p. 39). By embodying this principle, White (2018) brought awareness that the contributions of people of color and indigenous nations are missing in understanding food history. As a result, the food movement's narrative does not acknowledge Black Americans' connection to the land. Instead, White (2018) offered a different portrayal of the relationship between labor, land use, and Black farmers. Even with many of the contributions of Black farmers being overlooked, lost, forgotten, or revised, they were instrumental to developing the agricultural sector of the United States. White's demonstration of scholarly activism helps amplify the food justice movement and moves the fields of social geography and agrarian studies forward (White, 2018).

Likewise, Penniman (2018), co-Director and Farm Manager at Soul Fire Farm is an example of today's Black female farmers revolutionizing the traditional images of agriculture. According to Penniman, she only saw images of White people as stewards of the land, organic farmers, and in conversations about sustainability for years. Furthermore, Penniman (2018) asserted, "Black people and the land was about slavery and sharecropping, coercion and brutality and misery and sorrow. However, there was an entire history, blooming into our present, in which Black people's expertise and love of the land and one another was evident." (p. 3). Fortified by a more accurate picture of Black people and their land, Penniman and others have created farms centered on the needs of the Black community.

Finally, according to Carter and Alexander (2020), scholars still need to consider how the erasure of African-American farming has impacted the modern food landscape and contributed to significant health disparities. Carter pointed out that inequalities in health and diseases between various segments of the population have emerged as a pressing public health concern primarily due to poor diet being the primary contributor to many chronic conditions and diseases. In addition to these mission-driven efforts, several others confirm the need to understand how post-secondary education has influenced Black women's agriculture.

Purpose Statement

The purpose of this qualitative phenomenological study was to explore the perceptions and lived experiences of Black women as it pertains to the influence of post-secondary education on their involvement in agriculture in the southern areas of the United States. For this research, the underrepresentation of Black women in agriculture will be segmented into two groups. Experienced producers are actively working in the agriculture industry, and prospective producers are defined as students working toward a degree in agriculture.

Significance of the Study

The study's guiding theories were the hierarchy of needs theory and the intersectionality theory. The theoretical perspective of the study will show the viability of the two theories within the unique context of Black women in agriculture. Prior studies have explored the impact of women in agriculture and Blacks in agriculture, but little is known about the lived experiences of Black women in agriculture.

Leah Penniman (2018), the owner of Soul Fire Farm, stated that Black farmers make up less than 2% of all farmers in the U.S., even though Black Americans comprise 9-10% of the U.S. population. There is a gap in the literature determining the number of Black women included in that small population. For example, a study by Schmidt et al. (2021) highlighted the differences in how U.S. female farmers pursue agricultural practices from male farmers. Likewise, a survey by Doss (2018) showed the inherent difference in farm productivity and the developmental programs targeting more women. While both of these studies show the unique characteristics of female farmers, more research is needed to analyze the increasing importance and impact of Black female farmers. Therefore, the empirical significance of the study sought to understand why there is such a small percentage of Black female farmers and further aimed to determine the effect post-secondary education has on Black women engaged in sustainable agriculture.

The practical significance focused on sustainable food security, environmental protection, business opportunities, and community diet-related disparities to illustrate how these actions affect society. This study is socially relevant on a broader scale to reduce health and disease disparities by improving food sources. The Journal of the American Dietetic Association defined diet-related disparities as dietary intake, behaviors, and patterns in different population segments.

These diet-related disparities result in inferior nutritional quality specific to certain groups. The health outcomes result in an unequal burden in disease incidence, morbidity, mortality, survival, and quality of life (Brown & Zappala, 2019). While it is noted that these disparities are often defined based on race and ethnicity, Brown and Zappala (2019) stressed that factors contributing to inequalities might be more associated with socioeconomic status rather than ethnicity or race and factors related to environmental influences.

Research Questions

The research questions for this study were grounded in the literature on perceptions of Black females in agriculture and the significance of post-secondary education. This phenomenological-designed research is guided by one central research question that focuses on the problem of Black women in agriculture and the impact of post-secondary education. The four subordinate research questions relate to the main concepts identified in the study.

Central Research Question

What are the perceptions and lived experiences of Black women and the influence of post-secondary education on their involvement in agriculture?

Sub-Question One

How does post-secondary education impact the preparation and development of skills needed to increase opportunities in sustainable agriculture for Black women?

Sub-Question Two

What are the unique cultural experiences of Black women from childhood to adulthood, that have motivated their persistence in sustainable agriculture?

Sub-Question Three

What role can post-secondary education play in eliminating gender bias that may hinder more women from going into agriculture?

Sub-Question Four

What role do higher education institutions play in helping to address diet-related disparities and maintaining agricultural sustainability?

Definitions

1. *Agriculture Science* – Agriculture Science is a diverse field of study that includes plant science, animal science, and nutrition. In addition, agricultural sciences include research and development on plant breeding and genetics, plant pathology, horticulture, soil science, entomology, and production techniques. (L. Miller, 2018).
2. *Food Desert* – Areas in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly low-income communities. (U. S. Department of Agriculture, Economic Research Service, 2019).
3. *Heirs' property* – Property passed to family members by inheritance, usually without a will or estate planning strategy. It is typically created when land is passed on from someone who dies intestate to those legally entitled to their property. (U. S. Department of Agriculture, National Agricultural Library, 2021).
4. *Intersectionality* – The study of overlapping o intersecting social identities and related systems of oppression, domination, or discrimination. The theory examines how various biological, social, and cultural categories, such as gender, race, class, disability, sexuality, and other forms of identity, do not work independently but interact to produce

particularized forms of social oppression. As such, oppression results from intersecting forms of exclusionary practices (Collins & Bilge, 2016).

5. *Socially Disadvantaged Farmer and Rancher* – Women and members belonging to the following racial and ethnic minority groups: American Indians or Alaskan Natives, Asians, Blacks or African Americans, Native Hawaiians or other Pacific Islanders, and Hispanics (U. S. Department of Agriculture, Economic Research Service, 2019).
6. *Transcendental phenomenology* – A qualitative research design that focuses on the actual reporting of participants' experiences with a thick, rich, and deep holistic description utilizing inductive analysis rather than focusing on the interpretations of their experiences (Creswell & Poth, 2018; Moustakas, 1994).

Summary

Qualitative research was conducted to examine the lived experience of Black women in agriculture while also considering the impact of post-secondary education. A transcendental phenomenological research design was used to understand the voices of Black women through their stories of stewardship, resilience, and leadership. While there are perceived gender discrimination in agriculture, the disparity is more widespread for women of color in the United States (Lewis, 2021).

The study further recognized that race and gender are not mutually exclusive and reviewed the multiple paths of discrimination for Black female farmers. Identifying the various ways of discrimination is important. As Crenshaw (1989) revealed, with intersectionality, the social identities of Black females can be manifested in different areas of discrimination, thus influencing their perceptions and engagement. The study examined Black women farmers and the subsequent effect on rural and urban economic and social landscapes.

Additionally, focusing on the hierarchy of needs theory provided insight into the motivation and persistence of Black women in agriculture. Understanding their experiences helped shape agriculture's future while also helping eliminate food disparities. Finally, the experiences of Black women in agriculture were captured through semi-structured interviews, focus groups, and photo narratives.

CHAPTER TWO: LITERATURE REVIEW

Overview

The purpose of the qualitative phenomenological study was to explore the perceptions and lived experiences of Black women regarding the influence of post-secondary education on their involvement in the field of agriculture in the southern areas of the United States. At this stage in the research, the perceptions and lived experiences of Black women will be generally defined as the underrepresentation of Black women in agriculture both during and post-academia. Agricultural science offers many rewarding opportunities to contribute to domestic and global health and food security. Nevertheless, only a small percentage of Black women contribute to the field (Clarey, 2020). Furthermore, the connection between women and agriculture has been tainted by gender bias. Likewise, for Blacks, the relationship has been tainted by the institution of slavery and an exploitative labor system (Traverse, 2018). As a result, little is known about the lived experiences of Black women and the influence of post-secondary education on their perception of agriculture.

Chapter Two provided the theoretical framework for studying Black women in agriculture. The theory guiding this study is Maslow's (1943) hierarchy of needs and Crenshaw's (1989) intersectionality theory. When considering the five levels of Maslow's hierarchy, physiological, safety, love, and belonging, esteem, and self-actualization (McLeod, 2020), coupled with the marginality of Black women as identified by the intersectionality theory (Collins & Bilge, 2016; Faktorovich, 2020; Lorde, 1984), this research further defined the relationship between agriculture science and the referenced theories. By understanding the stories and lived experiences of Black women, necessary efforts can be made to increase the number of Black women in sustainable agriculture in both rural and urban environments.

This literature review revealed the imbalance in the economic stewardship and landownership of Black women in agriculture. The general topics included historical and cultural relevance, equality, and community participation. Also, the literature review revealed that higher education institutions could help empower Black women by providing cutting-edge research, financial insight, and timely and accurate statistics to the agricultural community. By doing so, post-secondary education can help create a safe, sustainable food system that leads to strong, healthy communities and families.

Theoretical Framework

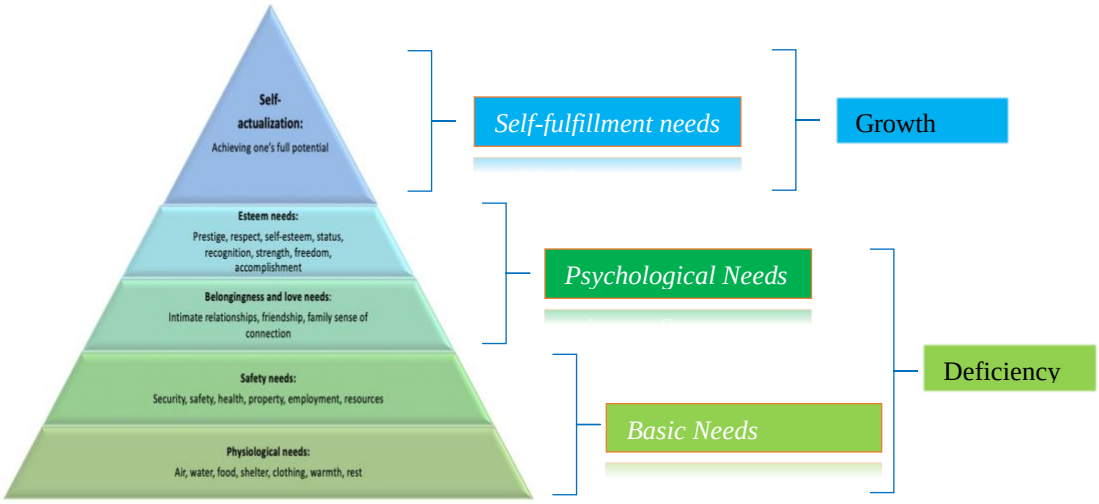
The theoretical model that guided this study was Maslow's (1943) hierarchy of needs theory and Crenshaw's (1989) intersectionality theory. Maslow's hierarchy of needs theory was pertinent to the study because it revealed the characteristics that motivate Black women to pursue agriculture. Intersectionality theory helps establish the framework to acknowledge the challenges of inequalities specific to both Blacks and women.

Maslow's Hierarchy of Needs

According to Maslow (1954), human motivation is satisfied progressively through five basic needs: physiological and safety, love, esteem, and self-actualization. Using a pyramid to illustrate the progression, the first physiological level refers to the essential physical needs for survival (see Figure 1). Psychological needs include basic needs such as food, water, shelter, warmth, rest, and health, and Maslow considered these needs to be the most important as all the other needs become secondary until these needs are met. Thus, a person's motivation at this lowest level of the hierarchy is derived from their instinct to survive (McLeod, 2020).

Figure 1

Attributes of Maslow's Theory



As illustrated in Figure 1, once the physiological requirements of an individual are met, the need progresses to safety. Safety needs in Maslow's hierarchy refer to the need for security and protection. Examples of safety needs include emotional security, financial security, law, order, freedom from fear, social stability, property, health, and well-being. McLeod (2020) believed that safety needs are developed in early childhood, as children require safe and predictable environments. Safety needs dictate behavior; therefore, a reaction or anxiety is typically created when not fulfilling the safety needs (McLeod, 2020). Maslow identified the lower two levels on the pyramid, physiological and safety, as basic needs.

The third need in the hierarchy involves feeling loved, belonging, and being accepted (McLeod, 2020). This need may include romantic relationships, friends and family members, or a social affiliation to motivate behavior. This hierarchy needs to encompass both feelings of being loved and feeling love toward others. When deprived of these needs, individuals may experience loneliness or depression.

The fourth level in Maslow's hierarchy is esteem needs. Esteem needs involve feeling good about oneself and the desire for reputation or respect for others (McLeod, 2020). According to Maslow, respect from others relates to achieving social acceptance, prestige, and recognition. In comparison, respect for oneself encompasses dignity, confidence, strength, competence, independence, and freedom. Esteem needs include feeling self-confident and feeling valued by others for achievements earned and contributions made. Maslow identifies love and esteem as psychological needs.

Finally, self-actualization is the highest level in Maslow's hierarchy. It refers to realizing a person's potential and self-fulfillment. Maslow identifies self-actualization as a self-fulfillment need. One unique feature of self-actualization is that it is perceived differently by everyone. For example, self-actualization might involve helping others; however, the desire may be expressed economically or academically (McLeod, 2020).

Consequently, self-actualization reveals a limitation to Maslow's model, the spiritual aspect of human existence. From a Biblical worldview, as illustrated in the Book of Philemon (New International Version), the power to move forward is centered on the ability to rise above cultural expectations to unite in Christ. Thus, Maslow posited that self-actualization means reaching one's full potential. Nevertheless, Hopper (2020) likened the concept to sanctification devoid of God and, therefore, will not work. McCleskey and Ruddell (2020) also asserted that Maslow's theory is not supported by Scripture. The authors go as far as to say that Maslow attempts to create a new worldview designed to supplant the traditional Christian worldview (McCleskey & Ruddell, 2020).

Scripture emphasizes the importance of a Christ-centered perspective as the foundation for reaching one’s full potential. As illustrated in Philippians 3:12 (NIV): "Not that I have

already obtained all this, or have already arrived at my goal, but I press on to take hold of that for which Christ Jesus took hold of me." This concept is further emphasized in Ephesians, "for it is by grace you have been saved, through faith – and this is not from yourselves, it is the gift of God – not by works, so that no one can boast. For we are God's handiwork, created in Christ Jesus to do good works, which God prepared us to do." (Ephesians 2:8-9, NLT). Both passages revealed the importance of external circumstances being rooted in Scripture.

By contrast, Maslow's theoretical assumption can be understood through the three principles of the hierarchy of needs theory: deficit principle, principle, and progression principle (Maslow, 1954). Hartzell (2021) indicated that hunger, thirst, security, friendship, respect, and being all you can be are just some things that motivate people to take action (Hartzell, 2021). These principles help understand the needs and encourage specific behavior by showing where they fall in Maslow's hierarchy of needs. The contrast is noted between the progression principle, which suggests that lower-level needs must be met before higher-level needs. Hartzell (2021) pointed out that the deficit principle claims it is no longer a motivator once a condition is satisfied because individuals will act only to meet unmet needs.

Deficit Principle

The deficit principle explains how motivation is based on a deprived need in Maslow's hierarchy of needs theory. When a need goes unmet, it dominates people's actions as they seek satisfaction (Maslow, 1954). Bouzenita and Boulanouar (2016) further believed that the need to fulfill unmet needs becomes more substantial the more extended the needs remain unmet.

Specifically, with Black culture being deeply rooted in the land, the negative aspects of slavery are profoundly illustrated with the deficit principle. For example, Nibiya (2021) equated the psychology of Jim, in Twain's 1884 novel, *Adventures of Huckleberry Finn*, to Maslow's

theory. The analysis revealed Jim in four phases: denied needs due to his master's anger; Jim's consciousness about himself as the object for capital gain; his freedom as a human being; and his pursuit of love and belonging in his need to reunite with his wife and children. However, Maslow's primary physiological needs, the most essential, and security, and safety, were denied to more than two million enslaved people in the American South throughout the 17th and 18th centuries (Littlefield, 2019; Nibiya, 2021). In the 21st century, those same assumptions remain relevant to Black farmers because of cultural deficiencies that have prevented them from assimilating and attaining social mobility within the industry. Moreover, this perceived disadvantage fosters a perspective that minority groups are fundamentally different from the dominant majority group because of culture and have shortcomings in skills, knowledge, and behavior that contribute to poor performance.

Littlefield (2019) also documented the experiences of enslaved women, including farm work, as demeaning and arduous work. The enslaved workers were field hands commonly used to plant, tend, and harvest tobacco, sugar, rice, or cotton. Littlefield (2019) reported that the repetition during the long growing season resulted in the expression of factories in the field. This term was derived from enslaved workers being in the areas before sunrise to till the soil, sow the seed, nurture the growing plants, or harvest the mature crops and working as hard and fast as possible on too little sleep and a meager diet. In addition, women worked the fields while caring for their newborn babies, who often were left under a tree during the long working hours (Glave, 2017). Their stories of hardship, fear, and violence have been passed through oral traditions and literature from generation to generation.

According to Hopper (2020), the sense of belonging and need for love within Maslow's theory was unrealized because enslaved Blacks' inability to move freely, live, and work hindered

nurturing relationships. Hunter (2017) wrote about the significance of marriage as an enduring lifelong bond that was rarely an option because no one knew when a slaveholder might choose to sell some family members and keep others. Enslaved mothers and fathers could not even call their children their own because enslaved people were property to buy and sell.

Prepotency Principle

The principle of prepotency includes claims that the lowest unfulfilled need will motivate behavior at any given moment and that a need ceases to inspire when it is fulfilled (Maslow, 1943; McLeod, 2020). Maslow posited that these five basic human needs could be organized in sequential order, ranging from the more concrete needs such as food and water to abstract concepts such as self-actualization (Maslow, 1954). Furthermore, Maslow asserted, “It is quite true that man lives by bread alone – when there is no bread. But what happens to man's desires when there is plenty of bread and when his belly is chronically filled?" (p. 375). However, the theory has been more flexible based on external circumstances or individual differences (McLeod, 2020). Maslow further pointed out that most behavior tends to be determined by several basic needs simultaneously rather than by one of them.

The prepotency principle relates to the theory because, for enslaved people, the opportunity to gain prestige and feelings of accomplishment was denied. The prepotency principle continues to be the case for Black women. As Banks (2019) explained, history has shown how race and gender inequalities have presented challenges for Black women in agriculture. Nevertheless, the importance of continuing and valuing agricultural vocations is justified, as stated by Bunch, "There is no more powerful force than a people steeped in their history. And there is no higher cause than honoring our struggle and ancestors by remembering" (Bunch, 2019). In the article "*Systematic Inequality and Economic Opportunity*," a strong

argument was made that the United States economy was built on the exploitations and occupational segregation of people of color due to slavery, Jim Crow, and the New Deal (Solomon et al., 2019). The authors' research revealed an estimated $14 million generated from labor by enslaved citizens and further referenced federal laws such as the 1793 and 1850 Fugitive Slave Acts, which legalized their imprisonment.

Progression Principle

The progressive principle asserts that the basic survival needs at one level must be met before the next level on the pyramid can be satisfied (Maslow, 1943). When applied to human motivation, this principle is synonymous with the interpersonal harmony of feeling confident in contributions and achievements valued as necessary (Bouzenita & Boulanouar, 2016). In contrast, when a need is not satisfied, it activates the actions needed to progress to the next level. Bouzenita and Boulanouar (2016) further indicated that conflict might arise as people seek ways to satisfy unmet needs.

This experience relates to what psychologist Adler called feelings of inferiority, which causes an individual to strive for superiority. The need to fulfill unmet needs will become stronger the longer the needs remain unmet (Maslow, 1943; McLeod, 2020). Consistent with the beliefs of environmental historians, Glave (2017) reported on the need to overturn the negative stereotypes considered demeaning and originating from the arduous work of enslaved people in southern society.

For example, historical figures like Thomas Monroe Campbell, the first Black federal agricultural agent, expressed his ambivalence about the land. However, his feelings about farming were formed and hardened as a sharecropper and day laborer, as Moore (2019) reported. While a student at Tuskegee Institute, Campbell believed that enrolling in an agriculture class

would aid his upward mobility toward middle-class American ranks. Blacks value farming's environmental aspects when it serves personal, economic, and political needs. Therefore, self-actualization occurs when farmers can access their full potential, which could be the skills needed to feed and nurture the soil, leading to productive harvest and healthy livestock.

Finally, Maslow's hierarchy of needs theory helps to highlight what motivates Black women in agriculture to transcend from deficiency needs (physiological, safety, love and belonging, esteem), as identified in Maslow's motivational model, to that of growth needed to include cognitive, aesthetic and transcendence (McLeod, 2020). Cognitive needs include knowledge and understanding, curiosity, a need for meaning, and predictability. At the same time, aesthetic needs include appreciation and the search for beauty and balance. Finally, transcendence need is when a person is motivated by values that transcend beyond the personal self.

Intersectionality Theory

Intersectionality theory was coined by scholar and civil rights advocate Kimberlé Crenshaw in 1989. Faktorovich (2020) defined it as a theoretical approach based on the premise that the interconnected nature of social categorizations such as race, class, and gender creates overlapping and interdependent systems of discrimination or disadvantage (p. 45). Lorde (1984) expressed the concept through essays, prose, and poetry, to voice her experience with oppression, intersection, and feminism. However, critical race theory is perhaps the most dominant theory used to explain race and its role in society as related to social justice and oppression. Crenshaw's theory aligned with the critical race theory in describing how race, class, gender, and other individual characteristics intersect (Crenshaw, 1989). Derrick Bell (2022), the founder of critical race theory, began using the theory in 1970 as an extension of critical legal

studies, an academic movement that looks at society and the law through a racial lens and maintains that society is divided along racial lines.

Furthermore, Crenshaw (1989) asserted that any analysis that does not take intersectionality into account could not sufficiently address the particular manner in which Black women are subordinated. An emerging subtext related to intersectionality theory discusses how racism and discrimination affect the choices and chances of individuals, such as Black women. For example, Lorde (1984), in her writing, conveys the impacts of internalizing racism and sexism on self-esteem and relationships between Black women. Collins and Bilge (2016) referenced Frances Beal's "*Double Jeopardy: To Be Black and Female*," which introduced the dual oppressions of Black women. The essay examines the intersection of racism, sexism, and capitalism as social processes (p. 66). The experiences of Black women have played a vital role in various movements. "Ain't I a woman," a term used by Sojourner Truth, is just one of the manifestations of intersectionality during the civil rights movement. Likewise, as stated by Onion et al. (2021), Elizabeth Cady Stanton, leader of the women's rights movement, voiced concern that Black women would suffer from a "triple bondage that man never knows" if they did not receive voting rights when colored men did (Onion et al., 2021).

The addition of class to intersectionality can also be justified by referencing activist Angela Davis. Davis spoke about the "*Triple Oppression*," a term used by Claudia Jones to explain the race, class, and gender faced by Black women (Barnett, 2003). However, according to scholar Eric McDuffie (2008), Louis Thompson Patterson coined the term in 1930 to describe the oppression pertaining to class, race, and gender suffered specifically by Black women.

Women's Rights Movement

During the 19th and 20th centuries, Black women actively obtained equal rights, opportunities, and greater personal freedom (Bailey, 2020). According to Bailey (2020), Black women had a large platform through their association with churches, newspapers, secondary schools, and colleges, which allowed them to participate in political meetings and organize political societies to plan strategies. However, although they were instrumental in helping to win the right to vote, Black women were not included in the advancement resulting from the movement.

Bailey (2020) further added that either Black men or White women led the agenda for civil rights organizations. Black women were often excluded from organizations and related activities. For example, Black women were excluded from attending the National American Woman Suffrage convention and often marched separately from White women in suffrage parades. In addition, Bailey (2020) documented that when Susan B. Anthony wrote the *History of Woman Suffrage* in the 1880s, they featured White suffragists while mainly ignoring the contributions of African American suffragists. As a result, Black women are less well remembered; however, they played an essential role in getting the Fifteenth and Nineteenth Amendments passed (Bailey, 2020).

Civil Rights Movement

Black reformers understood that they focused on human rights and universal suffrage rather than suffrage solely for African Americans or women because of their unique position. According to Bailey (2020), many Black suffragists weighed in on the debate over the Fifteenth Amendment, which would enfranchise Black men but not Black women. For example, Mary Ann Shadd Cary supported the Fifteenth Amendment but was also critical of it as it did not give

women the right to vote. Sojourner Truth argued that Black women would continue to face discrimination and prejudice unless their voices were uplifted like Black men's (Bailey, 2020).

Identity Areas

Crenshaw identified five areas associated with intersectionality: cognitive dissonance, stereotype formation, social identity multidimensionality, social comparison, and racialization (Crenshaw, 1989). The Women's Rights Movement and the Civil Rights Movement illustrate the five areas. The first area, cognitive dissonance, is a term used to describe the mental discomfort that results from holding two conflicting beliefs, values, or attitudes. The theory suggests that individuals will subconsciously change their attitudes or beliefs to conform more closely to their actions (Warren, 2020).

Acharya et al. (2015) further asserted that implicit biases might cause cognitive dissonance. The authors wrote that as the past continues to sway the present attitudes, social beliefs will persist long after the formal policies that created those beliefs have been eradicated. Therefore, implicit biases, residing deep within one's subconscious, will cause feelings and attitudes about other ideas or people based on characteristics such as race, ethnicity, age, and appearance.

Consistent with the teachings of Alfred Adler, a noted psychiatrist whose effective systems of individual psychology introduced the term inferiority feelings (North American Society of Adlerian, 2021). Through his works, as documented by the North American Society of Adlerian (2021), Adler stressed that people should be validated, connected, and made to feel significant as unique individuals. Individuals who feel they belong will act cooperatively and form healthy relationships with others.

According to C. Miller (2018), though one may not consciously view Black females as inferior farmers, if implicit bias believes Black females are inferior due to culture and media, then actions will follow. Individuals may actively do or say something against their own conscious beliefs. Because of the history of racism and discrimination against Black women, the pressure of isolation is compounded by the lack of enriching representation of Black women in agriculture. There are a few examples of Black women farmers presented through media. C. Miller (2018) argued that Black women must create platforms to voice concerns and call out the lack of diversity for things to change. C. Miller (2018) further stated that it is just as crucial for Black women farmers to have a voice in the predominantly White agriculture space and dispel the unflattering history.

The second area identified by Crenshaw (1989) is stereotype formation. A stereotype is a mental representation and social categorization of specific individuals or groups and their members (Bordalo et al., 2016). Once a set of characteristics, such as gender, race, political stance, and personality, describe a group of people, those characteristics are often attributed to all group members, thus affecting the people or individuals who hold the stereotype and those labeled by a stereotype. Bordalo et al. (2016) presented a model of stereotypes that supports that stereotypical thinking implies overreaction to information that confirms a stereotype and underreaction to information that contradicts it. Crenshaw (1989) posited that stereotypes are formed through either experience or society, and confirmation bias follows.

The third area identified by Crenshaw (1989) is social identity multidimensionality. Social identity refers to people's self-concepts based on their membership in social groups. Affiliation with a group confers self-esteem, which helps to sustain the social identity. According to Vinney (2019), three psychological processes are central to social identity theory: social

categorization, social comparison, and social identification. Furthermore, the cognitive basis of social identity is the process of social categorization and intergroup comparison. Group identity develops not from interpersonal relations between group members but as a product of common, shared membership. Generally, allowing people to be part of a group helps people to develop a sense of belonging in society. DiMaria (2020) states that these identities play an important role in shaping self-image. The more people identify with a particular group, the more they shape how people feel about themselves (DiMaria, 2020).

The Encyclopedia of Race, Ethnicity, and Society defines racialization as the process by which a group of people is defined by their race (Schaefer, 2008). According to Alberta Civil Liberties Research Centre, racialization implies a social construction in which certain people are superior to others, manufacturing and utilizing the notion of race to single out certain groups for unique treatment. The visible effects of processes of racialization are the racial inequalities embedded within the social, economic, and political structures and systems. Therefore, as each form of oppression intersects, it impacts the cultures and communities they are a part of and the institutions that give structure to their opportunities in life.

The intersection between race and gender is anchored in both historical and cultural contexts. Banks (2019) reported that historically, Black women's main jobs have been in low-wage agriculture and domestic service. Differences in labor participation were due to the societal expectation of Black women as workers and labor market discrimination against Black men, resulting in lower wages and less stable employment than White men (Banks, 2019).

Negative representations of Black womanhood have reinforced discriminatory practices and policies. "Double consciousness" is a term coined by W.E.B. DuBois to describe the elements pertinent to cultural identity (DuBois, 2020). As noted in *The Souls of Black Folk*,

DuBois (2020) defined double consciousness as the struggle Blacks face to remain true to Black culture while simultaneously conforming to the dominant White society. This split consciousness applies to Black women who attempt to merge their specific culture and characteristics with the dominant society's values. For example, while the women's suffrage movement made significant steps toward gender equality, according to Yang (2020), the efforts fell short of racial equality.

Effects of Affirmative Action

Intersectionality recognizes that race combined with gender affects the rights and opportunities of Black women. For example, Alexander (2012) concluded that civil rights gains were superficial opportunities because they were basic tenets of U.S. democracy. Citing affirmative action as an example, Alexander reasoned that although affirmative action is under constant attack because it benefits people of color, research shows that the significant recipients have been White women.

Steinbugler et al. (2006) state that gender and racial stereotypes toward Black women and Black men influence the opposition to affirmative action and create a negative attitude toward Blacks as a group. The resistance to affirmative action is consistent with Menand (2020), who spoke of people who support diversity but do not support affirmative action citing preferential treatment. Affirmative action is seen as unfairly penalizing those who have not biased themselves, who have enjoyed no personal benefit from discrimination, and who consider affirmative action stigmatizing to members of underrepresented groups because of accusations that they are underqualified for the jobs (Menand, 2020). Intersectionality demonstrates a multifaceted connection between race and gender, and affirmative action systems illustrate the oppressed or privileged nature associated with the theory.

Related Literature

The theory guiding this study is Maslow's hierarchy of needs developed by Abraham Maslow (1943) and the intersectionality theory developed by Kimberlé Crenshaw (1989). When considering the five levels of Maslow's hierarchy, physiological, safety, love and belonging, esteem, and self-actualization (McLeod, 2020), coupled with the marginality of Black women as identified by the intersectionality theory (Collins & Bilge, 2016; Faktorovich, 2020; Lorde, 1984), the literature will reveal the relationship between agriculture science and the referenced theories. The related literature review communicates existing knowledge on Black women in agriculture. It also revealed the gaps in the literature and the need to understand the topic further. The U.S. Census of Agriculture reported that the number of farms with female producers increased by 23%; there was also an increase of 7% in Black farmers. Although it is essential to understand the reasons for the increase, it is equally important to understand the need to revitalize and include a push to cultivate a new generation of female farmers has been identified as an opportunity to heal intergenerational trauma. This study will add to the limited body of literature by detailing the experiences of Black women in agriculture and the impact of post-secondary education.

Grounded in history, culture, equality, and community participation, this study is important because land ownership and agriculture comprise the backbone of civic and political life in rural and Black communities (Merem, 2006). A preliminary investigation by the Federation of Southern Cooperatives found that Blacks in all age groups viewed land ownership as essential to building wealth. Yet, there has never been a concentrated, well-resourced, and long-term effort to parlay those values into sustainable land-based economic development.

The problems surrounding the topic of Black women in agriculture are numerous. First, there is a lack of prior research focusing on the college experiences of Black women pursuing studies related to the topic. According to a study conducted by the University of Wisconsin-Madison, Women's & Gender Consortium, the findings revealed that the tarnished early history of American agriculture, the stories, and the experiences of Black women are left out (Mumma, K., 2021). For example, Jones-Branch and Petty (2019) acknowledged the poor track record of publications such as the *Agricultural History Journal* in publishing essays authored by African Americans by stating that the Agricultural History Society was less than welcoming of African Americans and other nonwhite scholars for most its history (Jones-Branch & Petty, 2019). Therefore, it is unsurprising that the journal pages have rarely featured scholarship by historians of African descent. Instead, they pondered how Black scholars' contributions could have impacted the understanding of Black and White farmers' influence on agrarian politics.

Unfortunately, when considering the role of Black women in agriculture, their stories are underrepresented in the pages of history books. Still, their impact has been and continues to be transformational (Wilson, 2021). In an article for *A.G. Daily*, Wilson (2021) expressed plenty of stories to amplify; they all deserve to be told. Specifically, Wilson (2021) spoke of the untold stories about the resilience and contribution of Black Americans in the quest to overcome oppression, seek progress, and pursue justice and equality. Greene (2016) related the limitation of Black women in agri-food systems to social justice by stating that in scholarly literature concerning changes in American agri-food systems, minority producers and their communities have received limited attention. Hopper (2020), with American Farmland Trust, concurs that there is an implicit bias and discrimination among lenders and agricultural resource providers, which remains a barrier for women of color, in particular.

Second, limitations have been recognized in a male-dominated field that hinders the advancement and motivation of Black women. For example, Shisler (2016) conducted a study to understand the gendered experiences of female farm operators in Northern Colorado. The findings suggested that further research is needed to know how multiple oppressed identities affect women of color in the agricultural sphere. The study will also align with research conducted by Jordan (2014), intended to gain insight into Black students and the influences of their lived experiences in choosing a major and pursuing a career in Agricultural Science and Natural Resources. Jordan (2014) determined that further research was needed to examine existing programs created to promote agriculture to African American youth. Thus, studying the students' involvement in the programs could help determine the effectiveness of the programs in recruiting diverse participants.

Organizations such as FarmaSis help to empower women while addressing gender disparities in farming and promoting better health by providing products and teaching agriculture skills (Clarey, 2020). FarmaSis is comprised of all Black women farmers and illustrates the benefits of increased social interaction among Black women farmers. Agriculture provided the space that shielded them from social isolation and helped improve their families' lives (Lutz & Herd-Clark, 2019). Furthermore, Clemons, the founder of FarmaSis, believed that the disparities are longstanding. For example, in South Carolina, where Clemons is located, the USDA agriculture census in 2017 shows 12,559 farms with women as the decision-maker, compared to 22,412 men. Black farmers comprise 7 percent of producers (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a).

Finally, additional content is needed to understand the slight shift starting to occur, as seen by a younger generation of Black female farmers who allow careers and passions to be fully

realized (Lewis, 2021). Historically Black females have aligned with activism, and today's Black farmers are also mission-driven by helping to address food deserts. Penniman (2018), co-Director and Farm Manager at Soul Fire Farm is an example of today's Black female farmers revolutionizing the traditional images of agriculture. According to Penniman, she only saw images of White people as stewards of the land, organic farmers, and in conversations about sustainability for years. Penniman noted that "Black people and the land was about slavery and sharecropping, about coercion and brutality and misery and sorrow. And yet here was an entire history, blooming into our present, in which Black people's expertise and love of the land and one another was evident" (p. 3). Fortified by a more accurate picture of Black people and their land, Penniman (2018) and others have created farms centered on the needs of the Black community.

A preliminary study by the Federation of Southern Cooperatives found that Blacks in all age groups viewed land ownership as essential to building wealth. Yet, there has never been a concentrated, well-resourced, and long-term effort to parlay those values into sustainable land-based economic development. Furthermore, to encourage change, it is necessary to understand the political, economic, and social environments that determine critical opportunities for sustainable agriculture, from production to consumption.

Rarely are images of Black women as farmers seen, even though agricultural traditions are a significant part of their past. By understanding the stories and lived experiences of Black women, necessary efforts can be made to increase the number of Black women in both rural and urban environments who participate in sustainable agriculture. This literature review confirms and sometimes confronts the negative beliefs about farming and agriculture practices. Also highlighted in the review are the economic benefits of education and skills development. In

addition to these mission-driven efforts, the review explains how post-secondary education has influenced Black women's participation in agriculture. The related literature section will focus on recent research on the topic of study. It will also provide an overview of the ideas, theories, and significant published literature on Blacks and women in agriculture. The literature will provide insight into how the research evolved through the theoretical concepts previously identified.

Historical Foundation

To understand the Black female farmer's experience in America today, it is necessary to recognize the significance of past experiences. To paraphrase Dr. Ralph Bunch, a notable Civil Rights leader and the first person of color to win the Nobel Peace Prize, reflecting and studying the past helps to understand the complexity and reveals the preservation of culture. For centuries, the connection between Blacks and agriculture was tainted by the institution of slavery and the exploitative labor systems that continued in the years following the abolition of slavery (Traverse, 2018). Researchers Bertocchi and Dimico (2020) continued to explore the intergenerational impact of slavery on the Black family structure today. Their research revealed that current inequality is primarily influenced by slavery through the unequal educational attainment of Blacks and Whites (Bertocchi & Dimico, 2020). They further suggest that the underlying links running through the political exclusion of formerly enslaved people negatively influenced the local provision of education (Bertocchi & Dimico, 2020). Additionally, Acharya et al. (2015) write that while legislation such as the Civil Rights Act and the Voting Rights Act made huge strides in increasing economic opportunity and reducing educational disparities, southern slavery has had a profound, lasting, and self-reinforcing influence on regional and national politics that can still be felt today (Acharya et al., 2015). Thus, even after gaining the

right to own land, there were – and continue to be – institutional policies and practices that work against Black farmers and landowners (Moore, 2019; Traverse, 2018).

Despite multiple and sometimes conflicting narratives, one common interpretation in the literature is Black women's activism and teaching to sustain rural southern communities. Anna Julia Cooper, Fannie Hamer, and Ida B. Wells-Barnett are Black women activists with roots in the rural South; they were also subjected to intersectionality by race, gender, and class oppression (Hutchison, 1982; Rosser-Mims, 2018). For example, in 1892, Anna Julia Cooper, one of the most prominent African American scholars, published *A Voice from the South by a Black Woman of the South,* the first book-length volume of Black feminist analysis in the United States. Cooper explored various topics, including race relations, poverty, and gender inequality (Hutchison, 1982). In addition, she encouraged the African-American community to take advantage of education. Similar to Hamer, Wells, and countless others, contributions have helped improve the political, social, economic, and educational landscape for Black women.

The history of agriculture is well documented, mainly through the works of Dr. Alfred C. True, a noted author, educator, and agriculture advocate. True (1937) concluded that farm boys and girls in rural high schools should be educated in the theory and practices of agriculture. Connors (2019), an Agricultural and Extension Education faculty member at the University of Idaho, wrote that in 1893, Alfred True, Director of the Office of Experiment Station (OES), advocated for the establishment of courses in agriculture in schools and urged the farmer to take an active role in the schools to let the school leaders know the needs of the farmers. In 1915, True would later become the director of the State Relations Service of the USDA, which was the reorganization of the OES (Connors, 2019). The passage of the Smith-Hughes Act in 1917 advanced the work of the OES in establishing agricultural education in public schools. While the

efforts to develop secondary agricultural education were resisted by educators and many farmers, it ultimately prevailed. The Commissioner of Education 1914-1915 reported that agriculture was taught in 4,390 secondary schools (Connors, 2019).

By contrast, the narrative was different for Black farmers. Jones (1981) wrote about the role of the Tuskegee Institute in the *Education of Black Farmers*, where the teaching of agriculture evolved from students working on the school farm. As stated by Jones, in 1890, over half the race was illiterate, and less than 1% of Blacks engaged in agriculture owned the land they tilled. Tuskegee Institute emerged under the leadership of Booker T. Washington, who formulated a self-help strategy into a center for educating and uplifting Black farmers in the South. Booker T. Washington (1865) concluded:

> The great body of the Negro population must live in the future as they have done in the past, by the cultivation of the soil. The most helpful service now to be done is to enable the race to follow agriculture with intelligence and diligence.

The Journal of Negro History was one of the few publications to write about the historical contributions of Blacks in agriculture. The publication helped redress past and enduring racism and inequalities in the academy (Thomas, 2019). Unfortunately, many Black professional historians tended to shy away from agricultural topics that only seemed to reinforce Black people's association with physical labor (Jones-Branch & Petty, 2019). Recognizing that the experiences of rural Blacks and Black women, in particular, demanded a more robust scholarly exploration to understand the complexity and diversity of their lives in the agricultural space, in 2019, the Agricultural History Society published a series of articles by Black women historians. The special issue, *African American Women in Agriculture during the Jim Crow Era*,

explored Black women's contributions as farmers, agricultural educators, home demonstrators, midwives, and civil rights activists in the rural South during the age of Jim Crow.

Included in the series was an article by Petty (2019), who wrote about establishing a family farm in South Carolina. Petty (2019) viewed the farm as a space that not only shaped her upbringing in ways that influenced her activism but how it also provided an economic underpinning for her civil rights work. In addition, Petty (2019) documented her unusual approach to farm ownership and civil rights activism as a way of making a living while also making a difference.

Harris (2019) shared a similar work highlighting the overarching consequences of racism and inequality for professional Black women working in the South during the Jim Crow era. According to Harris (2019), Black and White home demonstration agents shared a common dedication and determination to elevate rural women's lives. They frequently cooperated along gender lines because they faced sexism that undervalued their work and left them unequally compensated compared with male demonstration agents. Compounding the situation for Black women agents, Harris (2019) argued that the additional burden of racism deprived them of an equal professional sisterhood with white female agents. In this instance, racism minimized opportunities for similar and fruitful collaborations between professional women to improve all Southerners' rural lives.

Sano (2019) examined the essential contributions of midwives to the public health system. Sano (2019) revealed that traditional midwives lacked academic training; instead, they learned skills from an elder and described midwifery as a "calling" or a gift from God. Although the states viewed them as dangerous folk practitioners, they provided a health solution in the absence of physicians and more modern healthcare facilities (Sano, 2019). Jones-Branch (2019)

highlighted scholarship at the intersection of rural and agricultural history, southern history, and African American women's history. These and other authors built upon the groundbreaking works in the publication by contributing to discussions of how Black women, who are even more marginalized than Black men and white women, navigated Jim Crow laws while maintaining agricultural sustainability and eliminating diet-related disparities.

Agriculture in the United States is entangled with a history of racial discrimination and gender inequality that profoundly impacts those who own, access, and benefit from farmland (Harris, 2019; Jones-Branch, 2019; Petty, 2019; Sano, 2019; Shisler & Sbicci, 2019). Women have farmed for centuries but have infrequently had the farmer title. Instead, women expand what it means to be a farmer by performing feminine-coded work such as education, customer support, and feeding, thus making their role as care workers within their farming practices (Shisler & Sbicci, 2019). Shisler and Sbicci (2019) contended that Black women's work was crucial to farms throughout the South. Unfortunately, their efforts were often disregarded because of racist ideas and the belief that their work was unskilled and primitive (Shisler & Sbicci, 2019).

Historically, the civil rights movement and the women's rights movement have influenced agriculture and the income generated from farm operations. As such, Black women found themselves embroiled in two different struggles: (1) Black men needed their support to fight racial discrimination and prejudice (Bailey, 2020), while (2) White women needed their allegiance to challenge and help change the inferior status of women in American society. Unfortunately, both groups ignored the unique challenges that Black women faced.

History is shaped by imagination and perspectives, and arguably Black women in agriculture are not at the forefront. However, the foundation has been established for Black

women to contribute to the overall efficiency of agriculture. Countless inventions, ideas, and practices from important historical figures have helped improve agriculture productivity for Black farmers. For example, educators such as Booker T. Washington worked to offer agricultural education to Blacks under the Second Morrill Act of 1890 (Wilson, 2021). As Wilson (2021) documented, Morrill's legislative proposal correlated with the Emancipation Proclamation, being that Lincoln signed both documents to advance the infrastructure for land ownership and opportunities for formal education.

Additionally, Henry Blair, George Washington Carver, Booker T. Whatley, and other notable agricultural scientists and inventors sought to revitalize southern soil that cotton had stripped of its nitrogen to help increase production capacity. Their efforts gave southern farmers another crop to produce and sell besides cotton, thus diversifying the market (Poughkeepsie Farm Project, 2017). The combination of the 1890 Land Grants and the innovative research of these leaders led to the inclusivity of an underserved population of Black farmers.

Fannie Lou Hamer, a religious figure and a powerful voice in the civil and voting rights movement, aggressively sought better livelihoods for Blacks in agriculture when very few Black women were involved in the progression (Blain, 2019). Her creative challenge to the political process, coupled with economic strategies, led to greater racial equality. She advocated for cooperative land ownership, which would advance Blacks toward the ultimate goal of total freedom, according to Blain (2019). Her revolutionary Freedom Farm Cooperative (FCC), founded in 1969, acquired 640 acres in Ruleville, Mississippi. The FCC created a shared ownership model allowing cooperative members to feed themselves, own their homes, farm cooperatively, and start small businesses together to support a sustainable food system, land ownership, and economic development (Blain, 2019).

These historical figures and other individuals have helped promote self-sufficiency practices and ultimately helped improve conditions for Black female farmers in the United States. Arguably, the most crucial aspect of agriculture is that it is the basis of the world's food supply. Agriculture still provides an innovative way to build community and fight food insecurity (Muscato, 2020). Therefore, several opportunities exist for research and development for Black women. Changing the demographics to support research, education, and teaching may help increase participation by women and underrepresented minorities in rural areas. Numerous farming cooperatives have been established to increase land ownership, agricultural education, and living conditions for Black farmers (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a).

Trends

Diversity in its many forms can drive innovation and bodes well for the overall United States economy (Waldock & Zingales, 2020). Emerging technologies provide farmers with greater data-driven insight, allowing them to streamline farm management, improve animal care, and boost productivity. Innovation in agriculture technology will continue to advance as internet-enabled devices become ubiquitous. Farm automation is also helping producers to save time, as the technology reduces the need for people to actively partake in a task. Reviewing current trends provides data and insights to create policies, advance advocacy efforts, and establish programs and initiatives conducive to Black women's progress in agriculture. By analyzing factors such as race, ethnicity, size of business, and entrepreneurial dynamism, focused efforts can be given to determine areas of achievement and identify areas that need improvement.

The growing population and demand for food mean that farmers must increase crop production by at least 23% to maintain current living standards (Van Dijk et al., 2021).

Therefore, the awakening demands for a more relevant educational experience for Black women in agriculture are becoming a reality. Penniman (2018), a farmer and activist, have contributed to the growing body of literature on Black female farmers and food sources. She addresses diet-related illnesses often attributed to individual behavior and poor lifestyle choices. Penniman believed that the Act of farming and understanding the history of Black farmers is a source of liberation. Therefore, as the co-director of Soul Fire Farm, Penniman (2018) offered workshops focused on basic farming skills, healing people and the land, and understanding the history between Black people and farming in the United States. As said by Penniman (2018), "You can't go through hundreds of years of enslavement and sharecropping and tenant farming and convict leasing and not have that trauma get imprinted into your DNA and your cultural history" (p. 53). The work by Penniman (2018) is consistent with scholar-activism, a term coined by Gripper (2020) to show how academics also have a critical role in agricultural resistance and freedom movements.

Black-led organizations cultivate food and land sovereignty in many cities to help individuals and communities regain agency and ownership over their food systems. According to Gripper (2020), everything is done in an academy that amplifies the voices of Black and brown producers. The programs consist of community-based participatory research, conference planning, and competitive stipends to all the community members who contribute to the program. From community gardens to fresh farms and farm-to-table restaurants, Black women can advocate for food justice and establish community relationships to food with lasting improvements to health and wellbeing (Gripper, 2020).

In recent years, many emerging leaders have contributed to agriculture's social, scientific, industrial, and political progress. For example, Secretary Marcia Fudge, the 18th Secretary of the

U.S. Department of Housing and Urban Development and former chair of the House Committee on Agriculture's Nutrition Subcommittee, has a record for accountability on food and nutrition programs. Dr. Jewel Hariston-Bronaugh, an inclusive and accomplished agricultural leader, was in line to be the first Deputy Secretary of the USDA (Blackstone, 2021). Hariston-Bronaugh served as executive director of Virginia's USDFA Farm Service Agency and was dean of Virginia State University College of Agriculture. Shirley Sherrod, a co-founder of New Communities, a farm collectively owned by Black farmers, is widely recognized for creating the original model for community land trusts in the United States. The organization continues to empower the community through agribusiness and economic development. These phenomenal Black women in agriculture make it easy to support the claim by Wilson (2021) that the next generation of women on the rise in agriculture brings more credentials, career experiences, and grit.

Analyses have examined the overall impact of women and Blacks in agriculture. U. S. Department of Agriculture, National Agriculture Statistics Services (2019a) reported that the top states for Black producers in 2017 were Texas (11,741), which made up 3 percent of the state's total producers, Mississippi (7,028), Alabama (4,208), Louisiana (3,222), Georgia (2,870), S. Carolina (2,634), Florida (2,448), N. Carolina (2,099) and Oklahoma (2,074). As a result, the study will focus specifically on the Black Belt areas (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). It is noted that Texas has the most significant number of Black farmers than any other state. However, they comprise only 3 percent of the state's total farmers. Black farmers make up a larger share of the total farmers in Mississippi (12%), Louisiana (7%), South Carolina (7%), Alabama (6%), and Georgia (4%). Additionally, more than any other state, Texas has 156,233 female producers, equating to 38 percent. In 2017,

female-operated farms – 1.1 million farms with one or more female producers responsible for making decisions about the farm's operation – were 56% of total farms. In comparison, 91% of farms had one or more male producers.

When reflecting on trends related to women in agricultural science, there is still a great need for improvement. The role of women in agriculture is expanding, as USDA statistics indicate; however, there remains a need for more diverse voices because the landscape is complex. Basche (2016) reported while working on a Ph.D. at Iowa State University that women own approximately half of the state's agricultural land. However, women are only 8% of the principal operators, and for women of color, the number of principal operators is less than 1% (Basche, 2016). Although much attention is being paid to women in Science, Technology, Engineering, and Math (STEM) careers, the reality is that there are disparities in Agricultural Science. Compared to their male counterparts, women are the minority in all agricultural science fields, and nonwhites make up less than one-quarter of all faculty (Basche, 2016). Additionally, women are far more likely to be non-tenured faculty than their male counterparts. A study by the University of Florida Institute of Food and Agricultural Sciences found that despite earning 44% of the doctorates in agricultural sciences, women hold just 23% of the tenure-track faculty positions at U.S. land-grant institutions.

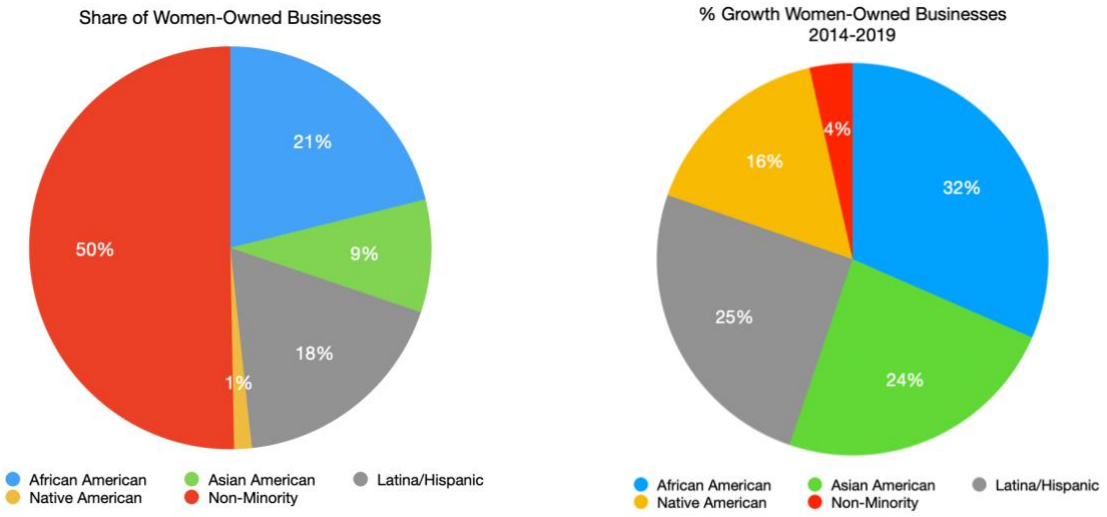
Finally, women and women of color are more likely to work part-time (Basche, 2016). It is also worth noting that women are known to comprise 43% of the agricultural labor force. Yet, they have less access to productive resources such as education, financial services, equipment, and land (Basche, 2016). Basche (2016) also added that women and farmers of color are relegated to smaller farm operations because of the lack of resources.

Women-Owned Business

The growth rates of several vital metrics show continued progress with increased ownership, employment, and revenue growth for women-owned businesses. For example, according to the American Express Commission (2019) State of Women-Owned Business Report, women-owned businesses grew 21% from 2014 to 2019. In addition, women of color grew at a double rate (43%), with Black women showing the most increase. Figure 2 represents the shares of women-owned businesses and the subsequent growth rate from 2014 to 2019.

Figure 2

American Express Commission, State of Women-Owned Business Report (2019)



As illustrated in Figure 2, based on the American Express Commission (2019), State of Women-Owned Business Report, woman-owned businesses are growing twice as fast on average as all businesses nationwide. In addition, Caplan (2020), a small business strategist, reported that in 2019, women of color accounted for 50% of all women-owned businesses, which employed nearly 2.4 million people and generated $422.5 billion in revenue. The report further indicated that women-owned businesses hire fewer workers than businesses in general. Typically, women-

owned businesses employ 0.7 workers, compared to 1.8 for all privately held companies and 3.8 for all firms. Additionally, the disparity between minority and non-minority women is increasing.

The American Express Commission 2019 State of Women-Owned Business Report states that in 2014, minority-owned businesses averaged $67,800 in revenue; by 2019, the average had dropped to $65,800. In 2014, non-minority women-owned businesses averaged $198,500 in revenue; by 2019, the average had jumped to $218,800. The decrease could be attributed to the entry of smaller, younger companies for minority-owned businesses, thus lowering the average revenue figures. The exception is Asian women-owned businesses, where the average revenue increased. Figure 3 represents the national trends of women-owned companies based on income and employment.

Figure 3

American Express Commission, State of Women-Owned Business Report (2019)

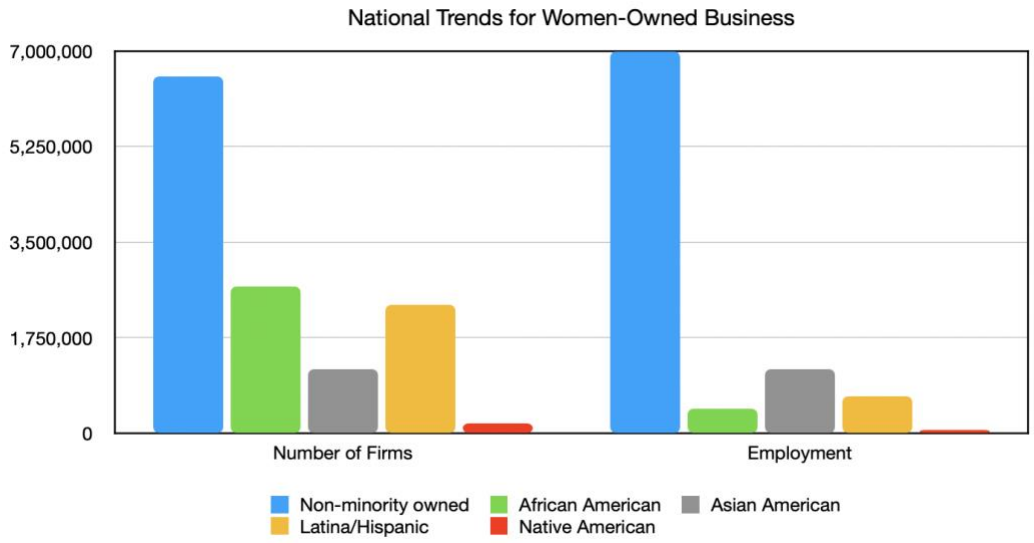


Figure 3 is consistent with trends seen in agriculture when comparing women-owned businesses. The USDA New Farmers noted that nearly 1 million women work in America's lands

(U. S. Department of Agriculture, National Agriculture Statistics Services, 2019b). That is almost a third of the nation's farmers, with these women generating $12.9 billion in annual agricultural sales. Furthermore, women's participation in agricultural and non-agricultural self-employment and paid employment has risen. These changes could indicate increased economic empowerment of women. However, according to Schuster and Lambrecht (2017), concerns about gender inequality have been voiced since the 1980s. Yet, these same concerns are expressed today concerning gender differences, women's access to and control over resources, and women's empowerment.

The potential of Black women entrepreneurs in agriculture has not been fully recognized in contributing to economic growth. Although farms with female producers as decision-makers tend to be smaller than average in both acres and value of production, women have been a crucial part of agricultural production, food security and nutrition, land and natural resource management, and building climate resilience across the country centuries. Thirty-six percent of all producers are female, and 56% of farms have at least one female decision-maker (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019b).

Globally, The Consortium of International Agricultural Research Centers (CGIAR, 2019) was founded in 1971 as a global research partnership for a secure food future dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resources (CGIAR, 2019). CGIAR (2019) reported that women continue to provide more unpaid farm labor than men, but the share of women who do so as their primary employment has decreased. Understanding the global impact is important because, as researchers identified by CGIAR indicated, progress toward gender equality enhances inclusion and promotes effective development. Gender bias contributes to the underlying causes of all the challenges CGIAR

(2019) identified, such as living within planetary boundaries, securing public health, promoting equality of opportunity, sustaining food availability, and creating jobs and growth (CGIAR, 2019).

Scientists supported by the CGIAR Research Program on Policies, Institutions, and Markets (PIM) are working to provide solutions to eliminate this bias (CGIAR, 2019). For example, the Women's Empowerment in Agriculture Index (WEAI), associated with the PIM portfolio, measured women's empowerment and inclusion in agriculture. The index was launched in 2012 to understand the linkages between women's empowerment, agricultural productivity, and food security. Doing so helps to diagnose empowerment gaps, identify and prioritize interventions to close these gaps, and test the effectiveness of these interventions. (CGIAR Research Program on Policies, Institutions, and Markets, 2019). In addition, women's participation in agricultural and non-agricultural self-employment and paid employment rose over time. These changes could indicate increased economic empowerment of women (Schuster & Lambrecht, 2017).

In comparison, Doss et al. (2018) supported gender equality and women's rights by challenging myths about women in agriculture. The article dispelled the myth that 70% of the worlds poor are women, based on data provided by the United Nations Procurement Division. The authors questioned the most commonly used poverty measures because they cast women as victims rather than contributors to food security (Doss et al., 2018). Furthermore, focusing on women as poor and most vulnerable to poverty can distort the design and implementation of programs and policies (Doss et al., 2018).

The second myth, revealed by Doss et al. (2018), is that women are the primary food producers in the world. While women are essential for food security, especially within the

household, according to the authors, this claim is often made to demonstrate the importance of women's role in agriculture and thus intended to direct policies toward women farmers. However, work in the kitchen, gardens, or tending small livestock or poultry is often not considered agricultural work (Doss et al., 2018). Likewise, the Food and Agriculture Organization of the United Nations (FAO) also confirmed that women farmers have less land, formation, capital, and credit than men farmers. Therefore, it is hard to substantiate the claim that women provide a high percentage of the labor input into food production (Muma et al., 2011).

The third myth Doss et al. (2018) revealed was that women own 1% or 2% of the world's land. The claim is made about the property rather than the land. According to Doss et al. (2018), this myth exposes that the legal systems and patriarchal gender norms may prohibit or make it difficult for women to acquire and retain land. In other words, to ensure food security, farmers must have secure tenure on the land they farm. In addition, women are often vulnerable to loss of land when their household structure changes (Doss et al., 2018).

Research by Pilgeram et al., 2022, shows how factors such as farming methods, land tenure, gender identification formation, and broader societal acceptance of women in agriculture have impacted women’s experience on the land. The findings suggest that

While much has been examined, further examination is warranted to eliminate the barriers that thwart the success of Black women farmers, specifically with training programs. Previous studies have also found that the labor structure in rural communities favors men rather than women, thus creating further ties into the cultural aspects that illustrate that farming is a man's job (U. S. Department of Agriculture, Women in Agriculture Mentoring Network, 2020). The women in agriculture mentoring network believes that functioning in a fair and just society can spur innovation, improve productivity, create jobs, build wealth, and grow the economy. The

economic potential of women in agriculture requires changes in policies, business practices, and attitudes.

Black Farmers

Of the 48,697 Black producers in 2017, 71% were Black males, and 29% were Black females. The age range was 6% under 35, 51% between 35-64, and 43% over 65. Farmers with ten or fewer years of farming were 29%, and farmers with eleven or more years of farming were 71%. (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). This research shows that Black producers, on average, are older than U.S. producers overall and more likely to have served or be serving in the U.S. military, 19% compared to 11% (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). In addition, a smaller share of Black farmers, 61%, live on their farms compared to 74% of all farmers. Figure 4 provides data for operators reporting in the 2017 Census of Agriculture.

Figure 4

Number of Producers and Farms, Black and All U.S. (Census of Agriculture 2017)

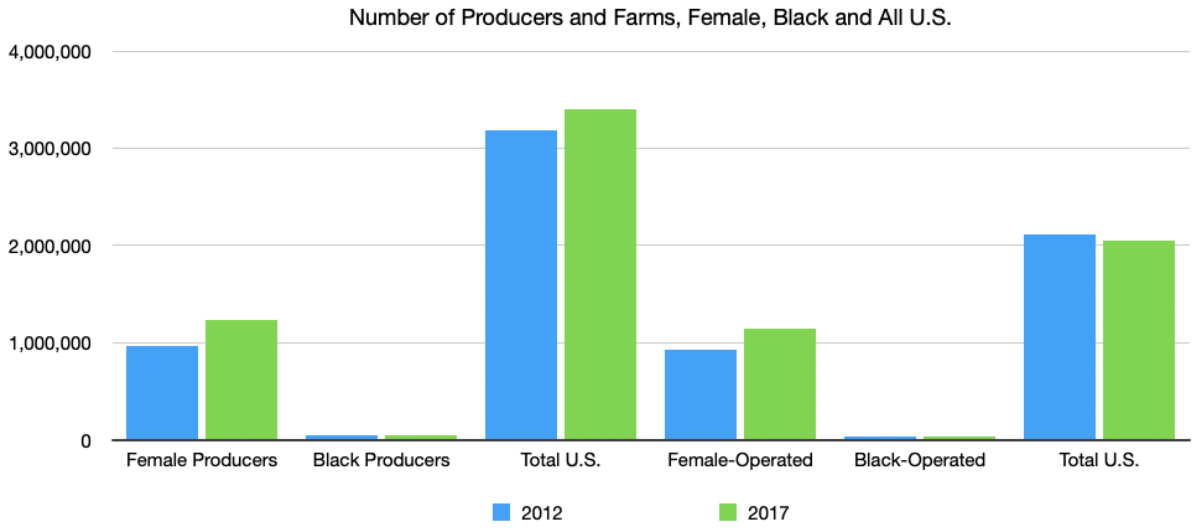


Figure 4, illustrated by the number of producers based on female and Black producers, indicates that there is still room for improvement for Black farmers. The United States Census of Agriculture reported that in 1920, Black farmers had acquired over 16 million acres of farmland, accounting for 14% of all U.S. farmers. Of the approximately 926,000 Black farmers, all but 10,000 were in the South. In 2017, there were only 45,508 Black farmers. A more disturbing fact is that ownership is declining faster for Black farmers. Black farmers have had a 3% decline since 2012 compared to 0.3% for White growers (Parker, 2019).

The 2017 Census of Agriculture reported that approximately 3.2 million farmers are White, equating to 95% of the U.S. total. A recent report by American Farmland Trust indicated a reduction of 31 million acres, which equates to an average value of $3,380 per acre, of farmland lost between 1992 and 2012. Between 2001 and 2016, 11 million acres of farmland and ranchland devoted to fruit, nut, and vegetable production were converted to urban open land or low-density residential land use (Hopper, 2020). Blacks and Native American farmers were disproportionately affected by land loss (Newkirk, 2019; Reiley, 2021). Therefore, looking at that number in isolation would mask the disparities that fall along racial lines.

Although some of the most cherished sustainable farming practices have roots in African wisdom, discrimination and violence against Black farmers have led to their decline to less than 2 percent today (Hegeman, 2021). Tibbetts (2006) reported how the enslaved people who worked on rice plantations in South Carolina helped create one of the most prosperous economies of the 18th and 19th centuries. In addition, the agricultural skills and knowledge of farming rice and other crops brought to the U.S. from Africa contributed to achievements that European settlers could not have achieved on their own (Tibbetts, 2006). Hegeman (2021) described the steep decline of Black farmers by documenting that no active Black farmers are

left in a historic Kansas community. The landmark community Nicodemus was the most famous of the Midwestern settlements where hundreds of formerly enslaved people migrated over a century ago, hopeful that farming their land would help them to escape racism and poverty (Hegeman, 2021).

Land ownership is American families' most significant contributor to intergenerational wealth (Ward, 2020). Ward (2020) believes that land is the basis for political and economic power; nevertheless, it has not been accessible to all Americans on equal terms. Several factors have contributed to the decline and history of land loss. Historically, the impact of systematic discrimination by private and public institutions against Black farmers have been documented (Browning, 2019; Carter & Alexander, 2020; Reiley, 2021). Institutional racism occurs when government agencies adopt policies that exclude or target people of color either overtly or in their effects (Glave, 2017). Such was the case with USDA's discrimination against Black farmers when distributing loans, as addressed in the Pigford v. Glickman class-action discrimination suit. Additionally, many Blacks did not have access to the legal system or trust in the southern courts' approach during Reconstruction. Greene (2016) detailed how many families jeopardized ownership by not leaving a will, thinking ownership was automatically transferred to their decedents.

Heirs’ property is one of the contributing factors behind the precipitous decline of land ownership in the Black community. The Southern Coalition for Social Justice (2019) stated that heirs’ property exists when a landowner dies intestate, and the property is passed down to multiple inheritors. When the land is partitioned and distributed among the heirs, the remaining parcels might be too small to maintain viable farms (Southern Coalition for Social Justice, 2019). The U. S. Department of Agriculture has recognized heirs’ property as the leading cause of

involuntary black land loss (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). It reported that heirs' property makes up over a third of Southern Black-owned land, 3.5 million acres, worth over 28 billion dollars. Without proper legal documents, the landowners are vulnerable to laws and loopholes that allow speculators and developers to acquire the property.

At the height of Black farming in 1920, Black farmers operated 925,710 farms, about one-seventh of all farm operations in the United States (Castro & Willingham, 2019). There have been no notable decelerators of the problem of heirs' property land loss over the last 40 years, yet, Black farms continue to maintain a foothold in American agriculture. However, according to Boyd, president and founder of the National Black Farmers Association, slowly, there is an acceleration of the numbers with the views of younger generations starting to shift. Additionally, the U. S. Department of Agriculture is proactively developing policies and regulations allowing it to provide services to the thousands of Black farmers and landowners who cannot avail themselves of those services because of heirs' property. Thomas Mitchell (2020), a law professor at Texas A&M University, is the architect of the Uniform Partition of Heir's Property Act (UPHPA). This Act is a template for reforming state-level property laws by establishing due process mechanisms to enhance private property rights and protect all families' real estate wealth (Mitchell, 2020).

In addition to constraints caused by heirs' property, young people are migrating from rural to urban areas, resulting in the aging of the rural population. The lack of farm successors has been a trend that has negatively impacted the continuity of family farms. In the years after enslavement, Blacks began to move to Northern cities in a series of mass migrations that continued into the 1970s (Glave, 2017). According to Glave (2017), the relocation to the North

and urbanization distanced them from the rural experiences of their parents and grandparents, who lived and worked in fields, gardens, and woods. Scorn, distaste, and fear of nature became the emotional legacy of people kidnapped from their homelands and forced to travel across the Atlantic Ocean to pick cotton and prime tobacco for their violent and abusive masters (Glave, 2017).

The Shift Toward Sustainable Agriculture

In recent years there have been appeals to transition to sustainable agriculture to address the challenges associated with climate change, biodiversity loss, and water scarcity. For decades, policies, technologies, and economic pressures have trended more toward capitalism; therefore, there has been a decline in farm numbers as production has shifted to larger farms specializing in two to three crops or livestock. Under a model that pursues productivity as the primary goal, these more extensive operations have eroded the critical resource of farm knowledge. A sustainable transition in agriculture would require growing and sustaining rural economies and a knowledgeable workforce (Carlisle et al., 2019). Lobao and Meyer (2001) believed that economic and policy barriers have conspired to make agriculture an unwelcoming profession at the moment when an influx of farmers is needed the most. Reversing the trend would require new sustainable farmers to be enabled, recruited, and trained to bolster a knowledgeable workforce (Lobao & Meyer, 2001).

There are also increased efforts toward Community-Supported Agriculture (CSA): farmers, horticulturists, and inventors who have contributed to revolutionizing the way the food system functions today. For example, Dr. Booker T. Whatley (1987), an Alabama horticulturist, author, and Tuskegee University professor, examined sustainable and efficient farming practices, allowing the small farmer to make a decent living (Whatley, 1987). His book explored his ten

commandments that help farmers minimize unnecessary costs, limit waste, and maximize income and farm space with smart crop selection. Whatley (1987) also identified community support organizations as an essential aspect of a prosperous farm in the 1960s and '70s. He shared that community members paid an initial membership fee, contributing to the organization's success. In return, the members received fresh produce to pick themselves, thus ensuring a constant cash flow into the farm while saving time and labor (Whatley, 1987). Today, this idea is commonly referred to as community-supported agriculture (CSA) and is becoming more popular as local food demand grows.

The shift toward sustainable agriculture can further be attributed to a combination of necessity, flexibility, and opportunity presented in the current environment. The COVID-19 pandemic showed another crisis woven into history, just like the 1918 Flu Pandemic, that revealed the importance of ensuring the nation's food security (Duvall, 2021). Furthermore, Duvall expressed the necessity of agriculture as a viable employment option or a means of supplementing income. Also, the demand for fresh and organic products increased, changing the food market landscape as consumers bought more vegetables than before the pandemic. Shearing (2021), vice president of public affairs for Associated Milk Producers Inc., attributed the change to consumers preparing more meals at home and pointed out that before COVID-19, approximately 20% of the U.S. population ate 90% of their meals at home. About 50% of households report eating at home at least 90% of the time (Shearing, 2021).

The literature reveals the role of women in agriculture from a leadership perspective. For example, Shearing (2021) advocated for women in agriculture by stating that women have been a critical part of farm and ranch operations and now have the unique opportunity to change the industry. Shearing states, "With women making up more than one-third of U.S. farmers and

ranchers – and that number growing yearly – there is no reason those numbers should not also rise in ag leadership positions" (Shearing, 2021).

Further support is found with Norris (2021), a former chair of the American Farm Bureau Federation's Young Farmers & Ranchers Committee, encouraging women in agriculture to seek leadership positions. She highlighted that the numbers show that we are no longer on the sidelines and that more women deserve the same seat at the table as any other farmer or rancher (Norris, 2021). Norris further advocated that from her experience, leaders are recognized and respected by stepping up and speaking out about issues affecting a topic of interest. In addition, leaders are passionate about trying to lead the project to success. Norris, who owns an agricultural marketing company, described her Farm Bureau leadership experience – both in Florida and nationally – as an incredible platform to represent agriculture, share the importance of our industry, and be the voice of agriculture (Norris, 2021).

A review of the trends shows that women and minorities have a unique opportunity to change the industry by building upon the legacy of stewardship, innovation, and productivity. They can help one another succeed now and into the future. For example, as a child, Washington (2021), founder of the Garden of Happiness, learned to appreciate wholesome food and agriculture. As a result, she has spent decades promoting urban farming in New York. Likewise, research by Pilgeram et al. (2022) indicates that understanding women’s experiences in agriculture requires understanding the impact of race in a broader historical context.

Washington (2021) coined the term "food apartheid" to voice concern about the oppressive, inequitable food system that she believed to be based on skin color and economic means. Whereas a food desert is commonly used to describe the areas where people have low incomes and low physical access to supermarkets, food apartheid highlights the discriminatory

structures that impact food access and control (Lewis, 2021). Washington asserted that whether the land is used to create a farm business that feeds the world, land that is left better than it was found, or a relationship that empowers and supports a community, industry, and neighbors—there are many ways to build and grow with agriculture to promote green solutions and sustainable communities. She advocates that women can move mountains if given the capital, land, and opportunity (Washington, 2021)

Legislation has been reintroduced to reverse the longstanding trend of Black land loss while instituting key civil rights initiatives. The Justice for Black Farmers Act was enacted to end discrimination within the USDA, protect remaining Black farmers from land loss, and implement systemic reforms to help family farms across the United States. (Booker, 2023). One of the more significant provisions of the Black Farmers Bill is to provide land grants to create a new generation of Black farmers and restore the land base that Black farmers have lost over the past decades (U. S. Department of Agriculture, National Agricultural Library, 2021). Efforts to restore the land are important because, according to a Pew Trust's Stateline report, Black-owned land used for farming has dropped by 85% in the past century. In addition, as currently written, the Justice for Black Farmers Act is intended to increase credit assistance for farmers to purchase land. The Act also provides for investments in agricultural education at historically Black colleges and universities (U. S. Department of Agriculture, National Agricultural Library, 2021).

Alignment with Higher Education

Post-secondary education has become an excellent resource for examining and understanding Black women's perception of agriculture. With recent research and technological advancement, farming has significantly changed (Carlisle et al., 2019; McKim et al., 2020). A

qualitative assessment provides an authentical review rooted in tradition and culture that will expand beyond existing institutions and socialization structures. Qualitative research involves examining the internal and external activities of Black women at higher education institutions to understand the influences of culture on their academic pursuits (Maxwell, 2013). As a result, the number of higher education institutions that offer agriculture curricula has also increased.

However, there are challenges confronting higher education institutions as they are called upon to initiate, lead, and articulate a vision for the future of agriculture. Barham et al. (2020) examined agriculture and life science faculty at U.S. land grant universities in two categories: academic engagement, as those who sponsor research, industry collaborations, and presentations, and academic commercialization, which includes patenting, licensing, and start-up. Their findings highlighted how faculty attitudes toward science and commercial activity shape involvement (Barham et al., 2020). Progress is explicitly needed regarding the absence of diversification between university faculties and their student bodies. Universities are also being called to adjust their programs to accommodate new topics and teaching and learning models.

As policymakers realize these topics are still being developed as policymakers recognize that meaningful change also requires understanding, as indicated by the various new outreach initiatives and programs. For example, the U. S. Department of Agriculture, National Institute of Food and Agriculture (2021b) recently invested over $8.65 million in research projects through its Agriculture and Food Research Initiative program. In partnership with higher education institutions, the investment can help stimulate and fund research and technological innovation to address agricultural needs and enhance social sustainability (Carlisle et al., 2019; & McKim et al., 2020). These and other initiatives help to advance the cause of agricultural education.

The Food and Agriculture Organization of the United Nations (FAO) predicts that the world's population will grow to almost 10 billion by 2050, thus boosting agricultural demand. As a result, many colleges and universities need to merge forces with stakeholders such as USDA to enrich and support increased education of critical knowledge and information on agriculture. For example, the USDA partnership aligned with historical Black universities to help right the wrongs of past discrimination and the resulting diminished economic opportunities. The expanded agricultural curriculum has paved the way for impactful programs that address some of the world's most significant challenges today by exposing the students to a diverse curriculum through the Department of Agriculture, Nutrition, and Humanities. As a result, they are equipped to address complex social issues facing food and nutrition, agriculture, and human and natural resource science.

The U. S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) provides a non-credit educational network that addresses public needs by providing non-formal higher education and learning activities to farmers, ranchers, communities, youth, and families (U. S. Department of Agriculture, National Institute of Food and Agriculture, 2021). There are also federal, state, and local collaborations with community-based organizations to help stem the loss of land and eliminate barriers to Black Americans. In 2020, NIFA invested over $17 million in agriculture education. Dr. Carrie Castille, the first female to serve as NIFA director, stated that developing the next generation of research, education, and extension professionals in the food and agricultural sciences is critical to the growth of the agriculture industry. According to Castille, NIFA programs support colleges, universities, and technical education institutions to ensure a steady pipeline of talent to fuel the future workforce.

Among the 37 organizations to receive grants was Clemson University's project, FLORECE!: Future Leaders Obtaining Research & Extension Career Experiences (U. S. Department of Agriculture, National Institute of Food and Agriculture, 2021a). The project prepares undergraduate students to become globally engaged professionals with world-class research and extension skills that allow them to identify critical factors that impact the sustainability of agricultural systems. Additionally, the University of Hawaii's project, "Empowering Women and Underrepresented Undergraduates with Advanced Technology Research Training in Agriculture and Food Sciences," developed Hawaii's local agriculture and food science industry workforce through education and training.

In Kansas City, Missouri, the U. S. Department of Agriculture's National Institute of Food and Agriculture (NIFA) announced $17.2 million for 37 Education and Workforce Development awards through its Agriculture and Food Research Initiative (U. S. Department of Agriculture, National Institute of Food and Agriculture, 2021b). Specifically, one Education and Workforce Development priority area recipient includes Texas A&M University-Kingsville's Drone WAVE project. The program highlights drones used for Women's Advancement, Visibility, and Experiences (WAVE) in food and agriculture, cyber informatics, and tools oriented to research. The purpose is to recruit, train, mentor, and graduate the next generation of women professionals with competitive geospatial sciences and technology skills. Implementing this initiative will address at least one of the following NIFA strategic goals: sustainable bioenergy, food security; childhood obesity prevention; or food safety (U. S. Department of Agriculture, National Institute of Food and Agriculture, 2020).

These are just a few of the NIFA programs that support higher education institutions to ensure a consistent pipeline of talent to fuel the future workforce. In the fiscal year 2020, NIFA's

total investment was $1.95 billion. Castille explains that the contribution helps advance agricultural research, education, and extension nationwide to make transformative discoveries that solve societal challenges. Furthermore, NIFA supports initiatives that ensure the long-term viability of agriculture and applies an integrated approach to ensure that groundbreaking discoveries in agriculture-related sciences and technologies reach the people who can put them into practice (U. S. Department of Agriculture, National Institute of Food and Agriculture, 2020).

The 1890 land-grant system consists of 19 historically Black universities established under the Second Morrill Act of 1890. According to NIFA, the Capacity Building Grant (CPG) program is structured to help increase the economic potential of land-grant institutions. In June 2017, the U. S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) awarded $16 million for 42 grants through the 1890 Institution Teaching, Research, and Extension Capacity Building Grants (CBG) program, which focuses on building and strengthening research, teaching, and extension programs in the food and agricultural sciences by building the institutional capacities of the 1890 land-grant institutions (U. S. Department of Agriculture, National Institute of Food and Agriculture, 2022). Additionally, CBG focuses on strengthening the partnerships among universities, government agencies, and private industry through food and agricultural science and advancing cultural diversity in the scientific and professional workforce by attracting more students from underrepresented groups.

According to Ramaswamy, former director of NIFA, the continuing partnership with the 1890 land-grant universities ensures the sustainability of our country's agricultural future. The next generation of leaders will be shaped by our commitment to research, education, and extension outreach (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019b). The competitive grants to the 1890 land-grant institutions that address critical problems

of national, regional, and multi-institutional importance in sustaining all components of agriculture, including farm efficiency and profitability, ranching, renewable energy, forestry, aquaculture, organic agriculture, rural communities, and entrepreneurship, human nutrition, food safety, family and consumer sciences, biotechnology, and conventional breeding (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019b). The grants support projects strengthening research, teaching, and extension programs in the food and agricultural sciences. The specific focus is on the need areas of curriculum design, materials development, faculty development, and other initiatives that significantly impact the economy (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019b). As McLaren (2020) stated, these efforts will help address critical problems of national, regional, and multi-institutional importance in sustaining all components of agriculture.

Summary

This literature review indicates several opportunities for more Black women to help build the country's agricultural system. These opportunities can be accomplished by strengthening teaching, research, and extension programs in the food and agricultural sciences. Many Black females have ancestral ties to the land and have kept in touch with their agrarian roots by establishing farms and gardens throughout the United States (Gripper, 2020; Newkirk, 2019; Wilson, 2021). Yet, little research has been conducted to determine the role post-secondary education can have in understanding the perception of Black women in agriculture. It is worth noting that many statistics report by gender or by race but seldom both. The lack of reporting makes it difficult to track women of color, reflecting the implicit bias in data collection.

While the motivation for farming can vary, the research examined current economic practices that support factors contributing to persistence. The assumptions linked to Maslow's

(1943) hierarchy of needs theory and Crenshaw's (1989) intersectionality theory were intertwined within the research to understand the challenges of Black female farmers. Because Black women lived and worked under the unequal and discriminatory Jim Crow regime, they consciously and intentionally accepted the challenge to make their mark on southern agriculture to improve rural life (Collins & Bilge, 2016). It is further evidence of the fertile yet largely unexplored ground from which much can be learned about the long-overlooked intricacies of rural Black women's lives and experiences (Jones-Branch & Petty, 2019). Self-directedness, internal motivators, and life experiences are a few revealed characteristics.

The study helped to fill the gap for further understanding of how post-secondary education can help to increase the significance of Black women in agriculture. As Maslow (1943) posited, there is an innate need to learn new information and better understand the world. Therefore, the study examined the lived experience of Black women and the influence of post-secondary education on their involvement in agriculture. Furthermore, while there is perceived gender discrimination in agriculture, the disparity is more widespread for women of color in the United States (Valdivia, 2019). Gender-specific obstacles such as lack of access to land, markets, financing, agricultural training, and education put female and Black farmers at a significant disadvantage. In comparison, Valdivia (2019) believed that women working in rural areas must face a double burden, so it is essential to integrate gender mainstreaming into the national agriculture policies.

It is essential to recognize the complex social issue surrounding why few women find agricultural careers attractive and why they often find such jobs exclusive and demanding. Gender discrimination coupled with issues confronted by Black farmers, -- such as the feelings of inferiority in the farming community, feelings of inferiority in the Black community, feelings

of distaste and anxiety that have been passed down from generation to generation, negative memories of land being taken away through taxation, unethical business practices and the withholding of government loans -- is all issues that may impact motivation.

According to U.S. News, and Associated Press, organizations such as FarmaSis help empower women while addressing gender disparities in farming and promoting better health by providing products and teaching agriculture skills (Clarey, 2020). FarmaSis is comprised of Black women farmers and illustrates the benefits of increased social interaction among Black women farmers. According to Lutz and Herd-Clark (2019), agriculture provided the space that shielded them from social isolation and helped improve their families lives.

Finally, the literature review shows a lack of prior research focused on the college experiences of Black women pursuing studies related to the topic. According to a study by the University of Wisconsin-Madison, Women's & Gender Consortium, the tarnished early history of American agriculture, the stories, and the experiences of Black women should be documented so that modern agriculture can learn from its past (Mumma, 2021). Jones-Branch and Petty (2019) also acknowledged the poor track record of publications such as the Agricultural History Journal in documenting the experiences of Black women (Jones-Branch & Petty, 2019). According to Jones-Branch and Petty (2019), because of the lack of articles published by Black women, it is not surprising that the journal pages have rarely featured scholarship by historians of African descent. Instead, they ponder how Black scholars' contributions could have impacted the understanding of Black and White farmers' influence on agrarian politics (Jones-Branch & Petty, 2019).

Likewise, in an article for *A.G. Daily,* Wilson (2021) expressed plenty of stories to amplify Black women farmers; they all deserve to be told. Yet, when considering the role of

Black women in agriculture, their stories are underrepresented in the pages of history books (Wilson, 2021). Although their stories are underrepresented in the pages of history books, the impact of Black women farmers has been and continues to be transformational (Wilson, 2021).

Limitations have been recognized in a male-dominated field that hinders the advancement and motivation of Black women. For example, Shisler (2016) conducted a study to understand the gendered experiences of female farm operators in Northern Colorado. The findings suggested that further research is needed to know how multiple oppressed identities affect women of color in the agricultural sphere (Shisler, 2016, p. 74). The study will also align with research conducted by Brown (2017) to gain insight into African American students and the influences of their lived experiences on choosing a major and pursuing a career in Agricultural Science and Natural Resources. In addition, Brown (2017) determined that further research was needed to examine existing programs created to promote agriculture to African American youth. Thus, studying the students' involvement in the programs could help determine the effectiveness of the programs in recruiting diverse participants.

Additional research was needed to understand the slight shift occurring among younger generation Black female farmers who allow careers and passions to be fully realized (Carter & Alexander, 2020; Lewis, 2021). Historically, Black females identify with activism, and today's Black farmers are also mission-driven, helping to address food deserts. Penniman (2018), co-Director and Farm Manager at Soul Fire Farm is an example of today's Black female farmers revolutionizing the traditional images of agriculture.

According to Penniman, she only saw images of white people as stewards of the land, organic farmers, and in conversations about sustainability for years. "Black people and the land was about slavery and sharecropping, about coercion and brutality and misery and sorrow. And

yet here was an entire history, blooming into our present, in which Black people's expertise and love of the land and one another was evident." (Penniman, 2018, p. 3). Fortified by a more accurate picture of Black people and their land, Penniman (2018) and others have created farms centered on the needs of the Black community. In addition to these mission-driven efforts, the problem should be addressed to understand how post-secondary education has influenced Black women in agriculture.

Chapter Two has outlined a review of what is currently known about Black women in agriculture. It also highlights what has been examined while considering factors that have yet to be studied. While existing literature about agriculture and farming is found independently for Blacks and women, limited resources focus on Black women. The experiences are similar to other female ethnicities and Black men; however, some experiences are unique to Black females. This study addressed gaps in the existing literature by unfolding the research's conceptual framework and synthesizing the related literature. The study provided a theoretical value by helping narrow the literature gap. The study also offered practical value by identifying solutions to the underrepresentation of Black women in agriculture.

CHAPTER THREE: METHODS

Overview

This transcendental phenomenological study aims to describe the perceptions and lived experiences of Black women and the influence of post-secondary education on their involvement in agriculture. Chapter three explains Moustakas' phenomenological research design to analyze how education and cultural experiences have influenced agricultural sustainability in rural and urban Black women in the Southern regions of the United States. Then, the research questions were reviewed, and the setting and participants were described, followed by the procedure, data collection methods, data analysis process, and role of the researcher. Finally, details will be provided to allow for the study replication while maintaining the confidentiality and anonymity of both the participants and the institutions. Trustworthiness will be established utilizing several data collection forms: semi-structured interviews, a focus group, and a photo narrative.

Research Design

This qualitative study used a transcendental phenomenological approach. This design is appropriate because phenomenology is an approach to qualitative research that identifies a phenomenon of the lived experience within a particular group (Creswell & Poth, 2018; Merriam, S., 2019). As opposed to a narrative study that focuses on a single individual, phenomenological research describes the commonality of the lived experiences of several individuals (Creswell & Poth, 2018). The approach’s fundamental goal is to describe the nature of the specific phenomenon. Therefore, this study provided insight into the human experiences of Black women in agriculture using a wide range of analytical tools such as interviews, photo narratives, and a focus group to help validate and build upon existing theory.

A qualitative research method provides flexibility and responsiveness and is open to contextual information (Merriam, S., 2019). A qualitative assessment provides an authentical review rooted in tradition and culture that will expand beyond existing institutions and socialization structures. The qualitative study involves examining the internal and external activities of Black women at higher education institutions to understand the influences of culture on their academic pursuits. Therefore, it is necessary to understand the political, economic, and social environments that determine opportunities critical to sustainable agriculture, from production to consumption.

Furthermore, the perceived appearance of something can make it a phenomenon. The challenge is understanding the phenomenon and capturing the essence of the experience without the preconceived ideas of the researcher (Moustakas, 1994). Because of the underrepresentation of Black women in agriculture, their collective voice is also underrepresentation. Therefore, a phenomenology structure will allow an in-depth analysis of individuals' programs, activities, and processes in different settings and environments. This will help explore various perspectives and align with the research question and procedures.

German philosopher Edmund Husserl introduced the philosophical method of phenomenology, primarily concerned with experience and consciousness. Husserl suggested that philosophy could become its own distinctive and rigorous science only by suspending or bracketing away the natural attitude. He insisted that phenomenology is a science of consciousness rather than empirical things (Beyer, 2020). Husserl's approach was that understanding the reality of a phenomenon is to understand the phenomenon as a person lives it (Moustakas, 1994). Moustakas (1994) noted that Husserl believed that a sharp contrast exists

between facts and essences, between the real and non-real, asserting that what appears in consciousness is an absolute reality while what appears in the world is a product of learning.

This phenomenological study focused on examining the essence of the experience of Black women in agriculture. In contrast, a case study describes and analyzes a bounded case or multiple cases. Case studies focus on an individual, a group, an institution, or an event (Creswell & Poth, 2018). Grounded theory was also not an appropriate research design for this study because grounded theory looks at experiences and as many other data sources as possible to develop a more objective understanding of the subject of the study (Creswell & Poth, 2018). Whereas the methods all look at real-life situations, phenomenological collates individual data and describes their experiences. The participants described their lived experiences and the influence of post-secondary education (Creswell & Poth, 2018; Moustakas, 1994).

Research Questions

The research questions for this study were grounded in the literature on perceptions of Black females in agriculture and the significance of post-secondary education. One central and four subordinate research questions guided this phenomenological-designed research. The formulation of these questions was based on the following characteristics: Seeks to reveal the essences and meanings of the human experience; seeks to uncover the quality rather than the quantitative factors in behavior and experiences; engages the total self of the research participants; does not seek to predict or to determine causal relationships; and is illuminated through careful, comprehensive descriptions, vivid and accurate rendering of the experiences (Moustakas, 1994, p. 105).

Central Research Question

What are the perceptions and lived experiences of Black women and the influence of post-secondary education on their involvement in agriculture?

Sub-Question One

How does post-secondary education impact the preparation and development of skills needed to increase opportunities in sustainable agriculture for Black women?

Sub-Question Two

What are the unique cultural experiences of Black women, from childhood to adulthood, that have motivated their persistence in sustainable agriculture?

Sub-Question Three

What role can post-secondary education play in eliminating gender bias that may hinder more women from going into agriculture?

Sub-Question Four

What role do higher education institutions play in helping to address diet-related disparities and maintaining agricultural sustainability?

Setting and Participants

Setting

The first setting for this study will occur in nine southern United States through cooperation with the Black Farmer's Associations. The top states for Black producers in 2017 were Texas (11,741), which made up 3 percent of the state's total producers, followed by Mississippi (7,028), Alabama (4,208), Louisiana (3,222), Georgia (2,870), S. Carolina (2,634), Florida (2,448), N. Carolina (2,099) and Oklahoma (2,074). Therefore, the study will focus specifically on the Black belt regions (U. S. Department of Agriculture, National Agriculture

Statistics Services, 2019a). It is noted that Texas has more Black farmers than any other state, but they make up only 3% of the state's total farmers (Jennings, 2020). On the other hand, according to Jennings (2020), Black farmers make up a larger share of overall farmers in Mississippi (12%), Louisiana (7%), South Carolina (7%), Alabama (6%), and Georgia (4%).

Additionally, as the 2017 U.S. Census Bureau reported, Texas has 156,233 female producers, more than any other state. Data from the Department of Agriculture shows that counties with the highest proportion of female-operated farms were mainly in the West and Northeast. Black farmers made up a larger share of total producers in the South.

The second setting for this study will be an institution identified as one of the Historically Black Colleges and Universities (HBCUs). A focus group of student participants representing the future of Black women in agriculture was conducted at the selected institution. Pine Valley A&M University (Pseudonym) is a four-year public HBCU. Tuition is $13,000 annually, and the acceptance and graduation rates are 74% and 31%, respectively. The University is located in a rural area of Texas, and over 90% of the student population represents in-state enrollment. In addition, Pine Valley is one of the few HBCUs that offer agricultural-related programs with their College of Agriculture and Human Science (pvamu.edu).

Participants

Following Liberty University's Institutional Review Board (IRB) approval, 20 participants were selected for this transcendental phenomenological research using purposeful sampling. Choosing purposeful sampling allowed the researcher to find participants who have firsthand knowledge of the phenomenon being studied (Creswell & Poth, 2018). Interviews were conducted with 10 participants who are established in the field of agriculture. The age of the

interview participants ranged between 35 and 65 and was solicited from the social media page of the Black Farmer's Alliance.

Likewise, ten students currently enrolled in graduate or post-graduate programs at an HBCU were chosen for the focus group session to represent the future of Black women in agriculture. The age of the focus group participants ranged between 20 and 24. A designated official from the study site was instrumental in identifying students who met my study criteria. The designated official emailed my recruitment documents to potential candidates (see Appendix C).

The participants chosen in purposeful sampling have experienced the phenomenon, so the participants for both the interview and focus group, who meet the criteria of being Black and female, will have all experienced the phenomenon and have the opportunity to articulate their lived experiences. Ideally, the participants selected for the interviews and focus group will also consent to participate in the photo narrative. Creswell and Poth (2018) asserted that "criterion sampling is appropriate for this study because it seeks cases that meet specific criteria and is used for quality assurance" (p. 159). Thus, all participants will have experienced the phenomenon. The selection criteria were determined by several factors: affirmation that the research participant is interested in understanding the nature and meaning of the phenomenon; is willing to adhere to the requirements established for data collection; consent to the recording, and possible video interview and focus group participation; and consent to having the data published in a dissertation (Moustakas, 1994).

Researcher Positionality

While this study can be geared toward other demographics and ethnicities, my motivation is based on personal life experiences as a multicultural subject who brings a unique perspective

and experiences to the research. I was born in the 1960s in a rural area in Texas. I was the youngest of seven children: six girls and one boy. My great-grandfather was an emancipated enslaved person whose family lost thousands of acres of land because of unscrupulous business practices. With a portion of the remaining acres granted to my grandfather and passed down to my father, growing, foraging, harvesting, and cooking became central to our family's existence.

Conceptionally, I also bring to the inquiry a view of myself and the belief that the most important aspects of agriculture are its source of food supply and raw materials. In addition, agriculture is a significant contributor to the nation's revenue and provides substantial economic development through employment and international trade. Yet, as a Black woman exposed to agriculture for years, I rarely see images of Black women as farmers, even though the agricultural traditions are a significant part of our past. Also, from an economic perspective, there are several opportunities for research and development that Black women do not utilize.

History and tradition are also essential components of the research. I understand and am aware of my roles and responsibilities. Still, I do not understand what it is like to be a Black woman in agriculture and how the experiences differ from other women and Black males. Black farmers comprised less than 2% of all farmers in the U.S. in 2012. Female farmers comprise 36% of farmers (U. S. Department of Agriculture, Economic Research Service, 2019). There are volumes of research addressing Black farmers; likewise, several resources address female farmers' plight. However, there is a deficiency in the literature, theory, and practices specific to Black women's unique challenges in agriculture.

Furthermore, I recognize that the research topic poses several dilemmas for me as a researcher. First, the sites will be rural and consistent with where I grew up. Second, my strong family ties to rural areas may provide an over-familiarity with the setting.

Although I am intensely aware of my background, I may appear like an outsider to the participants I do not know.

Also, being aware of the politics of representation, as indicated by gender, ethnicity, education, attire, or even technology, will not prohibit my ability to converse in the local dialect and navigate the rural areas. Therefore, considerable efforts will be made to conform while being conscious of differences to bridge the gaps and become more accepted. Who I am and how I interact with people helps me form trust relations important to the research. Throughout the interactions with the research participants, I will appreciate the time and space afforded me, the stories that will be shared, and the knowledge produced through their engagement. While the women and I may not share the same identity, we will share affinities that help us have some common ground from which to speak.

Interpretive Framework

The interpretive framework of social constructivism, transformative feminist theories, and critical race theory can also articulate my motivation for conducting this study. According to social constructivism, individuals seek an understanding of the social world through their interactions with their culture and society (Creswell & Poth, 2018). Therefore, for this study, the process of social negotiation and evaluation of the viability of individual understanding is paramount. Furthermore, every conversation and encounter in data gathering presents an opportunity for new knowledge to be obtained or present expertise to be expanded.

Social constructivism also teaches that all knowledge develops due to social interaction and language use and is, therefore, a shared rather than an individual experience (Creswell & Poth, 2018). Knowledge does not result from observing the world; it evolves through the subjective meanings of the experiences, resulting from many social processes and interactions.

Therefore, social constructivist learning attaches as much significance to the learning process as it does to acquire new knowledge, indicating that the journey is just as important as the destination (Creswell & Poth, 2018).

Consistent Vygotsky's cognitive development theory provides three cognitive development factors related to culture, language, and instruction (Creswell & Poth, 2018; Kurt, 2020). First, Vygotsky's theory posits that learning occurs primarily in social and cultural settings rather than solely within the individual. Cognitive abilities are socially guided; thus, culture is a mediator for developing specific skills. For example, every culture uses a language to communicate. This language can be understood differently by different cultures, yet it is interrelated within the culture to understand the world in which they live and work (Creswell & Poth, 2018).

Thus, as Delgado and Stefancic (2017) explained, the social world is not fixed but constructed with words, stories, and silence. Second, by using bracketing to objectively examine the participants' experiences, I can better examine my experience to seek areas that will increase Black female involvement in sustainable agriculture. Finally, the practice of social constructivism finds that imbalance facilitates learning in that contradictions between the learner's current understanding and experiences create an imbalance, which leads the learner to inquire into their own beliefs and then try out new ideas (Creswell & Poth, 2018). Specifically, the researcher will encourage the participants to stimulate ideas instead of minimizing or avoiding them for focus groups.

Transformative frameworks include critical theories, action research, and feminist theory (Creswell & Poth, 2018; Swanson, 2015). Feminist theory and critical theory are also frameworks examined in the study. Feminist theory because the research will show the

perspective of social positions and how they impact women. The feminist theory will help answer questions related to the centrality of gender in shaping an individual's consciousness.

Critical race theory (CRT) is the most dominant theory used to explain race and its role in society related to social justice and oppression (Bell, 2022). The acknowledgment of CRT helps shed light on the inequities experienced by Black farmers and the lack of empowerment, explicitly considering the dramatic decline from 1920, when there were nearly a million Black farmers, and today, there are less than 45,000. Furthermore, USDA reports that of the country's 3.4 million total farmers, only 1.3% are Black (U. S. Department of Agriculture, National Agriculture Statistics Services, 2019a). This study attempts to confront the negative beliefs and practices of farming and agriculture while highlighting the economic benefit through education and skills development.

Philosophical Assumptions

Three philosophical assumptions, ontological, epistemological, and axiological, will be used to guide the study. By distinguishing and articulating my positionality on the philosophical assumption of phenomenology, I will provide a view of the lens through which I approach the research. Philosophical and theoretical frameworks influence the methods used for data collection and analysis.

Ontological Assumption

According to Creswell and Poth (2018), the ontological assumption relates to the nature of reality and its characteristics, thus embracing multiple realities. Consistent with Kant (1798), who rejected the transfer of logic to the existence of God by asserting that God exists outside the realm of experience and nature. As a Christian, however, I believe in one universal reality: living in God's presence. Yet, as a researcher, to accept the absolute demands of ethical obligation, my

ontological assumption must be multiple, as seen through many views as needed to establish that the experience is real, as experienced, and not caused by an infinite, divine being. I recognize and will report different perspectives to identify a theme in the findings. However, as a Christian, this researcher recognizes God's truth as the only reality.

Epistemological Assumption

Epistemological is the philosophical assumption that creates an awareness of certain aspects of reality while also seeking to discover what is known and how these knowledge claims are justified (Creswell & Poth, 2018). My epistemological assumption is that knowledge regarding the phenomena is available, and my role as a researcher is to uncover it. Although I recognize that there are no absolute truths, objective knowledge exists and can be discovered based on the firsthand experiences and perceptions of the study participants. Because qualitative research is more subjective knowledge of the phenomena, it will be derived from the personal experiences of 15-20 women who are not necessarily experts in the field.

Axiological Assumption

The axiological assumption describes the extent to which researcher values are known and brought into a study. As the researcher, I acknowledge that research is value-laden and that biases exist concerning my role in the phenomenon. The values shaping the narrative and guiding my research are neutrality, truth, social responsibility, and ethical consideration. By being aware of my values and positionality, my role as a researcher will be to understand the phenomenon based on my belief in all people's inherent worth and dignity.

Researcher's Role

My role as a researcher and human instrument in the study will be to describe the voices of Black women in agriculture because there is little research available in this area.

By understanding both the constraints and accomplishments, as the researcher, I can give voice to a population that has been underserved and underrepresented in a male-dominated field. As a Black female who inherited a role in agriculture, I was aware of bias, values, and personal background that could form interpretations during the study. Born and raised in a rural area in the South, I can relate to the experiences of the Baby Boomer generation of Black female farmers while also understanding the transformation that has occurred with a new generation of Black female farmers. Additionally, identifying with the established Black female farmers and the future Black female farmers provides unique positioning for the study.

As the researcher, I conducted a literature review to explore prior published works. Qualitative methods were used to obtain the essence of the experiences related to Black women in agriculture. I interviewed participants while adhering to ethical standards outlined by the IRB for Liberty University and the HBCU selected for the focus group. Because I have experience with the phenomena being researched, my opinion can compromise the research. As such, epoché or bracketing is central to transcendental phenomenology to ensure unbiased conclusions. Therefore, epoché started at the beginning of the study to set aside personal views regarding the phenomenon and focus solely on the participants' perceptions (Moustakas, 1994). Moustakas (1994) suggests looking for what is there, staying away from pre-judgments, and having no pre-judgment, bias, or preconceived ideas about things (p. 94). He furthermore explains that epoché or bracketing allows the researcher to obtain multiple views, thus broadening the scope of possibility in the research. Bracketing or epoché is a concept that suspends bias and judgments to explain a phenomenon in terms of its inherent system of meaning (Moustakas, 1994).

Husserl developed the technique of epoché in 1906 (Beyer, 2020). According to Beyer (2020), the intent was that any phenomenological description proper is to be performed from a

first-person point of view to ensure that the respective item is described exactly as is experienced or intended by the subject. Patton (2015) also explained that ideology is used to "study how people describe things and experience them through their senses" (p. 116). Therefore, the process of epoché is essential because it allows the researcher to experience the phenomenon of Black women in agriculture and the influence of post-secondary education from the lens of the participants instead of the researcher's view.

The researchers' feelings about the topic and bias related to the history of discrimination and unethical treatment of Black farmers were considered throughout data collection and analysis procedures. The researcher had no prior affiliation with any participants selected for the task. Likewise, there was no affiliation with the research site. Additionally, as Moustakas (1994) suggested, a reflexive journal was used to help bring awareness of inherent bias to extract those perceptions in epoché/bracketing. Writing down daily reflection entries will help improve the reliability of the research and remove bias.

Procedures

Appropriate procedures were followed for this transcendental phenomenological study. Before any data could be collected, site permissions, IRB approvals, and participant consent were required. The data collection and analysis plans by data sources were also provided, detailing how the study will achieve triangulation.

Permissions

The first step in the procedures was to obtain Liberty University's Institutional Review Board (IRB) approval. A copy of all relevant material was provided as part of the review application process. Expressly, a Consent Form (See Appendix B) containing the following information: rights of the participants to withdraw from the study at any time voluntarily; the

central purpose of the research and the procedures to be used in data collection; the protection of the confidentiality of the respondents; the known risk associated with participating in the study; the expected benefits to accrue to the participants in the study; the signatures of the participant as well as the researcher (Creswell & Poth, 2018, p. 155).

A feasible research site at an HBCU was also identified. I worked with the gatekeeper of the research site to confirm in writing if there were any specific IRB requirements or conditional approvals from Liberty University. In addition, written permission was obtained from the National Black Farmer's Association administrator and the Black Farmers Nationwide Facebook page administrator as needed to recruit participants.

Recruitment Plan

Access to the participant population was gained using a combination of purposeful sampling. According to Patton (2015), there is no definitive number to reach data saturation; however, it is necessary to provide several participants who can provide extensive descriptions until no new themes are identified. Therefore, this study engaged 20 participants who can purposefully inform an understanding of the central phenomenon to achieve data saturation (Creswell & Guetterman, 2019). The sample pool included ten interview participants and ten focus group participants.

Eligibility to participate in the study was based on self-report as a Black female, ages 19 to under 65. For purposes of this study, each participant was either currently enrolled in a post-secondary education program or graduated from a post-secondary institution and was actively involved in agriculture, either personally or professionally. The primary method of soliciting participants for the interview portion of the study was through a Facebook social media group page, National Black Farmers Alliance which has over 21,000 members. Interested respondents,

limited to the first 25, received an introductory email detailing the study's purpose, the data collection procedures, the protection of confidentiality, and any known risk associated with the research (See Appendix B participant consent form).

Once the interview participants were identified and a letter of consent was obtained, I contacted them individually to schedule a meeting and answer questions or address concerns. The interviews took place virtually at a mutually agreed-upon time and date. One week before the interview, the participant was contacted by email. At that time, permission to record was requested and documented. The interview data were transcribed immediately afterward using OTTer.com, a speech-to-text software.

Simultaneously, after receiving approval, an email was sent to Pine Valley A&M University to seek institutional permission as the research site for the focus group session. Once consent was obtained from the University, the university liaison, the school-designated official, was contacted. Eligibility to participate in the focus group was based on self-report as a Black female, age 19 – 29. For this study, each participant was expected to be enrolled in an agriculture-related post-secondary education program. In addition, specific research details were provided to the University liaison to establish a rapport and gain confidence in the process. The request to the University liaison included a copy of the consent to participation form outlining the study's background, purpose, risks, and benefits (Appendix B), the recruitment letter (Appendix C), and the focus group questions.

After approval from the University, the researcher contacted the graduate, and undergraduate students as the university's liaison recommended with an email. Once the participants for the focus group were identified, the university's liaison was contacted to determine the best time to schedule the focus group and answer questions or address concerns.

The selected participant received an introduction email (See Appendix X) and a consent form to sign before the focus group session. The consent form also includes verbiage requesting permission to record and capture images of the participants. The University liaison and the student participant were contacted one week before the focus group session. The researcher reviewed the focus group questions with the University liaison before the focus group session. The focus group took place virtually at a mutually agreed-upon time and date. A PowerPoint presentation was used to lead the discussion. An Amazon gift card, valued at $25, was provided to each student. The focus group data were transcribed immediately after the interview using the Otter.ai speech-to-text software.

Participants for the photo narrative were nine volunteer participants from the interviews and focus group willing to express their ideas nonverbally. They were asked to explain why each image captures their experience in their environment and the meaning they attach to it. The photo narrative allowed the participants to associate their work environment's meaning and significance, indicating persistence and motivation. The pictures and description were emailed or sent by cell phone text messenger.

Data from the interviews, focus group, and photo narrative was gathered and organized into a structured database in separate file folders. Properly managing the data logically and consistently made it easier to find and retrieve when needed. In addition, the data collected was stored both on a secure hard drive and USB for backup.

The procedure concluded with analyzing the data collected according to the guidelines established for each data type (Creswell & Guetterman, 2019; Moustakas, 1994). Next, the data were triangulated using three data collection forms, including the interview, focus group, and photo narrative, to understand the phenomenon's essence and derive a common theme. Finally,

the researcher conducted bracketing and personal journaling to prevent personal biases and view the phenomenon through a new lens (Creswell & Guetterman, 2019; Moustakas, 1994). Finally, the necessary steps were taken to ensure trustworthiness with credibility, transferability, confirmability, and dependability.

Data Collection Plan

To better understand the phenomenon of Black women in agriculture and the impact of post-secondary education, data was collected from the participants' lived experiences. Data collection utilized multiple and different sources to ensure triangulation and trustworthiness while gathering, analyzing, and interpreting the data (Creswell & Guetterman, 2019). The methods used for this study to corroborate evidence were semi-structured interviews, a focus group, and a photo narrative. These methods also provided validity to the findings (Creswell & Poth, 2018).

Individual Interviews Data Collection

The individual interview is the first data collection strategy. Interviews are how a researcher gathers data on the research topic and question (Moustakas, 1994). For this phenomenological study, semi-structured interviews were utilized to evoke a comprehensive account of the participant's experiences with the phenomenon being studied. According to Brinkmann and Kvale (2009), interviews are conducted with 5 to 25 individuals with firsthand knowledge of an event, situation, or experience. Therefore, the primary method of collecting data was in-depth interviews with ten established Black women currently working in agriculture, both personally and professionally. The participants were recruited from a social media page for Black Farmers Alliance.

Extended interviews evoke a comprehensive account of the participant's experiences with the phenomenon being studied (Moustakas, 1994). The qualitative research interview attempts to understand the world from the subjects' point of view, unfold the meaning of their experiences, and uncover their lived world before scientific explanation (Brinkmann & Kvale, 2009). The interview was informal and interactive and utilized open-ended comments and questions.

The discussion occurred first because it allowed for a positive relationship throughout the study with each interviewee. Next, solicitation for potential candidates will be gained through outreach on Facebook group pages. The interviews were conducted via electronic conference due to pandemic restrictions.

The interview answered two broad questions (Moustakas, 1994): What has the participant experienced regarding the phenomenon? What contexts or situations have typically influenced or affected the participants' experiences of the phenomenon (Creswell & Guetterman, 2019)? Creswell and Guetterman (2019) further state that these two questions provide the textual and structural description of the experiences and ultimately understand participants' shared experiences.

The interview questions were open-ended, allowing for interactive discussion, gaining firsthand descriptive words, and providing evidence of the participant's experience willingly and honestly. This practice was applied to the ten semi-structured interviews. The interviews lasted between 60 and 90 minutes, and the Zoom conference was mutually agreed upon (Creswell & Poth, 2018). In-person location was physically not permitted due to COVID-19 precautions. The lengthy interview was the most effective data collection method (Moustakas (1994). Moustakas (1994) states, “although the primary research may in advance develop a series of questions aimed at evoking a comprehensive account of the person's experience of the phenomenon, these

are varied, altered, or not used at all when the co-researcher shares the full story of his experience of the bracketed question" (Creswell & Poth, 2018).

The interview began with a social conversation to create a relaxed and trusting environment between the researcher and participant (Moustakas, 1994). The interview questions were organized in sections to engage, evoke conversation, and then exit. The intentions were to leverage more conversation from one question to the other. The in-depth, semi-structured interviews were pilot-tested and based on the literature review (Patton, 2015).

Questions one through four were introductory questions. Harper and McCunn (2017) view this type of background questioning as an effective way for the researcher to follow a different method of inquiry that more likely produces additional information based on the premise that when people talk about themselves, they are more comfortable (Harper & McCunn, 2017). Questions five through seven were geared toward understanding the institution and creating programs conducive to the participants' interests. Questions eight through thirteen were intended to link cultural experience and future expectations. Questions fourteen and fifteen helped to provide an understanding of persistence and motivation.

The duration of the interview was 60-90 minutes. The interviews were documented while simultaneously being recorded, with prior approval from the participant. Otter.ai software was used to transcribe the interviews. After transcription, the audio data was removed from the electronic device, saved on a USB, and securely stored in a personal home safe.

Individual Interview Questions

1. What are three things that someone would not be able to tell about you just by looking at you? SQ2
2. How did you end up living in (State)? SQ2

3. What have you experienced in terms of being a Black woman in agriculture? SQ2
4. What contexts or situations have typically influenced or affected your experiences as a Black woman in agriculture? SQ2
5. How did post-secondary education help you to prepare for the job that you have now? SQ1
6. What have you found to be more challenging in pursuing a degree related to agriculture? SQ1
    a. How did you move past these challenges?
    b. If you have yet to experience challenges, what do you contribute to the lack of challenges?
7. What, if anything, would you feel that institutions of higher learning can do differently to encourage more Black women to participate in agriculture programs? SQ3
8. What do you consider to be the significant social-economic benefit of agriculture? SQ4
9. What are your thoughts about the emphasis or lack thereof on agriculture in the Black community? SQ4
10. Tell me about your experiences as a child exposed to Black farmers. Did past cultural experiences help to shape your perception of agriculture today? SQ2
11. What impact did this personal experience in your youth have on your decision to pursue agriculture academically? SQ2
12. I am interested in how you perceive the plight of Black and female farmers in the 21st-century landscape compared to historically. What unique circumstances have

you encountered as a female and Black farmer that can be compared to the images and traditions of the past? SQ2

13. Land ownership is an essential commodity for agriculture. What are your thoughts about knowing that Black land loss is one of the key contributors to the decline in Black farmers? SQ2
14. What practical application do you see yourself contributing to the field of agriculture? How do you see yourself impacting your community? SQ2
15. Is there anything else you would like to add that would be beneficial in encouraging more Black women toward agriculture? SQ2

Individual Interview Data Analysis Plan

The study involved multiple forms of data collection; therefore, data analysis will take place throughout. As Patton (2015) stated, qualitative studies require ongoing data collection and analysis. As a result, qualitative data analysis software (QDAS), such as ATLAS, was used to manage the interview study from start to finish. The package is conceived as a "textual laboratory" within which the researcher can manage, organize, store, and structure the qualitative data systematically and methodologically informedly (Vanover et al., 2021).

Vanover et al. (2021) recommended six thematic analysis practices. These practices were adhered to for both the interviews and the focus group.

Practice 1: Developing Transcripts within and outside of a package.

This study's verbatim transcripts were sufficient, mainly because I was interested in what was said but not necessarily how. Another consideration involved where and how the transcription occurred. Therefore, a manual transcription software tool, ATLAS, was used to transcribe audio to text.

Practice 2: Formatting and Organizing the Interview Data.

Once the first draft transcript was generated verbatim, I formatted, organized, and prepared the data for importing into ATLAS. This practice included anonymizing the data before importing it into QDAS to build ethical protections in the analytical process. A master list of the names and pseudonyms was maintained in a separate excel spreadsheet. The data was organized in groups based on experience, participant's role, and geographical region.

Practice 3: Synchronizing Transcripts with Recorded Data.

A synchronized transcript was created by inserting time stamps associated with the audio segment. Inserting time stamps allowed me to quickly navigate various points in the media file and transcript. A synchronized transcript also helped to identify areas of the recording that is particularly useful for analysis.

Practice 4: ***Creating Quotations and Directly Coding and Memoing Media Files.***

Intensive listening to the interview and focus group data allowed the researcher to stay close to the nuanced nature of the recorded conversations. This intensive listening took place within the QDAS software before transcribing the data. In addition, creating quotations provided an advantage of directly memoing media files to allow for repetitive review of the data when necessary. I leveraged tools provided within ATLAS to create citations to highlight relevant portions of the data, including comments to capture my initial thoughts about the data. Similarly, directly memoing media files made navigating to a particular interview or focus group data segments easier. They helped to determine which data segment to transcribe while moving through the analysis.

Practice 5: Comparing Participant Perceptions Across Cases.

Comparing participant perceptions across cases made it possible to quickly identify similarities and differences, patterns, and potential relationships in the critical attributes of the data. For example, I was interested in identifying similarities and differences based on age, geography, and rural or urban settings for this study. By interrogating the dataset, I could determine potential relationships and patterns between the key attributes. I was further able to organize the data to explore variations effectively.

Practice 6: Generating a Description of the Use of QDAS in a Research Report.

I report in detail the use of QDAS. Providing the information confirms the software version used and reduces the implication that the software produced the analysis. This practice increased the study's quality by substantiating the details.

Focus Group Data Collection

A focus group was conducted at the HBCU to allow student participants to comment on their agricultural program experiences. Whereas the interview participants were established farmers, the focus group participants represented the future generation of farmers. A focus group is an interview that utilizes a small group of participants to solicit responses on a specific topic (Creswell & Poth, 2018). In phenomenological qualitative studies, focus groups are substantial. They bring together individuals who have experienced the same phenomenon to allow these participants to provide comments based on what they hear from one another (Patton, 2015).

In addition, the focus group allowed for member checking and collaboration during the questioning process, encouraging more detailed conversation from the participants and eliminating any false information from the individual interviews (Creswell & Poth, 2018). The focus group was conducted virtually with a goal of ten participants. All participants had experienced the phenomenon, and their responses to the focus group questions triggered others to

remember and add more details of their experiences regarding the phenomenon. The goal was to generate several ideas and opinions from the participants in the 60-90 minute time allocated for the session.

The focus group occurred via Zoom video conferencing because on-site visits were prohibited due to COVID-19 restrictions. All recording devices were tested in advance to ensure proper placement and sound quality (Patton, 2015). Since the focus group was conducted via Zoom, the session was recorded using a laptop with an embedded video-recording device. A separate computer was used with the same login credentials as the participants to monitor for technical glitches and use as a backup recording. A PowerPoint was developed to have the questions displayed. Emails were sent to the university liaison and each student participant to ensure no scheduling conflicts with testing or holiday breaks. The focus group was conducted using an interview guide (Creswell & Poth, 2018).

The University representative was asked to identify the participants based on the criteria provided; female, Black, age 19-29, enrolled in related coursework in agriculture. An email was sent to introduce the research's purpose and relay the importance of the interview responses (Appendix F). A consent form was attached to the email for all participants (Appendix B). All participants were over the age of 18. Therefore, parental consent was not required.

Focus Group Questions.

1. Describe the lifecycle of your favorite fruit or vegetable. SQ2
2. Why did you choose to attend this particular institution? SQ1
3. What have you found challenging while pursuing a degree in agriculture, and how do you move past those challenges? SQ1

4. Of the courses you have completed, which do you think will be most beneficial in helping to meet your career objective? Why? SQ1
5. What, if anything, could your school do differently to encourage more women to participate in agriculture programs? SQ3
6. This phenomenological study seeks to determine what efforts are needed in post-secondary institutions to facilitate training and development for students to understand the economic benefits of a major in agriculture. What can be done to help younger girls recognize the importance of agricultural science? At what age do you think education should start? SQ3
7. What do you consider to be the significant economic benefit of agriculture? SQ4
8. What do you think are the social benefits of agriculture? SQ4
9. What practical application do you see yourself contributing to the field of agriculture post-graduation? SQ1
10. How do you see yourself impacting the Black community through agriculture? SQ3
11. Is there anything more you would like to add that would be beneficial in encouraging more women toward agriculture?

Questions 1-2 are engaging questions to establish the topic of discussion and make participants comfortable with the focus group setting and with each other. Questions 3-9 are exploration questions. These questions are used to get information regarding their experience and ensure the discussion is productive. Finally, question 10 is an exit question to ensure that I have caught everything and that there is nothing else the focus group members would like to contribute to the discussion.

Focus Group Data Analysis Plan

The primary data was collected through interviews and a focus group. Data analysis for the focus group had the same approach as the interviews adhering to the practices for thematic analysis. Qualitative data analysis software (QDAS) was used to manage the focus group study from start to finish.

Photo Narrative Data Collection

The final step in data collection was the photo narrative. Photo narratives or photo-elicitation is when the researcher is shown pictures, and the participants are asked to discuss the contents of the photographs (Creswell & Guetterman, 2019). This data collection method also allowed the researcher to gain more in-depth knowledge that may not have been exposed during the interviews and the focus group. According to Glaw et al. (2017), different layers of meaning can be discovered as this method evokes deep emotions, memories, and ideas. The researcher directed participants to document their feelings and how the image impacted their desire to continue agriculture.

The participants, both experienced and aspiring agriculture producers, were requested to share photos representing their agricultural experience. They were also asked to document their thoughts and emotions about the significance of the image and its impact on their persistence (see Appendix D). Finally, participants submitted their pictures and notes via an electronic device such as an iPad, mobile phone, or email. These and other efforts ensured that the researcher could construct the universal meaning of the event, situation, or experience throughout the process and arrive at a more profound understanding of the phenomenon (Creswell & Guetterman, 2019).

Additionally, because this study considered the influence of the past on the present environment, the historical context was supported with evidence viewed through historical records, documents, and pictures, providing additional insight into the cultural significance. Likewise, to understand the impact of post-secondary education on Black female farmers, the question was answered by examining the U. S. Department of Agriculture (USDA) data and various organizations such as the Federation of Black Farmers for additional insight. Finally, data collection complied with ethical standards, including obtaining participants' permission to study them and gather relevant information (Creswell & Guetterman, 2019).

Photo Narrative Data Analysis Plan

The analytical approach involved gathering and organizing the photographs and notes into different themes and then determining the frequency as the themes emerged. Next, for each photo submitted, the participants were asked to provide a brief narrative of its meaning and how the image has helped influence their lives and emotions. Finally, a thematic analysis of the findings was done because words and photographs can be more powerful than numbers alone (Maxwell, 2013).

The researcher collaborated with the interview and focus group participants. All participants were asked to submit five photos with a written narrative for each. The goal is to reach at least 50% participation. This visual method helped to enhance the data by discovering additional layers of meaning, adding validity and depth, and creating knowledge. Asking the participants to photograph or select their images allows them the freedom to choose what they would like to express. The photographs and notes were submitted electronically. Once received, the researcher organized them into categories. The final analysis of the emerging patterns were clarified with the interviews, the focus group, photographs, and written narratives.

Data Synthesis

Moustakas (1994) embraced the focus on the wholeness of experience in a search for the essence of experiences by viewing experience and behavior as an integrated relationship. The transcendental phenomenological study allows the researcher to set aside prejudgments as much as possible and use systematic procedures to analyze the data (p. 34). The following summarizes steps in the Modified Stevick-Colaizzi-Keen method as described by Moustakas (1994):

Researcher's Epoché

First-person reports of life experiences are what make phenomenological research valid. Therefore, epoché was the first step toward phenomenological reduction. At the beginning of the study, the researcher set aside personal views of the phenomenon and focused on those views reported by the participants (Moustakas, 1994). According to Moustakas, "the everyday understandings, judgments, and knowing are set aside, and phenomena are revisited, freshly, naively, in a wide-open sense, from the vantage point of a pure or transcendental ego" (p. 33). Therefore, the researcher will bracket out personal bias and set aside judgment and prejudice to view the phenomenon with a fresh eye.

Transcendental Phenomenological Reduction

After data was collected from the participants, the data was transcribed for transcendental phenomenological reduction. Moustakas (1994) posits that this approach is transcendental because it uncovers the ego for which everything has meaning. But, on the other hand, it is phenomenological because the world is transformed into mere phenomena, and reduction in that leads back to our own experience of the way things are (p. 91). In other words, it allowed the data to speak for itself.

This reduction allowed the researcher to experience the data in its raw form without intrusions to gain a fresh new perspective based only on its existence (Moustakas, 1994, p. 34). To accomplish this involved five steps: (1) Bracketing, in which the focus of the research is placed in brackets, and everything else is set aside so that the entire research process is focused only on the topic and question; (2) Horizontalizing and listing all relevant statements and questions as having equal value; (3) Reduction of experiences that are repetitive or overlapping; (4) Thematic clustering to create core themes, which also includes a comparison of multiple data sources for validation; (5) Crafting of individual textural descriptions of participants (Moustakas, 1994). In the transcendental phenomenological reduction, each experience was independent; thus, the phenomenon was observed "freshly, as for the first time" and is open to its totality (p. 34). As such, the researcher derived a textural description of the meanings and essences of the phenomenon.

Imaginative Variation and Textural-Structural Description

Through imaginative variation, the researcher focused on descriptions of each theme, thus, grasping the structural essence of the experience. It refers to how the knowledge of the phenomenon came to be by presenting a picture of the conditions that precipitated the experience and connection with it (Moustakas, 1994, p. 35). The imaginative variation provides the "how" that speaks to needs that illuminate the "what" of the experience (p. 98). This procedure requires imagination and intuition to reflect the relationship and theme pertinent to the experience. Moustakas (1994) indicates that intuition begins deriving knowledge of human experience, free of ordinary sense impressions and the natural attitude (p. 32).

Textural descriptions are a complete explanation of what the participants have experienced within the context of the phenomenon (Creswell & Poth, 2018). Structural

descriptions describe how the participants experienced the phenomenon (Creswell & Poth, 2018). Both were obtained through phenomenological reduction (Moustakas, p. 99). These textural and structural descriptions were turned into a composite description, which allowed the developing and organizing combined writings of the themes from all the participants' narratives (Moustakas, 1994). This process enabled the researcher to arrive at the essence of the lived experience of Black women involved in agriculture by focusing on the shared experiences of the participants (Creswell & Poth, 2018).

Synthesis of Meanings and Essence

The final step in the phenomenological research process was a synthesis of meanings and essence. A synthesis of meaning and essence involves the intuitive integration of the fundamental textural and structural descriptions to form a unified statement of the essence of the experience of the phenomenon as a whole (Moustakas, 1994, p. 100). Moustakas (1994) employs the concept by Husserl to state that the essence is the condition or quality without which a thing would not be what it is (p. 100). In other words, the essence is the final truth.

Van Manen (2016) explains the meaning of essence as a linguistic construction of a phenomenon that would allow for grasping the nature and significance of a pedagogical experience in an unseen way. Furthermore, the essence is derived by constructing a holistic and analytical description, evocative and precise, unique and universal, powerful and sensitive (Van Manen, 2016, p.39). Additionally, the textual description should weave together the factual and ontological aspects of lived experiences (Van Manen, 2016).

Therefore, after the data analysis approach for each source of evidence, the data was synthesized into a coherent singular body of evidence that identified themes and answered the research questions. A single theme was determined based on the three collection methods,

interviews, a focus group, and photo narratives. Open coding was accomplished by highlighting each theme in a different color to distinguish between the three. Vanover et al. (2021) state that this open coding process is essential because it allows the researcher to determine concepts and categories. The theme was chosen based on the similarity of words and phrases. Furthermore, it helps to break down the components into possible headings and subheadings.

After manually coding to determine emerging themes, the researcher used a Qualitative Data Analysis Software (QDAS), ATLAS, to help organize and manage data sets. However, coding and analyzing the data were done manually. Representing the data is generated from text, tables, or figures. For example, the visual representation of the data includes a comparison table comparing two or more themes (Vanover et al., 2021). Visualizing the data was essential because it showed the organization of concepts and data (Lungu, 2022; Saldana, 2010).

Trustworthiness

Trustworthiness is the foundation for good qualitative research. Therefore, trustworthiness was established by addressing credibility, dependability, transferability, and confirmability within the research (Patton, 2015). Each aspect is fully defined below to address its relevance to the study. Patton (2015) states that trustworthiness is synonymous with validation.

Credibility

Credibility is defined by the extent to which the research findings accurately describe reality (Reilly, 2013). To determine credibility, the triangulation of data analyzed and synthesized across multiple data sources, interviews, a focus group, and photo narratives was used to help to corroborate evidence (Creswell & Poth, 2018). In addition, memoing helped contribute to credibility by documenting ideas related to the theories and taking notes while

reading, sketching reflective thinking, summarizing field notes, and making margin notes (Creswell & Poth, 2018).

The developed codes were then classified into themes describing the phenomenon and its context. Once the coding was finalized, it made for a more efficient interpretation of related categories and themes. These interpretations lead to visualized data representation (Creswell & Poth, 2018).

Member checks for trustworthiness were done by sharing with the participants the transcripts to verify that their experiences of the phenomenon were accurately reflected. Member checks were done during and after the interviews and the focus group to enhance trustworthiness. Member checks provided a way for the researcher to accurately portray participant voices by allowing participants to validate the data's accuracy and interpretations. In addition, this process increased the study's dependability because the participants were asked to confirm that the information presented was reliable.

Transferability

Transferability was established by providing evidence that the research study's findings apply to other contexts, situations, epochs, and populations. Transferability was achieved through an in-depth discussion of the phenomenon that allows the researcher to clearly understand and report the essence of the experience without bias (Creswell & Poth, 2018). The procedures were outlined in detail to enable future research and replication in compliance with Creswell and Poth (2018) to collect interview, focus group, and photo narrative data.

Dependability

Dependability is determined by how well the data is interpreted and the research findings reported. Dependability occurs when the data is internally coherent (Reilly, 2013). Therefore,

member checks ensured dependability, requiring the researcher to allow participants to review the information to determine accuracy. Member checks also increased the study's trustworthiness because the participants agreed that the information presented was reliable (Creswell & Guetterman, 2019). In addition, member checks deepened and extended the researcher's understanding and analysis of the information submitted during the data collection process (Reilly, 2013).

Moreover, Reilly (2013) explained that member checks also allow participants to assess the preliminary results and confirm or disconfirm aspects of the data. The dependability of the study relied on peer debriefing and memoing. Therefore, participants each received the interview transcription, allowing the women in agriculture who participated in the study to read their responses to the interview questions to determine if they approved the transcription. The participants could correct mistakes or contest what they perceive to be inaccurate.

Confirmability

Confirmability maintains confidence in the research study findings based on participants' cases and experiences rather than bias by the researcher (Reilly, 2013). This criterion was achieved using a thorough audit trail from the beginning of the data collection through data analysis and the final interpretation. Each day the researcher wrote down thoughts regarding coding and explained why the codes were merged and ultimately presented with the theme. The results were connected to the conclusions in a process that can be replicated.

Reflexivity was another technique used to establish confirmability. As a researcher closely aligned with the topic, there are many ways that bias could affect the study. Reflexivity allows the researcher to examine oneself objectively and examine how the topic, methodology, data, and interpretation could be influenced in the process (Creswell & Poth, 2018). To further

preserve the authenticity of participants' voices, the researcher maintained a reflexive journal throughout the research process to separate specific values, beliefs, and interests and gauge the effectiveness of the research process. Reflexive journaling increased the dependability of the research. It allowed the researcher to record reflective notes during data collection and analysis by writing what was learned throughout the data collection process. These memos added to the credibility and trustworthiness of the qualitative research.

Ethical Considerations

Ethical considerations were paramount while researching human subjects. Data collection and analysis did not begin until Institutional Review Board (IRB) approval. IRB requirements were adhered to throughout the process. Creswell & Guetterman (2019) stated that ethical issues occur at all stages of the research. Pseudonyms were used to protect the privacy of the participants and the institutions. All recordings and documentation related to interviews, the focus group, and photo narratives were always secured and password protected. Proper consent forms were distributed, and there were no objections to acknowledge and adhere to accordingly. Recognizing that there are also ethical concerns with data collection online, the researcher protected the participants' privacy.

Summary

The purpose of Chapter Three was to explain the research design used to analyze the degree to which education and cultural experiences have influenced the perception of agricultural sustainability in rural and urban Black women in the Southern regions of the United States. The research design included various methods of data collection, specifically interviews, photo narratives, and a focus group. The data collection methods supported the study's credibility, dependability, confirmability, and transferability. In addition, ethical considerations were

sustained throughout the study to adhere to the approval by the IRB. Finally, the study participants, setting, procedures, and data analysis are described in detail.

CHAPTER FOUR: FINDINGS

Overview

This transcendental phenomenological study explored the perception and lived experiences of twenty Black women regarding the influence of post-secondary education on their involvement in agriculture. Chapter Four presents a narrative description of the participants for this study and how their lived experiences as Black females in agriculture identify the overall themes and subthemes of the research questions. This chapter concludes with a summary of the findings derived from the participants' lived experiences and perceptions revealed through individual interviews, focus groups, and participants' and photo narratives.

Participants

Participants consisted of 20 Black females who were engaged in the profession or study of agriculture. Ten women representing a broad spectrum of agricultural careers and experiences were selected as interview candidates (experienced agriculture producers). Likewise, ten students studying to work in agriculture were chosen as focus group participants (aspiring agriculture producers). The individuals were selected based on age and demographics. The rationale was to gauge a broad spectrum of experiences to provide detailed descriptions of experiences and perceptions. Following Liberty University's Institutional Review Board (IRB) approval, 20 participants were selected for this transcendental phenomenological research using criterion and purposeful sampling. Creswell and Poth (2018) asserted that "criterion sampling is appropriate for this study because it seeks cases that meet specific criteria and is used for quality assurance" (p. 159). The selection criteria were also determined by several factors: affirmation that the research participant is interested in understanding the nature and meaning of the phenomenon; is willing to adhere to the requirements established for data collection; consent to the recording,

and possible video interview and focus group participation; and consent to having the data published in a dissertation (Moustakas, 1994).

Interviews were conducted with ten experienced agriculture producers who were established in agriculture. The age of the interview participants ranged from 30 to 65, and each was solicited from the social media page of the Black Farmer's Alliance. Likewise, ten students currently enrolled in an agriculture program at a 4-year university were chosen for the focus group session to represent the future of Black women in agriculture. The age of the focus group participants ranged from 19 to 29. The participants for the interview and focus group, who met the criteria of being Black and female, all experienced the phenomenon. The participants selected for the interviews and focus group were also asked to participate in the photo narrative. Photos were submitted by six experienced agriculture producers and three aspiring agriculture producers.

Table 1 provides the demographic breakdown of the interview participants. The report includes the participant's age, years in agriculture, and highest degree completed. In addition, the geographical location and the type of institution provide other, more well-rounded depictions of the participants. It is possible that marital status or some other personal aspects of their lives could be related to Black females in agriculture. That potential will be listed in Chapter 5 for recommendations for future studies to provide content to help understand how the participants have learned to navigate their careers and the nuances of their interactions in the male-dominated industry.

Table 1

Interview Participant Demographics

Participant	State	Age	Highest Degree Earned	Institution	Experience

Alice Mae	LA	64	B.A.A.S Organizational Leadership	PWI	30+`
Colleen	CA	60	M.S Curriculum & Instruction, Bilingual & Multicultural Education	PWI	20+
Donna	AL	48	B.A. Education	HBCU	10+
Kimberly	TX	58	B.A Business Diploma-Ranch Management	PWI	15+
Leah	TX	38	B.B.A Agriculture	HBCU	20+
Minnie	OK	65	B.A Business	HBCU	5+
Phyllis	GA	59	B.A. Business	PWI	10+
Rachel	TX	52	B.A. Hospitality	HBCU	2+
Rebecca	FL	65	Ph.D. Journalism and Communication	HBCU	22+
Stella	GA	35	B.A. Chemical Engineering	HBCU	2+

The following subsections will highlight the voice of each interview participant for this study, as identified in Table 1. Pseudonyms were assigned realistically and culturally, utilizing randomly assigned names to protect the participants' confidentiality. The participants had the opportunity to articulate their lived experiences, and regardless of any syntax errors, all quotes from the participants remained true to their given responses.

Alice Mae

Alice Mae was a 64-year-old cattle rancher who grew up on a farm and had been exposed to agriculture all her life. Her dad taught her and her brother how to drive tractors and trucks,

shoot, and rope when they were preteens, and as she grew older, she continued to participate. Alice Mae wanted to be a veterinarian, but her dad, a stern disciplinarian, persuaded her to pursue a degree in computer science in the early 70s. She did not complete a degree in computer science. However, she stated she had just received a Bachelor of Applied Arts and Science in Organizational Leadership three or four years ago.

Alice Mae has worked in agriculture as a sidebar to her professional career as a paralegal. She contributes her perspective of hard work and dedication to agriculture to her small family, which consists of her mom, dad, and brother. Her brother, who was involved in Future Farmers of America (FFA), introduced her dad to the dairy business. Alice Mae shared the memory of the day the cows were delivered in two big double-decker trucks as the start of the business that continued for almost 40 years.

When asked what contexts or situations have influenced her experience as a Black woman in agriculture, she related it to the tenacity she saw in her dad. She revealed that her father could not get a loan to have a barn built, so he built his own. Alice Mae applied that same tenacity while working as a bookkeeper in a law office and commuted to Dallas, which was a 70-plus mile trip one way. She would come home in the evenings and immediately go to the barn to help finish the milking and feed the baby calves. Alice became emotional as she reminisced about her childhood experience growing up on a farm. She shared about the hard work and unpleasant conditions, yet her father made it exciting and fun, even helping them to open a bank account (see Appendix D). "My father gave me memories to treasure for a lifetime, all while teaching me about hard work and gratitude."

Colleen

Colleen is a 60-year-old retired teacher and dairy farmer in a small rural town in California. She is divorced and the mother of two adult sons. She was eager to participate, and even after initially being disqualified for geographical reasons, she was insistent that she could add value to the discussion because of her upbringing with a foundation in agriculture established in rural Mississippi. She shared that she has been involved with cattle ranching for generations. Colleen first attended college and earned A.S. in Fire Science. Later she received a B.S. in Physical Education and a Master's in Curriculum and Instruction & Bilingual & Multicultural Education.

According to Colleen, she acquired ranching knowledge by trial and error and from advice from her dad. Her father had his ranch six to seven years before she purchased his neighbor's ranch, and her father was all too happy to share his knowledge. Furthermore, Colleen believes that education is never wasted and that every experience eventually helps with something else. She states, "Nothing I graduated in helped me to be a rancher. It just all fell together and somehow worked out". We concluded the interview with her saying, "on the one hand, I feel that I am really blessed; on the other hand, what the hell was I thinking?" Colleen's images for the photo narrative were of scenic mountains, cattle, and the American flag (see Appendix D). The comments included "...happy cows on the hillside, grazing on the green grass...Hope I have managed to share a glimpse of my slice of a blessed life...".

Donna

Donna was born and raised on a farm in a small town in Washington state. With a background in Education, she had a unique path to agriculture. "I actually studied economics and thought I would be an academic. And then, life happened, and I was like, I can't see myself

spending the next twenty years running this tenure race". She started doing volunteer work in Costa Rica before moving to Mississippi. In 2012 Alabama passed HB56, an anti-immigration law, and according to Donna, there were thousands of refugees in limbo, and they were all fleeing the state. Many ended up in Mississippi, where she worked.

She then moved to Birmingham, AL, and built a program recognized by the America Hospital Association as a best practice for immigrant communities. Donna revealed that she did meaningful work, but it was also work that was filled almost daily with tragedy; stories of folks who could not get access to healthcare; dire situations related to immigration status and poverty, of course. She became burned out and decided that she would like to reconnect with her roots in farming. She started working on a farm that taught elementary school students about agriculture, nature, and reconnecting with the land. "It was an incredible step down in salary, over $20,000 pay cut, but I just said yes. I had found my passion, and it was beautiful".

Kimberly

Kimberly is an accomplished ranch manager in Texas. She holds a bachelor's degree in marketing and computer science from Long Island University. In 2007, Kimberly left her corporate position at Bloomberg on Wall Street in New York to manage the diversified ranching operation that was started by her parents five years prior. The ranch is over 2500 acres, and the operation produces registered Charbray cattle, from which their breeding stock is sold nationally and internationally. In 2008 Kimberly founded a non-profit organization to serve agricultural producers. In 2016, she launched a direct-to-consumer meat company.

Kimberly is a member of her state’s Independent Cattlemen's Association board. She is also a member of the Capital Farm Credit advisory committee, the USDA advisory committee on minority farmers, and the USDA trade advisory board for trade in animals and animal products.

Lastly, she serves on the College of Agriculture advisory and policy committee for socially disadvantaged farmers and ranchers policy for a Historically Black College and University designated as an Agricultural and Mechanical (A&M) institution. In addition to her bachelor's degree, Kimberly also earned a diploma in ranch management, and she completed the Agriculture Lifetime Leadership Program at a Predominantly White Institute (PWI) that also has an A&M designation. She recently appealed to Congress that producers need access to Education and programs that support the adoption of conservation practices on working lands, mainly through the Farm Bill.

When asked about her experiences as a Black woman in agriculture, Kimberly acknowledged that her experience was somewhat different from that of other Black female producers because of her background and what she brings to the table. She believes her background in finance and business makes her more of a role model in the community. She further states that she has been a person that many other Black producers, male and female, have relied on due to her experience. Interestingly, she shared that she has not experienced negativity from the Black community; however, outside of the Black community, she has had to prove herself mainly because there are not a lot of Black producers in her community that were prominently established. "It's more about proving how did we get here? What are the resources that got you here? I have to explain more than probably people that don't look like me, how we have accomplished what we've accomplished".

Leah

Leah was the only experienced farmer who went to college for Agriculture. She is 38 years old and has been farming and ranching all her life. As a legacy, Leah is proud that her entire family attended Prairie View A&M University, including her uncles and grandmother. She

has an older brother and a younger brother who is twelve years younger; they all have a career in agriculture. Leah participates on two farms and ranches; the farm and ranch owned by her and her husband and the family farm with her brothers.

Minnie

Minnie is a 65-year-old retired educator who lives in a rural area of Oklahoma. She recently recovered her share of 50 acres of heirs' property, which her great-grandfather passed down to her. She provided a photo of her great-grandfather for the photo narrative (see Appendix D). Minnie shared that she grew up hearing how several hundred acres were taken from her family in the late 1800s and early 1900s due to unscrupulous business practices of a white farmer with the help of the local county officials. Fifty acres remained in the family; however, Minnie was most heartbroken to learn that a cousin had tried to claim sole ownership of the 50 acres by filing false documents in the county records. According to Minnie, her goal over the next two years is to really build out the land to generate income from fresh produce, hay, and hunting leases.

When asked about the unique cultural experiences from her childhood that have motivated her persistence in agriculture, Minnie was proud to acknowledge family members , veterans, and women leaders in business because they are championing a new way of life for her family. She shared that farming was the cornerstone of her family's survival because growing up, she watched her father and grandfather as farmers and ranchers and was overwhelmed by how much work was involved. "It's a 24-hour-a-day 7-day week job, but they loved it". Minnie believes that the interest in agriculture initially has to come from the home environment. "You have to be exposed to it and enjoy it. If you look at it as a chore, something laborious that is not rewarding on any level, you are not going to pursue it".

Phyllis

Phyllis is 59 years old and attended Valdosta State University, where she majored in Education. Phyllis was the youngest in her family, and when she went away to college, the legacy of farming stopped because, as she proclaimed, "I wasn't going to be a farmer." Nevertheless, she did start actively farming in 2016. At the time, she was teaching and, therefore, could approach agriculture as a slow journey toward success because she didn't rely on it for her primary income, knowing that when she retired, she would have a pension.

Phyllis was proud to say that she was born into agriculture. She shared that her story was somewhat of a legacy she did not come to appreciate and embrace until much later in life. After emancipation, her great-grandfather purchased 405 acres of land for $350; some remained in the family, and some were sold. When Phyllis was told that her mother had less than six months to live, she resigned from her teaching job in Atlanta, GA, and moved back to Dublin, GA, to care for her mother, who lived to be 96 years of age. It was then that she received a consistent and firsthand account of the history of the land that she grew up on. Phyllis reminisced about how her mother talked about the land as if her heart was in it.

Rachel

Rachel was born and raised in Texas near Houston and spent every summer with her grandparents on the farm where they grew produce and raised livestock. Rachel has a degree in business from an HBCU and worked in the hospitality industry. After finding herself laid off in 2020 due to the COVID-19 pandemic, she started farming hemp with the persistent encouragement of her daughter. Rachel was animated as she said, "I didn't know enough about the difference between hemp and marijuana, and I was like, oh girl, no, un un. So that's when I

started researching". She and her daughter attended workshops and conferences before deciding to start producing.

Rebecca

Rebecca is a 65-year-old farmer who graduated with a degree in Journalism and Communication. Although she grew up in the city, she states that her roots are in agriculture. She spent her summers on the farm and proclaimed that farming was in her DNA. Her father was from Florida, and her mother was from Alabama, and when she decided to move back to their farmland, she was confident in her ability to farm. She believes that some would say she is just toying in the soil, but according to Rebecca, anyone who thinks that, if they were to look at her background, would know that she has the drive and capability to be bigger than any of them if she chooses. "I don't take no for an answer. I'm quiet, but I meticulously keep cutting. That's what keeps me going. I've been through a lot; I've seen a lot. Nothing they can do that I can't".

When asked what you think institutions of higher learning can do differently to encourage more Black women to participate in agricultural programs, Rebecca responded that incentives for agriculture should be comparable to what is done with the STEM program as related to outreach and scholarship. Furthermore, she believes that communications should highlight the impact on the environment and the ecosystem and show how agriculture feeds the world. Rebecca stressed that the art of farming is not a lost science; it's just low, not lost.

Stella

Stella is a 35-year-old engineer who is new to farming. She lives in Georgia, and her parents are originally from Alabama. She has a bachelor's degree from Tuskegee University in chemical engineering and an MBA. She worked in engineering for over ten years before quitting her job to become a full-time farm apprentice. Stella states that she is okay doing something that

is a passion. Her great-grandparents farmed, and their families before them farmed, so she feels that it is coming full circle that she would also farm.

Stella is also passionate about the environment, specifically maintaining healthy farmland. She spoke about farmland in Georgia being sold to corporations to build apartments and subdivisions as her motivation to get involved with the farm coalition. Stella believes that even if nobody wants to farm the land, it should still be protected for future farming rather than building a structure. Additionally, she sees herself contributing to the field of agriculture in the role of an educator. Stella believes that in her past experiences, there are many applications to agriculture; therefore, she sees herself as someone who can show others how to be more profitable and more efficient in navigating the different nuances.

Finally, as noted in the introductions of the established producers, there were various experiences from education, expertise, and motivation. The established producers were very engaging and comfortable sharing their experiences. Although the descriptions are lengthy for each of the women, their lived experience provides much of the context for the discussion in Chapter 5.

The focus group session was conducted at an 1890 land-grant institution that offered four program areas of study: Animal and Veterinary Sciences, Human Sciences, Nutrition and Food Security, and Plant and Environmental Sciences. The 1890 land-grant institutions are historically Black universities established under the Second Morrill Act of 1890. The focus group encouraged student interaction with like-minded individuals rather than a sampling of a broader population. In Table 2, several pieces of information were gathered from the focus group participant illustrating compliance with the program's intent to strengthen research, extension, and teaching in the food and agricultural sciences.

Table 2

Demographic of Focus Participants

Name	Age	Year of Study	Major	Hometown
Bonnie	21	Junior	Plant and Environmental Science	Baton Rouge, LA
Kayla	20	Sophomore	Nutrition and Food Security	Port Arthur, TX
Lexi	20	Senior	Nutrition and Food Security	Ada, OK
Lily	20	Sophomore	Animal and Veterinary Science	Houston, TX
Lindsey	23	Senior	Animal and Veterinary Science	Houston, TX
Meghan	21	Junior	Plant and Environmental Science	Brinkley, AR
Portia	24	Junior	Agriculture, TBD concentration	Tampa, FL
Raven	21	Senior	Plant and Environmental Science	Killeen, TX
Rose	22	Senior	Animal and Veterinary Science pre-vet	Prairieland, TX
Sophia	21	Sophomore	Nutrition and Food Security	

The following subsections will highlight the voice of each focus group participant for this study, as identified in Table 2. Pseudonyms were assigned realistically and culturally, utilizing

randomly assigned names to protect the participants' confidentiality. The participants had the opportunity to articulate their lived experiences, and regardless of any syntax errors, all quotes from the participants remained true to their given responses.

Bonnie

Bonnie is a 21-year-old junior agriculture major with a concentration in plant and environmental science. She is from Baton Rouge, LA, and was a recipient of the 1890 USDA scholarship. Bonnie shared about the summer internships she received as part of the 1890 scholarship. Most of the time, the internships were in a rural area, and she expressed apprehension about being the only Black person there. She furthermore expressed, "They expect that you are not going to be as educated as them. So, it comes as a surprise when a woman, at that, comes in and is even more educated than a man on certain topics".

Kayla

Kayla is a 20-year-old sophomore from Port Arthur, Texas. Her major was agriculture with a concentration in plant and environmental science. Kayla believes that more people are becoming privy to information about food deserts and the lack of sustainability through social media. Moreover, she believes the same skills people used to survive years ago can be used today because technology has helped make production much easier and more efficient. One of the pictures that Kayla provided for the photo narrative was a picture of her as a little girl helping her grandmother in the garden (see Appendix D). The narrative read: "While most kids at three would just be playing in the dirt, I was planting seeds. Thanks, Grandma, for planting the seed in me to appreciate agriculture".

Kayla's family has owned land in Louisiana since the early 1800s. Because of the lack of appreciation for the land, an ambitious neighboring landowner, and the economic hardship of

some of her family, she fears that the land will be lost or fall into the wrong hands. She states, "One of my biggest fears is that they'll let a big corporation come in and just offer X amount of money or the neighboring landowner will just take it because in this community, money talks. That's very concerning to me".

Lexie

Lexie is a 22-year-old senior from Oklahoma. She is a recipient of an 1890 scholarship, and her major was nutrition and food security. When asked about the importance of post-secondary education in helping her prepare to work in agriculture, she spoke of her grandmother (see Appendix D), who dropped out of school in sixth grade to work on the family farm. Lexie was reminded of that by family members who told her that her grandmother did that so she would not have to. Lexie shared how she responded to the irrelevance of their argument by reiterating that everyone benefits from agriculture and that it is crucial to ensure the industry is sustainable. "Yes, she had to do that. But she did that so that I can do this. And I can help revolutionize the industry".

Lily

Lily is a 20-year-old sophomore. Her major was agriculture with a concentration in animal food science with a pre-med focus. Raised in a small town outside of Houston, Lily chose PV because of her support and connections prior to enrollment and because she wanted to attend an 1890 institution. Lily's motivation for agriculture came from observing her father and his family. According to Lily, they owned a farm where everyone, including the women, was expected to chip in and do what was expected because, at the end of the day, everyone had the capability to do the same jobs.

Lily furthermore stated that early in her passion for agriculture, she kept getting connected with Black women in agriculture. And then once she started getting involved with it and going out to different events and programs, a lot of it through PV. What I will say about PV is that when it comes to agriculture, especially in terms of students and who you'll be involved with, we have a very strong Black women representation here at PV. Half the time, if you're making a friend in agriculture, it'll probably be another woman.

Lindsey

Lindsey is a 23-year-old senior agriculture major specializing in animal and veterinary sciences (Pre-Vet). She is from Houston and chose this institution because it was close to her home. She was initially enrolled in nursing because, according to Lindsey, the institution was recognized as having one of the best nursing programs. However, she changed her major to agriculture a year into the program. When asked what she has found most challenging as a Black woman pursuing a degree in agriculture, she cited an example of being the only woman working on the farm at the university. "It's a major adjustment how people act toward you when you are the only woman. I started working last summer, and when September came around, they told me... I'm surprised you made it this far. I'm surprised you haven't quit yet".

Mehgan

Mehgan is a 22-year-old junior who transferred to PV from a community college. She is majoring in agriculture with a concentration in plant and environmental science. When asked how the college is helping to prepare her for a future in agriculture, she raved about the university being very hands-on, especially in soil science. For example, she shared how one of the professors took them to a farm and explained how Native Americans used a particular bark off a tree to numb their mouths. She states, "...of course, you get the education of going to class,

reading things in a textbook, but actually going out to see it and then have one of your classmates, you know, try it. You know, it's pretty cool". Mehgan was also impressed with the research aspect of the university.

Portia

Portia is a 24-year-old junior born and raised in Tampa, FL but enrolled at PV after living overseas in Japan. She was the most spirited participant in the group. Portia was majoring in agriculture, but at the time of the interview, she had yet to decide on a concentration as she was wavering between plant science and animal science.

When asked how her post-education experience is helping to prepare her for after graduation, Portia revealed that initially, she thought farming was easy, stating, "I'm just going to buy a little land, buy a few cattle do some farming." She admitted that she knew nothing about "growing plants or taking care of animals." However, her post-education experience has prepared her through internships, conferences, and work experiences to understand, respect, and want to be a part of the industry. Portia also feels that the college experience has helped her to explain agriculture to other people because, according to Portia, "my entire family thinks I'm at PV playing with dirt and studying cow farts for some reason. That's their exact words".

Raven

Raven is a 21-year-old senior agriculture major with a plant and soil science concentration. She was born in Killeen, Texas, and her family moved to San Antonio, Texas, when she was five years old. Upon graduating high school, Raven moved to Atlanta because she wanted to get away from home but later realized she wanted to return to her roots. "I knew that I wanted to stay at an HBCU, and I knew that I wanted to study Agriculture and plant and soil science, so PV was the best option."

Raven also mentioned that college had better prepared her by strengthening her foundational knowledge of the industry and helped her determine business opportunities related to the interdisciplinary and transdisciplinary aspects of the industry. She is focused on sustainability and admits that college has helped her recognize the challenges of feeding a large population. She was imposing when discussing how each stakeholder in each part of the industry determines the price of products, how it is produced, and how to connect with consumers. Finally, she shared the impact that conferences and the ability to do research have helped on her professional development, and she appreciated building relationships with like-minded individuals who are Black women.

Rose

Rose is a 22-year-old senior majoring in agriculture with a concentration in animal science with a pre-vet focus. Originally from Pearland, Texas, Rose chose PV because she was a 3rd or 4th generation student. Rose shared that she became motivated in agriculture in high school. She knew that her major was agriculture, even though, according to Rose, she had to explain it to her family several times before they understood it. "Both of my parents are engineers, so trying to explain cattle and everything to them, they were like, huh? Oh, what's agriculture?" Here professor helped her to secure an internship that provided more hands-on and that helped to confirm for her that she was on the right path.

Sophia

Sophia is a 22-year-old sophomore who attended the university because she received an 1890 scholarship. Sophia was the quietest in the group and less engaging. She believes it is necessary to educate people about where their food comes from and encourage the support of local farmers to reduce the cost associated with the food supply chain.

Results

The purpose of this qualitative phenomenological study was to explore the perceptions and lived experiences of Black women as it pertained to the influence of post-secondary education on their involvement in the field of agriculture in the southern areas of the United States. This transcendental phenomenal study documented the lived experience of the 20 research participants as described in this chapter. The research process began with an interview session, with 10 experienced producers, conducted by telephone or in a zoom conference call, whichever method was most convenient for the participant and researcher. The focus group, consisting of 10 student participants, was a zoom conference call with only the pseudonym used throughout. A PowerPoint presentation was used to display the questions on the screen.

Data collection utilized multiple and different sources to ensure triangulation and trustworthiness while gathering, analyzing, and interpreting the data. The methods used for this study to corroborate evidence were semi-structured interviews that were conducted with experienced producers, a focus group session with aspiring producers, and a photo narrative with both experienced and aspiring producers. The data collected were synthesized across the multiple data sources used to help to corroborate evidence. These methods also provided validity to the findings (Creswell & Poth, 2018). Bracketing and personal journaling were done to prevent personal biases and enable the phenomenon to be viewed through a different lens.

After conducting the individual interviews, focus group interviews, and photo narratives, the information was examined for broad themes. Thoughts and feelings of the interview content were bracketed out, to exclude personal feelings, opinions, and ideas, thus allowing for accurate data to be reflected within the research. The interviews were transcribed using the otter.ai application and followed up with a manual review of the recording to ensure consistent

documentation. Each participant was given a chance to review her transcribed interview for accuracy and member checking. Two participants responded with clarifying remarks or providing additional comments which were included.

After the interviews were member-checked, data analysis methods were implemented, starting with ATLAS.ti Web Account Management. The relevant documents, which included the interview transcripts, focus group transcript, and comments from the photo narrative, were inputted into the database to be analyzed. The data were organized and classified using color coding to identify similar thoughts and vocabulary used by the participants. Initially, there were several different categories established. The transcribed interviews were reread and reviewed several times, looking for themes and commonalities among the participants. Microsoft Excel documents were also created to arrange the different color codes for easier sorting and referencing. Once coding was completed, the themes and subthemes of the study were determined.

There were 15 photo images and narratives submitted and analyzed (Appendix D). The goal was to require participants to respond with photos that made them think about their role in agriculture and intersectionality, such as their race, age, gender, education, and rural or urban environment. The photo narratives were linked directly to what the participants stated in their interviews and substantiated their experiences and perceptions.

After reviewing and analyzing the data, the coding process was completed by identifying themes in the participants' responses. The analysis included epoché, phenomenological reductionism, imaginative variation, and the synthesis of meanings and essence. After the themes were identified, codes were assigned to each theme, noting the frequency of each.

Table 3 highlights the subthemes and code categories for each identified theme. The themes identified were love and belonging, education, safety, physiological needs, and esteem. The five themes related to Black women in agriculture aligned with Maslow's hierarchy of needs theory and Crenshaw's intersectionality theory.

Table 3

Themes and Subthemes for all Data Sources

Theme	Sub-Theme	Code Category
Love and Belonging	Family Relationship	Legacy, Cultural Norms, Male Influence
	Sense of Connection	Professional Association, Professional Development, Friendship, Social Engagement
	Black Female Mentors	Lack of Black Female Mentors, Importance of Black Female Mentors
	Need for Affirmation	Role of Females in Agriculture, Media Influence on the Image Created
Education	Impact of HBCU	Legacy at the Institution, A&M Comparisons, 1890 Institutions
	Curriculum Design	STEM, Mission-Focused, Independent Study, Training, Internship/Apprentice

	Representation in Academia	Educators/Professors, Agriculture Professional, Researcher, Administration
Safety Need	Land Ownership	Land Loss, Land Acquisition, Heirs' Property, Deeds, Retribution
	Personal Security	Freedom, Access, Fairness/Equality, Opportunity
	Economic Stability	Career, Generational Wealth, Employment/Layoff, Pension
	Resources	Training, USDA, Grants/funding, 1890 Institutions, 2018 Farm Bill, Justice for Black Farmers Act
Physiological Need	Environmental	Soil Health, Water Supply, Pesticides/Supplements
	Food Desert/Food Security	Food Desert, Food Security, Food Quality, Production, Supply ChainE
	Culture/Lifestyle	Shelter, Clothing, Generations, Peace
	Healthy Eating/Medical	Non-GMO, Healthy Food Choices, Medicinal Produce
Esteem	Community Initiatives	Programs, Community Garden, Recognition, Braided Seed, Board Appointments, Media Coverage

Academic Achievement	Degrees, Awards, Educate the Community (play-it-forward)
Recovery	Land Purchase, Deed Transfer, Land/Mineral Rights Recovery
Sustainability	Protecting the land, Ownership

Theme 1: Love and Belonging

Table 3 reveals that the first theme correlates with love and belonging. Consistently the participants discussed the relationship and their need for acceptance, thus the sense of belonging. The theories of Maslow's hierarchy of needs and Vygotsky's sociocultural theory are supported by the data to show that when the participants feel a sense of belonging and acceptance, their self-esteem and self-actualization will increase (Maslow, 1943). The sub-themes will detail the social interaction that plays a fundamental role in the development and persistence of Black women in agriculture.

Family Relationship

The first subtheme to emerge from the central theme of love and belonging is the positive relationship between the participant and their family. The components of this subtheme were based on legacy, cultural norms, and predominantly male influences in the family. Most participants described their relationship with their family as supportive of the decision to work in agriculture. For example, Leah moved back home after becoming jobless. She shared that she could not have made it this far without her parents. They were very supportive, even through the roughest time.

Stella revealed that her parents were from a very small rural town. Neither of her parents graduated high school because they had to stop in the summertime to pick cotton when they were

children. Stella highlighted the importance of working as a family unit. She states, "it took all of them; everybody had a chore, a job to do so that they could all live well, or better. My brother and I shared the love of the farm because we did everything together as a family". Similarly, in the case of Portia, focus group participants, her parents, who were both engineers and did not understand her desire to major in agriculture, yet, they were supportive and accepting of her decision.

When describing relationships with family, several participants referred to their relationship with their father, brother, or other male relatives as influencing the role of agriculture. For example, Alice Mae spoke about her dad's influence as a child that has carried her into adulthood. She stated that he planned something for them to do every day, but he made it fun. She also spoke of how he lectured them daily, "...sometimes we would get tired of hearing him go on and on about life, but I have come to see that everything that he lectured us about was really preparing us for being on our own".

Colleen shared an example of her father's influence on her decision to become a dairy farmer and raise cattle. She shared that he taught her that land ownership was essential. Because of her father's influence, she purchased her first cow at the age of 16, bought land, and built her home from the ground up in her early 20s. "All of that is because of what my dad was mentoring and lecturing in. I believed what he said. He said I've already been where you are going. Now, this is what you need to do. I didn't question that".

Leah described her older brother's influence as helping her navigate and secure a position teaching agriculture. Her brother was offered a position as an ag teacher, but because he had a job with USDA, he declined but insisted that the superintendent speaks to his younger sister about the position. Leah's testimony would later reveal the challenges associated with

intersectionality based on gender and age when she became the first African American woman to work at an inner-city school in a classroom of lower-functioning, problem students. With advice from her parents, who were both educators, she shared that the experience made her who she is today.

Additionally, Phyllis speaks of how her grandfather created a legacy of pecan orchards that was eventually lost to a white banker. Although she had no intentions of becoming a farmer when she left for college, she did so when her mother became ill. Upon her return, she purchased one of the pecan orchards her great-grandfather planted. She was proud when she stated,

So, I own the trees that are... according to the original deed, when my great-grandfather purchased the land. He purchased it for the purpose of planting crops and the pecan grove, and the crops provided him with annual income. Because he was an agriculturalist, I surmise he had to know that those pecan trees would outlive him. He planted them to make way for the generations that were to follow.

The male influence was also illustrated in the photo narrative. Minnie submitted an image of a 1940 Census Record (see Appendix D). The narrative stated, "These are census records that I found a few years back for 6 of my great-grandparents. At least three of my great-grandfathers were farmers and being in agriculture has really been a full-circle journey for me. I work as hard as I do because I know that I'm doing things that they were unable to do".

Sense of Connection

Sense of connection was the second subtheme to emerge for love and belonging, as most of the participants shared the difficulty of feeling accepted in their agricultural environment. This sub-theme encompasses friendships, social engagements, political affiliations, and professional associations. Colleen joined the Cattlewomen Association in hopes of seeing other Black people.

Although she still did not see any other Black cattlewomen, she remained a member so that other people outside the organization could see representation.

Kimberly is a member of various boards, associations, advisory committees, and non-profits. When asked how to address food disparities, she mentioned that she had been approached to take a position at a federal administration level; however, Kimberly declined because she could be more impactful on the outside rather than on the inside. She expressed the importance of voting to bring investment into the community. "You can do your best to fight all you can as a rancher, but unless you can change who the political people are in that community, you will not change them."

Likewise, the importance of social engagements and friendship was beneficial for Donna. Donna received financial benefits and an engaging network as one of the inaugural recipients of the Braided Seed Fellowship award, an award by the Federation of Southern Cooperatives and Soul Fire Farms. She states, "the amount of encouragement, mentorship, sisterhood, and all of the moments that are shared between people who work the earth, who feed people, it was invaluable, and we need more of those things so that we can support more people."

Additionally, networking and exposure were paramount for the student who participated in the focus group. Sophia shared about the strong representation of Black females in agriculture. "Half the time if you're making a friend in agriculture, it'll probably be another woman ."Raven also speaks about the benefits of building relationships with like-minded women who are Black women adding, "early in my passion for agriculture, I kept getting connected with Black women in agriculture. And then once I actually started getting involved with it and going out to different events and programs, a lot of it through PV".

Black Female Mentors

Finally, the lack of Black female mentors is the third subtheme to emerge for love and belonging. Many participants expressed the importance of having a Black female mentor; however, some said they were hard to find. Rose, for example, communicated the impact of seeing Black females in the workforce. She states, "the majority of us don't know what field we want to go into. But if you see someone that looks like you, you're going to be motivated to do that job and also excel in that job".

Likewise, Kimberly embraces her role as a mentor and role model to everyone in her community, regardless of race, gender, or other intersectionality characteristics. As it relates to her influence on the younger generation of Black farmers, she shared her experience of speaking at a Women in Agribusiness conference where there were over 1000 women in attendance. After speaking, five students approached her and were emotional as they communicated the impact of seeing someone who looked like them addressing the conference. According to Kimberly, there is a need for someone in the classroom to encourage and help the students. "...unless you have a female internally in that system that fights on your behalf, saying you can get a job on the farm, it's not going to happen". Although Kimberly is a role model in her community, she also has a mentor, a Black male her age, who was born and raised in the community. She thinks having someone to rely on in the business is always important.

When asked what the university can do differently to encourage more Black females to participate in agriculture programs, Donna suggests equality in funding farming and research projects. She furthermore suggests that when given the opportunity, Black women can shine and make a difference. "All of my mentors and people I look up to have this huge impact, and they all happen to be Black women."

In contrast, some felt a lack of Black female mentors, but they aspired to become one. Specifically, in the focus group, Lindsey stated that she could not, off the top of her head, think of any ladies in agriculture. When asked what she saw as her contribution to the community after graduation, Lindsey stated that she wants to return to the campus to set up a clinic that promotes the mentorship of Black women in the pre-vet program because she appreciated being in a professional environment with other Black women. She spoke about being surrounded by people who had never interacted with other people like her and having to defend her school and how she dressed or talked. "So for me, being able to learn and grow in an environment that wasn't holding me back was an advantage that I had; I want every pre-vet student to have the same advantage ."Finally, Mehgan expressed the importance of having mentors through her photo narrative:

I chose this picture of Farmer Cee Stanley, owner of Green Heffa Farms (see Appendix D). Farmer Cee inspires me because she has been navigating the agriculture space as an unapologetic Black woman with integrity and grace. On days when I struggle with the hard work of farming, I watch a few of her TikTok videos, and they definitely inspire me to keep on going.

Need for Affirmation

Finally, the fourth subtheme was the need for affirmation because women's roles in agriculture are sometimes misconstrued. For example, market crops may be considered more important than smaller garden crops; smaller farm livestock may not be as lucrative as cattle. In either case, the category does not negate the women's role as a farmer. Kimberly believes that the misconception starts not just for Black women but in general, and there is a need to change the perception of agriculture through media. Additionally, the research revealed that the women sometimes needed affirmation that they were farmers. As illustrated in the photo narrative by Stella, she captioned an image of her learning to operate a BCS tractor (see Appendix D). "I

chose this picture of myself because it was the first time I actually saw myself as a Black woman farmer and not just a gardener or an ex-engineer."

Theme 2: Education

The education theme highlighted the influence of Historical Black Colleges and Universities, the need for a more robust curriculum in agriculture, and the importance of representation in academia. USDA has a long history of investing in and supporting our nation's Historically Black Colleges and Universities. The feedback highlights the critical link between the two in ensuring public access to agricultural education, research, and outreach programs.

Impact of Historically Black Colleges and Universities(HBCUs)

The influence of Historically Black Colleges and Universities was paramount and therefore emerged as the first subtheme for education. Only three participants attended a Predominantly White Institution (PWI), and the remaining seventeen attended an HBCU. Several participants indicated they attended their respective HBCUs because of their legacy, as their parents and other family members either attended or worked at the institution. Many focus group participants attended PV because they were recipients of an 1890s land-grant scholarship.

The 1890 land-grant institutions are historically Black universities established under the Second Morrill Act of 1890. According to NIFA, the programs of the 1890 land-grant institutions are intended to strengthen research, extension, and teaching in the food and agricultural sciences by building the institutional capacities of the 1890 Institutions (NIFA, 2022). The 1890 land-grant system consists of the following 19 universities: Alabama A&M, Alcorn State University, Central State University, Delaware State University, Florida A&M University, Fort Valley State University, Kentucky State University, Langston University, Lincoln University, North Carolina A&T State University, Prairie View A&M University, South

Carolina State University, Southern University, Tennessee State University, Tuskegee University, University of Arkansas Pine Bluff, University of Maryland Eastern Shore, Virginia State University and West Virginia State University.

Consistent with the purpose of the 1890 land grant institutions, the experiences shared by many participants are a testament to the importance of such institutions. For example, Rachel's dad managed the farm at an 1890 institution. As such, all four of his children attended and graduated from that same 1890 institution, with two receiving an Agriculture education and subsequent careers related to agriculture. Additionally, Stella provided a photo of Tuskegee University as part of the photo narrative (see Appendix D). As an alum of Tuskegee University, the experience has prepared her for many obstacles that she has encountered. She is also a supporter of the work of Booker T. Washington and the work he was doing with the students, and the innovative approaches he took. As a result, Stella aspired to have her own Farm Mobile that she could use to continue to educate other Black women on farming and gardening.

When considering the history of agriculture in the Black community, Tuskegee played a significant role in helping to develop Black male farmers. Further research is needed to gauge the impact on Black women. As with Tuskegee, there is a heightened expectation for the HBCUs to lead the way for Black women producers. Rose highlighted this fact in the focus group discussion that she often finds it necessary to explain her worth because when people think of agriculture, it is reserved with negative connotations from enslavement. However, as she declared, there is so much more. She states, "There's a science behind it. There's food processing, there's engineering, you know, it's all these other different fields that people tend to forget about".

Curriculum Design

The second subtheme that emerged was curriculum design. The findings showed different aspects of learning that resonated with the women, including hands-on and visual learning, networking with other females, and specific conservation content. The basis for this learning and empowerment structure aligns with the Community of Practice (Petrzelka,, et al. (2020), which has created an outcome of environmental and social impacts that occur from such a community.

Regarding educational programs, the number of relevant majors differed significantly for the experienced farmers and the students who participated in the focus group. The experienced producers majored in computer science, economics, education, engineering, marketing, and journalism. While their education was not specific to agriculture, they all believed that the knowledge gained with post-secondary education was helpful to the work that they are currently doing in agriculture. For example, Colleen believed there are many teachable moments within the cattle industry, especially since the beef industry is very integral to the economy. She states that "there are so many cross-curriculum things that can be taught in regards to cattle ranching." Additionally, in various ways, the women indicated that their strengths as a producer were complimented by their abilities to market, monitor pricing, and handle the administration. Therefore, their education, though not in agriculture, has positively affected how they approach farming.

In contrast, Leah was the only experienced farmer who majored in agriculture in college. However, ironically, she was the only participant who said her post-secondary education did not help. Leah states that education was instilled in her by her father and mother, who told her that she needed to go to college to get a degree, even if it was in basket weaving. Leah completed a degree in agriculture and followed with a Master's in Counseling. She stated that her post-secondary education, helped to an extent, but she received more hands-on between her father and

her husband than she did while in school. "They gave me the skills to think outside the box. College gave me the skills to put together a business plan, but I don't use any of that".

Moreover, other participants pursued additional training to enhance their knowledge of farm operations. For example, Kimberly shared about her coursework at Texas A&M and TCU, which helped better to position her in her farm and ranch operations. Specifically, she had a more targeted focus that provided her with a master plan that she only needed to return to the ranch and implement.

Representation in Academia

Finally, the third subtheme to emerge was the representation of Black female agricultural professionals in academia. The research revealed a disconnect between agricultural professionals such as educators, researchers, or administrators and the expectations and opportunities for Black women. Several participants were retired educators, but Leah was the only experienced farmer who taught agriculture classes.

Leah shared a story about the lack of respect she experienced from students and staff because she was a young female teaching an agriculture class. Leah's experience centered on intersectionality based more on gender and age. She admitted that she hated going into education, especially as a 24-year-old young lady who looked about the same age as the 16-18-year-old students she was responsible for teaching. She equated her first day to the movie *Lean on Me* because she would ask the students to be quiet. They stop and look at her and then continue the conversation. Like in the movie, Leah said she went behind the desk and sat down feeling defeated. After coaxing by her parents that the students did not know anything about agriculture, Leah went back to the same behavior. She states, "although I was not supposed to, I took a desk, and I threw it across the room, and I told everybody to sit down. They sat down".

Leah was persistent in helping the students learn about agriculture, albeit it took her tossing a chair across the room to garner their attention. Her resolve was also challenged by a negative encounter that she experienced with a peer when asked to move a trailer. The peer was a Black male who berated her for not putting the trailer in its proper place. As a result, she had to back it out and park it several times and never to his satisfaction. Months later, the experience benefitted her as she encountered another objector, a parent, who questioned her ability based on age, race, and gender to drive a truck with a trailer and cows. The parent was adamant that he should drive his son's cattle to show because he did not believe "that was my place," stated Leah. So, when I would help his son in showing or what have you, he would look for Kenneth (her husband) to make sure that I was doing it correctly. Kenneth didn't say a word. He made himself a little scarce when that parent was around so that I could be the one that made decisions.

Lastly, all of the focus group participants concurred that college is adequately preparing them for a career in agriculture. Specifically, Kayla expressed her career objectives in pursuing sustainability as a result of being better prepared and strengthening her foundational knowledge of the industry. Lily stated that post-secondary education has helped prepare her for the future through hands-on experiences. According to Portia, her college knowledge has given her the confidence to explain agriculture to others. "You know, tell people, oh, maybe you should buy from like local farmers, or this is how our food supply chain works. It's really helped me prepare to go into the industry rather than me just knowing. It's been really educational for me, and it's really been good helping me explain it to others to get other people interested".

Theme 3: Safety Needs

Safety needs encompassed land equity, economic stability, personal security, employment, and resources. These components were motivators for both the student and

experienced participants, but the discussion of property, specifically land, was the primary sub-topic. All concur with the statement in one form or another with the statement made by Rachel, "God is not making any more land, so until he returns, hold what you got."

Land Ownership

The first subtheme to emerge under safety needs was land ownership. Land ownership is an essential commodity for agriculture. When the participants were asked their thoughts about knowing that Black land loss was one of the key contributors to the decline in Black producers, it generated relevant discussions centered around legacy/heirs' property, equity, freedom and equality, and generational wealth.

When considering that heirs' property is obtained most often because of the death of a loved one, the emotional attachment to the land is understandable. The women expressed various emotions ranging from grief, anger, acceptance, and sometimes defeat when discussing land passed down from generation to generation. Minnie recognized the power associated with owning land as she became older. Growing up, she could not understand why they lived in an area surrounded by her grandparents, aunts, and uncles, and most of her friends lived in settlements. "Granddaddy made sure that we had land to build our home so we would not have to rent or depend on anybody else."

Moreover, subthemes acknowledging recognition and achievement were documented based on the purchase or reclamation of land, sustaining and being good stewards of the land passed down as heirs' property. There was a tone of sadness as Phyllis passionately shared how invested her mother was in the land, even in her final days. Alice Mae revealed her attachment to the land that started with her great-grandfather, who was one of 17 children. He had 13 children, and then one of those children was her grandfather, who had 14 children, one of whom was her

mother, who remained on the land until she died. "Of all those children, she was the only one who remained on the land ."In the case of Leah, she also lost shares of her family's land inheritance. While she did not disclose the specific reasons why it was necessary to sell the property, she expressed heartbreak because that was property owned by her grandmother that eventually would have been passed down to her and her brothers.

While the experienced women indicated a great appreciation for land ownership, many believed the younger generation did not see the value. According to Alice, her dad taught her the importance of purchasing land, and she started buying land early in life. Sadly, she proclaimed, that now she is too old, and she knows that as soon as her nieces get a hold of this land, they will probably sell it". Similarly, Phyllis expressed that neither of her boys, one vice president of a bank and the other a professional boxer and trainer, are interested in agriculture. Therefore, she is trying to inspire her two granddaughters, both interested in STEM, to love the land and explore the potential business use so that she can pass it down to them.

Likewise, Minnie shared a similar opinion as it relates to land. Minnie detailed the work that she has done on the farm but expressed disappointment that she does not see young Black females being interested in farming. She spoke explicitly about her three nieces' poor attitude, who told her, "I'm not picking up limbs, and I ain't toting buckets."

However, contrary to the opinions of the experienced farmers, young people in the focus group saw land's value and were passionate about land ownership. Rose, a focus group participant, understands the importance of landownership but believes that many Black farmers lose land because of debt. Meagan piggybacked on Rose's comments by saying, "a lot of people don't realize by having your own land, you can do so much with it. You know, many people are not educated about owning land".

Lexie contributed from her observations and participation in different internships. She surmises that few Black females are in agriculture settings because of a lack of resources regarding land or money. She shared her experience while interning in Vermont.

It was a mix of people, but many of the white counterparts were talking about how much land they had just sitting and waiting on them, and they did not want to do anything with it. I'm like, if I had one acre or half an acre, I would be blessed. That is one thing that I noticed. We don't have...at least I don't have the land.

Many participants shared the importance of leveraging land equity and increasing working capital. Nevertheless, they also expressed how that ability was denied to them as Black female farmers because they were not treated fairly in their role in agriculture. Stella shared her experiences after transitioning from a job as an engineer to becoming a farm apprentice full-time.

The most compelling testimony was from Stella, who shared that after quitting her job as an engineer and becoming a farm apprentice, she worked for a White farmer who, in her opinion, did not know that he was racist. She recanted incidents where he would walk up and only speak to the White lady, and it was as if she or the other Black apprentice was not present. Stella recalled, "one day we were having a conversation with all the apprentices, and the White lady said I don't think he's racist; he goes to church. I was older than them; I'll be 35 in July. I was like let me tell you, I've never seen it in my time being alive but I know when my grandmother was a little girl people were going to church and after church, they were hanging people".

While this was a question posed to Stella, several participants clearly communicated the issue of equity in the data collection. "My great grandparents farmed, their family farmed, people, made it so hard for them ." People took the land; people did so much that they eventually bowed out and said, " Okay, you got it. We will go do something else". "They were land-locked

out of their land. That had land but couldn't get to it, so they sold it for pennies, not realizing that the minerals were worth millions". "People don't want to sharecrop. I've seen people in Atlanta who are urban farmers who have leased the land and developed it for years, and then all of a sudden, the owner dies, and their kids are like, hey, we know you have done this, but we are selling this, so we are going to need our land". Finally, Lily added her experiences to the discussion of land loss.

In the neighborhood where she grew up, every home sat on at least two acres. Sadly, people are now selling their land because of financial hardship, not realizing the value. There are people throwing dollars at them for the land, and they do not realize that it is worth way more. It comes down to a need for more education. I see so many people later down the road regretting selling their land. It is just the aggravating feeling to see this; that's all it is; it is aggravated.

Personal Security

The second subtheme was personal security, which included freedom, access, fairness, equality, and opportunity. The discussion about land often led to the concept of freedom and equality. One of the photos provided by Colleen was that of the American flag, the ultimate symbol of freedom and equality for all. Nevertheless, several women shared their experiences of denial of opportunities because of discrimination and inequality.

Stella spoke of having two degrees, excellent credit history, and still finding it difficult to buy land. "I feel that I am in a pretty good standpoint financially, and it has been hard for me. I don't know if it's a racial thing, but I have had difficulty getting land". Kayla shared her family's struggle with a wealthy neighboring landowner trying to squeeze them out of their land with easements and water erosion. "He is doing whatever he wants because money talks in small rural

towns, and he knows my family cannot afford representation to match his legal team. I pray every day that God will make it right and that I live long enough to see it".

Historically, Blacks have lost land for several reasons, as Chapter Two details. Minnie confirmed as she explained that her family lost rights to hundreds of acres in the late 1800s because of fake vendor liens levied against her great-grandfather. As the story was told, he was arrested shortly before the court date and falsely accused of stealing a pig. When he was finally released, he had lost the court case and the land. "I often think how different our lives could have been had our land inheritance not been stolen."

Likewise, Donna experienced inequality in employment. As the first Black woman ever employed by this organization, she states that there were so many hurdles that she had to jump through, and it was a very intense work environment that she could not sustain. Finally, Kimberly also experienced inequality in having to prove how her operations became so well established. "How did we get here? What are the resources that got you here? How have you accomplished what you've accomplished? These were just some of the questions that she had to explain.

The lack of resources was revealed as a source of inequality, specifically regarding USDA funding and training, the curriculum at 1890 institutions, and provisions in the 2022 Farm Bill. Colleen proclaimed that the government put the smaller dairy farmers out of business by allowing "mega-dairies" to come in and squeeze the family farms out of business. Bonnie shared in the focus group her recollection as a child of the inequality that she noticed that negatively impacted the small Black farmers that she attributed in part to the USDA. "I remember when I was a little girl, I would see these huge irrigation things above ground in the fields of white farmers, but when you go to our neighborhood, the farmers were praying for rain."

Phyllis also reflected on the inequity caused by USDA. She stated that the larger farmers, with whom the Black farmers could not compete, had USDA on speed dial and were able to secure loans when the Black farmers could not. Minnie also shared her opinion on the USDA's inequality and injustice as she believes there is a movement afoot to never level the agricultural and economic playing field for socially disadvantaged farmers.

Economics

Other areas of safety relate to income and economics; therefore, economic stability emerged as the third subtheme, including internships, generational wealth, and pension/retirement. Most farmers were successful when given adequate resources and the freedom to grow. Interestingly, Kimberly's passion for agriculture and the community motivated her to leave her job on Wall Street to start working on her family's ranch.

> I always say, that what really drove me home was the disconnect between the financial world I lived in and the agriculture community. And when you have that family that's in agriculture and then you are in the financial world -- where they are just putting numbers together, and they're deciding the price that you are going to get back home, I decided, well, which side of the game do you want to play. And I wanted to play the game back at home.

As Kimberly pointed out, land in her area is priced at over $10,000 an acre and, therefore, difficult for many to afford right now. The problem is with investors offering $10,000 and people not realizing that $10,000 is such a short financial gain and the longevity of land ownership has a greater and much longer financial gain. She proposes making the land as profitable as possible and keeping it generational.

There were those whose family was indeed making the land profitable. "My brother just planted pine trees to pay for college for his grandchildren, who are still in diapers. No, no. Don't ever sell it. God is not making any more land, so until he returns, hold what you got". Kimberly's family recently converted 1000 acres of land to solar power. "With us doing that, our neighbors, Black ranchers, were able to piggyback off that and put some of their land in, and normally they wouldn't have been able to do it themselves. And they tell me, now my children will keep the land because they are getting continuous income". Kayla's family collects mineral royalties. "It's not much, but it's something," she said.

In Rachel's case, she turned to the land as her source of income after being laid off from her job in the hospitality industry during the COVID-19 pandemic. Other participants desired to grow healthy food and save money but get the same food quality as in the upscale grocery stores. Two of the interview participants boasted about the high quality of green vegetables they grew in abundance and were proud to be able to share with their church and others in the community. However, Leah did not see an economic benefit because, as she stated, they spend more than they make. "It's kind of like, I don't want to say a hobby because I know I'm not going to ever reach that million-dollar goal ."Despite her skepticism, she encouraged her husband, a ranch manager, to invest differently in support of their family by explaining that "there's no point in taking care of someone else's herd and not having his own ."Her push led to purchasing cattle and other livestock that can now be passed down to her daughter.

Earning an MBA helped Stella see agriculture's economic potential beyond what she saw as a child growing up on her grandfather's farm. "I can think of a million different ways for farmers to not even necessarily expand, as far as size, but maybe expand in products. Like if you are growing and selling tomatoes, onions, then make salsa". Likewise, the focus group

participants also recognized the potential for agriculture and the benefits of diversification. Bonnie stated, "people like to go back to the same thing of thinking that we are just playing with dirt. But, there is so much that you can do within agriculture to get income. For example, herbalists who sell their own herbs".

Theme 4: Physiological Needs

Maslow's hierarchy indicated that physiological needs and safety constitute basic survival needs. Once the physiological needs requirements of an individual are met, the need progresses to the next level, safety need. The discussion related to physiological needs covered environmental, food insecurity and food desert, culture, and healthy eating.

Environmental

The first subtheme for physiological needs is environmental. Air, water, food, shelter, sleep, clothing, and reproduction are all physiological needs the agriculture industry impacts. As mentioned in Chapter 2, ozone, greenhouse gases, and climate change affect agricultural producers significantly because agriculture and fisheries depend on specific climate conditions. Temperature changes can cause habitat ranges and crop planting dates to shift, and droughts and floods due to climate change may hinder farming practices. The women interviewed were keenly aware of the environment's impact on their operations. If the environment is suffering, the crops suffer.

Rachel recalls the lessons her grandfathers and her parents taught concerning the farm. "We knew not to contaminate the ground by putting harsh chemicals and things like that. We kept it as clean as we could. Pesticides, we didn't do any of that. That's what we learned in the summer, spending time on the farm." Portia's objective after graduation is to help people adjust to climate change. She expects to establish credibility by becoming knowledgeable about

agriculture and sharing it with others in her community. "I've got to make sure that I know what I'm talking about before I go help anybody."

Food Insecurity and Food Deserts

Food insecurity and food deserts are the second subthemes identified in the research. The components of Maslow's theory build upon each other as indicated by the physiological needs associated with agriculture. Especially for the rural farmers, when social and economic development was limited, they relied on farming to meet most of their essential needs. Kayla shared her experience of watching her mother, aunts, and grandmother preserve fruits and vegetables. She shared that they lived in a food desert but were not food insecure because of their acumen in agriculture. Minnie shared that she can't recall when her family did not have a form of meat for dinner. "Our freezer was stocked with beef, pork, and chickens raised on the farm. We also had deer and fish, and whatever else my father and brother could hunt in the wild... rabbit, quail, you name it."

The conditions of the environment were also reflected in the food quality. Kayla recognized that the eggs looked and tasted different from what she now buys in the store. The experienced farmers shared how they grew up eating organically before organic even became popular. They did not have excessively unhealthy foods, mainly because fast food was not an option.

Nevertheless, when discussing food disparity in the 21st century, the problem was attributed to access to fast and unhealthy foods, limited availability of healthy food, and lack of knowledge regarding food sources. Additionally, Rachel pointed out that a person may not live in a food desert but still could be food insecure because of the high cost of healthy food options. Stella reiterated when discussing access to organic produce that people will buy what they can

afford. She states, "I got into farming and agriculture because I know that if I shorten the supply chain and I don't have to ship things from coast to coast, I can charge less for things and make it more affordable for people who look like me."

The focus group participants also recognized the disparities and believed that social media helped spotlight the difference in lifestyles. As shared by Lily, "like in other neighborhoods, there is supposed to be a grocery store on every other corner, rather than us driving 15-20 minutes to a somewhat decent grocery store for decent produce". Rebecca concurred that there are food deserts all around and believes that more emphasis should be placed on growing our foods, but the foundation has to be established early. "I taught for 30 years, and I created my own garden in front of the school. So, the fact is, there is a cross-connection between all of the content that they learn. The curriculum has to support this holistic approach to education and agriculture.

Rachel and Phyllis equated food disparities to cultural norms. Rachel lives in a predominantly African American community and travels 20-plus miles to get fresh fruits and vegetables. She concurred that this generation had better wake up. She believes the interest will come if the children are exposed to agriculture at an early age. Likewise, Phyllis believes that children are concerned about shoes and clothes to put on their bodies but rarely think about eating and what they put in their bodies, especially food from the drive-thru. “They don't eat mindfully; they eat mindlessly. They're not thinking about the journey of that food from the farm to the drive-thru window; They don't even think about the changes and modifications the food goes through before getting to them.”

Phyllis became animated when she spoke of her sister: “This particular sister was like, Oh, no. I ain't going back up there to no country. You talk to her about growing anything, and

you would get cursed out.” Because this sister loved to cook, she now questions why should buy produce from the grocery store when she has the skills to grow them in her backyard.

According to Donna, the other aspect of farming in this space is reminding people that they deserve beautiful things and high-quality things. She cited an example of other organizations and mobile food trucks that come in and out of the community and bring food to a place with limited access. Sometimes the food is outdated, high in starch, ripped boxed, bent cans, and not good quality. She proclaims, "the place where we begin to trust and really love each other comes from wanting the highest quality things for myself and for my neighbor.” Moreover, Donna believes that it's not an either-or; but the standard, and expectation. “For a long time, when you are made to work with less, you start expecting less.” That's a really important part of the social interaction, how she farms. Growing really high quality, superb level of food, and also making spaces that are really beautiful, and exciting and eye-catching in a space that has been divested for a long time

Finally, Lexie reiterated the story of her grandmother, who dropped out of school in sixth grade to work on farms to help support her family. As such, many of Lexie's family members could not understand why she would pursue a career in agriculture, considering her grandmother sacrificed her education for farm labor. Lexie responded by reminding her family members that agriculture is an industry everybody needs; everybody has to eat. She stressed the importance of caring for the planet and sustaining the industry.

Noticeably, other focus group participants were like Lexie, who recognized their ancestors' sacrifices and desired to become educated and make a difference. Meagan believes that higher education will allow her to return to her community and educate people in a food desert. Because of her influence, her grandparents now eat healthier and have built a garden in

their backyard. "And I think that if I can do that for my grandparents. I know I can do that for the rest of my community back home".

Portia found encouraging others to recycle and positively impact the environment rewarding. Likewise, Donna was not confident that she would have a global impact, but she felt fulfilled about the work that she was doing. "If it inspires other people and they can learn from the steps and missteps we have had along the way, wonderful." Lastly, Kimberly shared that she wants to be a resource in her community and a role model for the younger generation, who will be a role model for others.

Culture and Lifestyle

The third subtheme for safety needs is culture and lifestyle. Food is central to cultural legacies in the Black community, ranging from celebrations to mourning. The interviews illustrated the participants' efforts to reconnect to their farming roots, both rural and urban. For instance, Donna believes that her farm may or may not be unique as an urban farm that focuses on feeding the folks in her community. She believes that part of her work is figuring out how to farm sustainably, not only in farming practices but also in structuring pricing so that she can continue doing this work. Also, how do we feed a community that has been ignored and divested for almost several decades? I want to be very intentional about having the neighborhood informed or work in the things we grow because we would not exist in the way we function now without them. And so as far as the social aspect of it, coming from a culture that has so many ties to celebration around food and mourning around food, even things like the tradition around how you clean your greens, I think those are the social things that continue to be exchanged at our farm that may not be happening at larger, agriculture, big commodity crop farms.

The history of the long and challenging struggle associated with producing and delivering wholesome and nourishing food was also revealed in the interviews. As Rachel shared, she has only been a farmer since 2020 but has become accustomed to waking up at 5 am and going to the fields to do what was needed, returning home to prepare for a full-time workday online from 8 am-5 pm and then return to the fields in the evening. She observed this work ethic in her parents and grandparents as a child.

When asked about the lack of emphasis on agriculture in the Black community, Rebecca responded, "We have lost respect for the life of the Black farmer. We need to write our narrative—not allow someone else to do it for us. Furthermore, Phyllis recognized the social divide between her grandchildren in terms of what they know and what they are being exposed to. She states, "I have one granddaughter who was growing up with her mother in South Carolina, and I have to tell her we are not having Skittles for breakfast!".

Finally, the interview participants shared comments regarding the medicinal benefits of agriculture as another way of reconnecting with their cultural roots. Bonnie spoke about a study she read that proves that a particular type of cherry cures cancer.

It kills all cancer cells that people don't know about because they steadily tend to go to the doctor, ending up with medicines that have chemicals that the doctor prescribes to them. It helps, but it keeps you coming back to them. It keeps money flow flowing back into their pocket. So if people understand that, you know... you can have your ashwagandha to help with stress and anxiety. You know, stuff like that. You can literally grow these things in your own backyard and have a better lifestyle.

Rebecca, an experienced producer, elaborated on Bonnie's perspective by stating that we have become dependent on someone else's science. She cited the benefits of turmeric, ginger,

garlic, and other produces that offer healing properties. "We need to know that we are the original root doctors and medicine. Every plant you grow, different plants and vegetables correspond with some type of healing potion".

Theme 5: Esteem

The final theme is esteem, with subthemes encompassing community, achievement, and sustainability. Research from Harris and Orth (2020) suggested that the link between people's social relationships and their level of self-esteem is reciprocal in all developmental stages across the life span, reflecting a positive feedback loop between the constructs. Leah shared esteem in describing the transformation she helped make on students enrolled in her inner-city class with minimum support from the school administration. By the end of the year, there were students on the waiting list for her class.

Compared to Leah's experiences, Donna experienced esteem with her work as a community and environmental advocate and was recognized and rewarded as an inaugural recipient of the Braided Seed Fellowship. She attended a conference and was approached by a woman who acknowledged the amazing work that she was doing. The woman offered to support the organization with no-string-attached funding. "That was the funds that started Fountain Heights Farms. It started in 2017, and we have been farming here in Fountain Heights ever since."

Outlier Data and Findings

Two outlier findings were identified: (1) negative stereotyping by both Black males and males of other races, and (2) aggression as a coping strategy. While these data points were inconsistent for the majority, they were worth mentioning because of intersectionality. These findings were particularly noticeable with Leah.

Outlier Finding: Negative Black Males

The Black women producers shared their lived experiences of racism and sexism, but the dual effects of intersectionality were sometimes leveled at them by Black males. Specifically, Leah shares how her experiences negatively and positively influenced her motivation in agriculture. In one case, the negativity helped her grow and improve, but in other situations, she felt defeated. Kimberly is an example of overcoming any negativity based on her knowledge.

"I have not experienced that as much because when they see me ride horses, they see me work cattle, they know, they're like Kim knows what she's doing." Moreover, she gets calls from men who require her help, which she furthermore contributes to her education. According to Kimberly, they do not question her ability because she has the technically advanced ranch management education options on her resume. "That's one of the barriers we need to stop. We need to have more Black women and men enter programs like that".

Outlier Finding: Aggression as a Coping Mechanism

Black women have often been the victims of negative stereotyping in mainstream American culture. Such stereotypes include the myth of the angry Black woman that characterizes women as aggressive, ill-tempered, illogical, and hostile. However, as the research shows, many negative characteristics developed in response to external stressors where aggression was viewed as a coping mechanism.

From the focus group, Bonnie shared why she becomes more aggressive when faced with discrimination. "If you are extremely passive, they will walk all over you. You have to be more aggressive; you have to constantly stand your ground. When they are talking about you, you have to talk about them ten times worst". Leah also shared her experiences as an inter-city

agriculture teacher at a public high school, albeit it took her tossing a chair across the room to get the students to listen.

Research Question Responses

The research questions for this study were grounded in the literature on perceptions of Black females in agriculture and the significance of post-secondary education. This phenomenological-designed research was guided by one central research question and four subordinated research questions. The research questions presented in this study were designed to provide information not found in the current literature. Much literature has been presented on perceptions of women farmers and Black farmers. However, a limited amount of research is shown on the perception of Black women.

The formulation of these questions was based on several characteristics: to reveal the essences and meaning of human experiences; to uncover the quality rather than the quantitative factors in behavior and experiences; to engage the total self of the research participants; does not seek to predict or to determine causal relationships; and is illustrated through careful, comprehensive descriptions, vivid and accurate rendering of the experiences (Moustakas, 1994, p. 105). Below are the questions and the findings from the participants concerning the questions.

Central Research Question

The central research question was: What are the perceptions and lived experiences of Black women and the influence of post-secondary education on their involvement in agriculture? The central question was designed to answer two broad questions: What has the participant experienced as a Black woman in agriculture? What contexts or situation have influenced their experiences as Black women in agriculture? Twenty Black women participated in the research and provided diverse answers. While there were various perspectives, similarities occurred in

many responses. The major themes that addressed the central research questions are love and belonging, education, safety needs, physiological needs, and esteem.

Overall, the perception and lived experiences of Black women in agriculture correlated with post-secondary education in several categories. First, the primary influence was that of family. Particularly for the experienced farmers, who grew up in an era where their parents, in most cases, did not attend college, but the expectation was that their children would. The women highlighted the expectations and sacrifices that made it possible for them to achieve post-secondary education. Ironically, the love of family encouraged them to attend college, and later in life, it was the love of family that brought them back to their roots, as noted by the desire to help on the farm or the illness of an aging loved one.

While working in her professional capacity on Wall Street, Kimberly noticed a gap in how the financial benefits were trickling down to the point where it impacted her family's operations. The disconnect between the financial world and the agricultural community influenced her decision to return to the land. Likewise, Phyllis returned to her roots when her mother became ill, and it was then that she garnered a greater appreciation for the land.

> I came back, and she talked about the land like her heart was in it. It was then that I was able to buy one of the pecan orchards back that my great-grandfather had planted. So the trees that I owned, trees that are according to the original deed, when my great grandfather purchased the land. He purchased it for the purpose of planting crops and the pecan grove, and the crops provided him with annual income. Because he was an agriculturalist, I surmised that he had to have known that those pecan trees would outlive him. But that's what he planted to make way for the generations that would follow him.

The question also revealed how culture and childhood upbringing played a role in the motivation and persistence of the participants. Leah enrolled in college without a clear direction or a defined plan. She commented that she started farming as her father's shadow yet, and when she enrolled in college, she felt agriculture to be her calling because she could not figure out anything else she wanted to do.

Stella described her motivation for agriculture based on her family history.

> I've had to work double and triple my counterparts. So for me, it was like...okay, it's hard work, but I've spent the last 12 years doing hard work for other people. So, I'm okay with doing something that is a passion of mine. My great-grandparents farmed, and their families before them farmed, so for me, it's been like coming full circle. I definitely feel like I've faced some of the same things they experienced back in the 1920s and 30s.

Additionally, the research revealed challenges in mentorship, a lack of diversity, and low Black female representation in the roles of educators at post-secondary institutions. Several participants communicated the importance of having a female mentor and other Black females in the industry with whom they can relate. Others agree that the perception of Black female farmers needs to change, starting with the media. The assumption is that more Black girls will become interested in becoming farm and ranch producers if they see others who look like them in the position. Historically, the image of farmers and ranchers has predominantly been white males.

Finally, the research exposed the need for curriculums in agriculture at the post-secondary level to address concerns for food disparity, protection of the environment, and diversification of land use. The participants called on the HBCUs to do more because the most

negatively impacted communities are communities of color. The participants also supported more mission-focused training programs.

Sub-Question One

The first sub-question for the study was: How does post-secondary education impact the preparation and development of skills needed to increase opportunities in sustainable agriculture for Black women? The question aimed to understand the institutions and create curricula and programs conducive to the participants' interests. Most agreed that post-education impacts preparation and development significantly. The theme that addressed this question was education, with the related subthemes of 1890 Institutions and curriculum design.

For the students currently studying agriculture programs, the classroom teaching, coupled with the hands-on experience, is helping to prepare them. Additionally, networking amongst like-minded students helps with persistence. At the same time, a few participants indicated that they became motivated toward agriculture in high school through programs such as 4-H or F.F.A. Additionally, post-secondary education helped solidify their career and professional interest.

While the focus group participants and a few experienced farmers embraced the programs offered in partnership with an HBCU and USDA, others believe that more should be done to advance the need for Black women in agriculture. Kayla shared that her grandfather was not educated in agriculture. Still, he taught her a lot by observing his actions, even though he generated little income from the small-scale operation. She recognizes that with so much innovation in farming, there is more opportunity for Black women to expand commercially if given the proper training and encouragement. Likewise, Colleen recommended that higher education use the same process as STEM. to encourage more Black women to participate in

agriculture, citing the example of Hidden Figures. If young Black girls are exposed to Black women who are in agriculture, they too can aspire to do the same.

Several experienced farmers were retired educators and concurred with Alice, who stated that there were a lot of teachable moments in the industry and cross-curriculum that can be applied to agriculture. While agriculture was not their study major, the transferrable skills they learned could be processed on a level applicable to their agribusiness. Moreover, the experienced farmers agreed with Donna, who stated that her education, even though not in agriculture, has positively affected the way she approaches farming. Donna majored in Spanish and minored in French. She explained, “education doesn't teach you what to think; it teaches you how to think.”

According to Phyllis, she did not have an educational background in agriculture. Still, as a retired educator, she was not opposed to becoming the pupil when it came time to learn and not the instructor, "whatever I taught my students about how to learn something completely foreign to them, like a language, I tell myself to use that same method to learn agriculture.” She added that the gap must be closed, teaching the importance of eating healthily, “we all might make $100,000 a year, but you know, money can buy medicine, but it can't buy health”.

Many participants believed that hands-on learning was just as important as book learning. Leah, for example, explained that the hands-on experience she received from her father and husband was more beneficial than her post-secondary education in agriculture. She supported her claim by sharing a story about a teacher who had book knowledge but lacked the skills needed to understand the nature of the animals, which could only be achieved by hands-on involvement.

The experienced farmers shared that although their post-secondary education was outside agriculture, they took advantage of the university training programs. For example, Kimberly completed agriculture education programs. Also, she participated in an agricultural leadership

program with a narrow-minded focus on what she needed to do to manage her family's ranch. Her creative or non-traditional approach toward addressing the needs of Black women serves as a model for others.

Sub-Question Two

The second sub-question for the present study was: What are the unique cultural experiences of Black women, from childhood to adulthood, that have motivated their persistence in sustainable agriculture? The purpose of this question was to link cultural experiences and future expectations. The themes of love and belonging and physiological need addressed this question. The participants embraced the subject and were eager to share their unique cultural experiences, and the dominant responses centered around family. As Donna pointed out, Black women come from a culture that has many ties to celebration around food and mourning around food. Unfortunately, the ugly history of Black America in the quest to overcome oppression, seek progress, and pursue justice and equality has not always been accessible. A couple of the participants were emotional when describing the impact.

The participants shared that family was their source of support and encouragement. The calls were often made to the father when they were challenged and needed advice and direction. Phyllis recalled the shared responsibilities of the family members. "I know from my experience, my father came from agriculture. In his agriculture experience, his family owned a farm where everyone, including the women, was expected to chip in and do what was expected because, at the end of the day, everyone had the capability to do the same jobs". For many, the cultural experience of agriculture was associated with a negative connotation; however, with age also came an appreciation.

Several participants communicated the hard work associated with agriculture and the benchmarks that the role models in their families established. In particular, for the photo narrative, focus group participant, Kayla, provided a picture of her grandfather's hand that was taken during his final hours of life (see Appendix D). The narrative read: “my grandfather literally worked his fingers to the bone to provide for his family. In return, he only asked for three things: That we know the Lord, stay out of jail and get a good education. I promise I will not let him down”.

Additionally, many comments were centered around land ownership since land is an essential commodity needed for agriculture; yet, the past inequalities continue to add to the complexity of land ownership for Black farmers, especially Black female farmers. Rachel shared that her great-grandparents farmed, their family farmed, and people made it so hard. Bonnie stated, “People took the land, and people did so much that eventually, they just bowed out and they said, okay, you got it, we will go do something else.” Alice Mae spoke about seeing people who have leased the land and developed it for years, and then all of a sudden, the owner dies, and their kids decide to sell. Finally, Minnie questioned how different her life could have been had her family’s inheritance not been taken.

There were also stories of retribution that came with pride in their heritage. Rebecca returned home to her roots on the plantation property where her parents were sharecroppers. Phyllis also shared her story of retribution.

> I got the land. And then it was a question of, what are you going to do with the land. Well, I bought it primarily because my mother inspired me, and I was able to bring the deed home and put it in her hand and say, Mom, we got some of the land back, right. That was meaningful to me to be able to do that before she

> passed away, for her to know that we've gotten part of the land back. Then as I got closer to retirement and the gentleman's lease ran out, then I knew that I needed farm equipment. Well, I bought a tractor four years ago, or about four or five years ago. I just paid the tractor off last year. Had I ever driven the tractor? No. But I use it in the orchard. I use it to keep the grass cut.

Finally, Rebecca shared the importance of embracing history and changing the narrative, not just the conversation. She encourages women to approach farming as a business venture, owning the land and machinery and hiring people to do the work.

> We are scientists. Look at what George Washington Carver did. For me, I think it is taking it back to our roots, all the way back to our roots in Africa to now, making people proud of our heritage and the importance of the Black farmer and women can be a part of that.

Stella also looked to accomplished figures such as George Washington Carver as a motivator. A photo provided by Stella was the image of the George Washington Carver Museum (see Appendix D). The narrative provided read:

> This photo is significant because I spent many days visiting this museum and learning about George Washington Carver as a kid. He has done so much for agriculture and sometimes doesn't get the recognition he deserves. He also went through so much and was able to overcome it all and still make a significant impact on society. I keep this in mind at all times while I'm navigating the world as a Black woman farmer. There may be obstacles, but I can overcome them.

Despite the challenges and hardships that the participants recalled historically, there was a motivation to educate others about the importance of sustaining and maintaining the land. For example, Colleen desire to help with education.

> There is a lot of distrust and a lot of history. There are a lot of buildups. I encourage women to step forward to let people know that you are here, you are out here doing what's good for the community, and you are providing fresh fruit and vegetables. There are so many things. The convenience food that is here, so many of us are eating that, and it is causing high blood pressure, diabetes, and things like that that are not good for us. I want to help the community get back to the fresh eating that is rooted deep in us. And to do what's good for us, to be healthier. We are cattle farmers, but I am 80% vegetarian.

Finally, Rachel recognized farming as part of Black culture that should be encouraged. She expressed concern that farming and agriculture would become a fad rather than a way of life.

> My mother lived to be 96. My father lived to be 84. My great-aunt lived to be 103. You know, my aunt, who passed away last year, was 92. My aunt, who passed away, lived in Philadelphia, but she was the community gardener there. I mean, her collard green grew so huge the leaves looked like elephant ears. She could feed her whole block with the stuff that she raised. And my sister, who lives in Miami, everybody talks about my sister's collard greens in her backyard. Because some things you've learned come back. If it's in you, it's going to come back".

Sub-Question Three

The third sub-question for the present study was: What role can post-secondary education play in eliminating gender bias that may hinder more women from going into agriculture? The themes that addressed this question are love and belonging as the subthemes of sense of connection and Black female mentors, which speaks to the impact of professional associations, social engagement, and mentorship. Kimberly, who sits on the agriculture board and the board of an HBCU, responds,

> I guess it's more than Black women...I think it's in general. It's like, what do we need to do to get more women involved, etc.? Number one is definitely the curriculum, and they are trying to change the curriculum to a point where it is more concentrated. I'm not trying to be discriminative at all, but many times, female and male roles have this point of view of what we can and cannot do in the industry, and I think we have to break that barrier down and say it doesn't matter what you can do and can't do.

Kimberly went on to express the importance of including females in the roles of managing operations and adding to the curriculum of female agriculture professors and researchers. She dispelled the opinion that there were no qualified candidates because, as she stated, "they are out there."

As it relates to intersectionality, Donna suggests that there is nothing that higher education institutions can do to eliminate the bias seen in agriculture, adding,

> The reason I say that is because farming is incredibly intense. It is physically demanding. It is undervalued. It is at the whelm of climate change, fickle markets, and fickle consumers. It also carries a profound and long-lasting legacy of trauma

> for Black and brown people, particularly women. It would be a great undertaking for higher education to do that. I think more and more consumers understand the value of food and the land that farmers protect and hold. I also believe that there is an incredible structural barrier that will always work to keep farmers, particularly farm laborers, poor. That it will always be undervalued because of labor and not necessarily considered cerebral. I hate to be the pessimist, but I'm not sure that higher education could make that change.

Leah, a certified teacher, provided an example of the barrier she faced as a Black woman in agriculture when applying for positions in agriculture. By using her initials on a job application rather than her full name, she was invited to interview for a position in agriculture. However, when she appeared, the attitude of the hiring personnel changed when they saw that she was a young, Black female.

Leah also shared her experiences building a program at the school where she worked, and the principal eventually canceled her employment contract. When asked if she felt it was because of her race or gender, she replied, "It had nothing to do with my color. Okay. He feels that inner-city kids did not need to know anything about agriculture. How was that going to help them? So, to answer this question, I ended up bringing two kids to Prairie View. And I got them scholarships. Now they know the value of a college education. And hopefully, he'll continue in some form or fashion in agriculture.

Another subtheme that addresses the question is safety needs, specifically, the subtheme of personal security as it relates to access, fairness, and equality. The question was asked, what do you feel that institutions of higher learning can do differently to encourage more Black women to participate in agriculture? The consensus was that they should get these students while

they are in high school or while they are in middle school. According to Stella, she already knew what she wanted to do when she got to college.

> If you take someone who has never thought about agriculture and you wait until they get on the collegiate level and try to bring them in, it is going to be hard. I remember when I was in high school, I would have never thought – hey, let me join 4-H. That's because I didn't see anybody who looked like me -- granted, I didn't see any engineers either. My dad always took me to Tuskegee, so at every open house, I was there. I would talk to the students the older I got, and that's when I saw the engineering major. I think that exposure really helped me, so if they can reach people when they are younger, maybe go to some career fairs, or career days, that would be good.

Many of the women took the initiative to seek out resources. For example, Rachel, I don't have that college education in ag, but I've been on so many webinars from Prairie View that they are starting to know who I am. Stella provided a photo of Tuskegee University (see Appendix D) with a caption that read:

> I am an alum of Tuskegee University and am forever grateful for my experiences there. It has prepared me for many obstacles that I have encountered. I am also a supporter of the work that Booker T. Washington was doing with the students and the innovative approaches he took. I aspire to have my own Farm Mobile that I can use to continue to educate other Black women on farming and gardening.

Furthermore, the intersectionality theory was woven throughout the interviews and reinforced the importance of having mentors and sponsors to advocate and provide hands-on experiences in higher education institutions. This was illustrated mainly by

Leah and her experiences. The focus group participants also shared the importance of having other individuals they could identify with at the university. "We had a lot of females in the nutrition class---some of them didn't want to participate in the animal version, but they had to because of the curriculum. They didn't have a choice, so we had to support each other".

Many of the focus group participants had the goal of helping to educate the community. Rose proclaims that after graduating with a doctorate in Veterinary Science, she would like to return to campus to set up a clinic promoting mentorship. Lindsey also shared the stress of being in a professional environment surrounded by people she cannot identify with.

> Honestly, sometimes it's stressful to be in a professional environment, and you already have to be at your very best, but now you are surrounded by people who don't like you and have never interacted with someone who looks like you. And not only do you have to be professional, but you have to go beyond that. Sometimes you have to defend yourself, what school you're coming from, how you dress, how you talk, and your experiences. So being able to learn and grow in an environment that wasn't holding me back, was an advantage.

Sub-Question Four

The fourth sub-question for the present study was: What role do higher education institutions play in helping to address diet-related disparities and maintaining agricultural sustainability? The response to this question differed significantly between the experienced interview participants and the aspiring focus group participants. This question was addressed with the safety needs theme and the subtheme of resources, specifically, the 1890 Land-Grant Institutions National Scholarship Programs, which aims to deliver high-quality

agricultural research, education, and extension programs to produce skilled graduates in agricultural science (U. S. Department of Agriculture, Economic Research Service, 2019).

The experienced producers believed that, historically, farmers knew what to do based on skills passed down through the generations; however, it was done on a smaller scale. The information from the experienced producers indicated that most of their role models, specifically the males, did not have formal education and training. Still, they were skilled at growing healthy produce and raising healthy livestock, albeit on a small scale. Therefore, they did not view higher education as a necessity. This is the sentiment communicated by experienced farmers.

Rachel indicated in her interview that in her county, so many farmers are growing just enough for their families. “They are doing it. They know what to do. Those farmers are also working other full-time jobs. It’s just not generating enough income for them to have a living”. By watching the prior generations, the experienced farmers knew not to contaminate the soil with harsh chemicals and pesticides and to allow livestock to feed organically rather than using supplements. These are skills that can be evidenced through academia.

Finally, Donna shared the importance of being community-focused when other organizations are intentional in their efforts to address food disparities. She advocates for institutions to ask questions to define the problem and create a model to ensure equity.

> We have organizations that come in and out of the community. They bring food to places where there is limited access, but sometimes the food is out of date, high in starch, boxed, bent cans, and all of these things. The place where we begin to trust and like really love on each other comes from wanting the highest quality things for myself and for my neighbor. It’s not an either-or; it’s just that we both have this standard, and this is what we expect.

The focus group participants believed that with innovation, things have changed, and the role of higher education institutions in helping address diet-related disparities was communicated throughout the session. They shared interesting perspectives about food disparities, medicinal agents such as hemp and other herbs, and sustaining the environment, as influenced by their college experience. Several shared that they are better equipped to return to their community and make a difference by being in college and earning a degree. A few young farmers were starting to make a difference by encouraging their families to eat healthily, grow to produce, and recycle to help protect the environment.

"And I think that if I can do that for my grandparents. I can do that for the rest of my community back in Florida. So, it's just helping everybody kind of live more active and healthier lives and then have a more positive impact on the environment".

Whereas experience farmers gain knowledge from observing the prior generations of farmers, the focus group participants cited innovation and technology for making farming more efficient. In contrast, there was extensive discussion regarding the quality of foods consumed via fast food convenience and mass production with hormonal enhancements. Also, there is more discussion about the quantity of food consumed by their generation. "My grandmamma didn't have the option for fast foods, but she did have fruit trees, a vegetable garden, and pecan trees; she would take all day to cook a pot of peas or greens," stated Kayla.

The question then led to the discussion of the locations of fresh produce compared to the availability of various unhealthy fast food options. "Why are there communities where people have to travel 20-plus miles away to get fresh fruits and vegetables, but there is a McDonald's or Popeyes on every corner?" Sophia also believes that the University should focus more on the

supply chain. “If people understood the cycle, where their food comes from, they could better understand why the processed foods found at most fast food places are unhealthy.

Lily expressed personal reasons for why agriculture should be sustainable. Growing up in the inner city, she noticed that many of her friends and family in the neighborhood had asthma, but it was not a condition that was hereditary. “That's why I'm in agriculture right now because I want to go into environmental science to explore how neighborhoods in the same vicinity could have the same lung disease that did not run in the family.” Observing how low-income communities of color are affected by the pollution caused by larger corporations, Lily believes that greater emphasis should be placed on bringing awareness to the problem.

It was an interesting dynamic as Raven and Lily continued to piggyback upon the comments of each other. Raven agreed that people do not know the difference, “people just think this is a way of life, but social media has made us realize, oh, it’s not supposed to be like this.” The dialogue continued with Lily stating, “it is supposed to be a grocery store on every other corner, rather than us driving 15-20 minutes to a decent groceries for decent produce. It's a realization that it's not supposed to be like this. But how can we change it unless we go to school for it?” Both agreed that it could be so much better as Raven concluded, “seeing how a lot of neighbors around me would stretch their ins to make sure their farm is still working, it just made me grow a whole different appreciation for agriculture growing up.”

Lastly, hemp was mentioned in a few interviews, so the participants were asked to expand on the relevance of farming hemp as an integral part of an agriculture curriculum. To summarize comments by Bonnie, Stella, and Kimberly, farming what we eat is essential; however, industrial hemp is coming. Black women must learn everything about it – from

packaging (e.g., plastics, insulation, paper, and clothing), materials, or manufacturing provides a good space to look into for opportunities to diversify. Not only that, but the environment and sustainable engineering will be a space for open-minded botanists, scientists, and engineers. Some will be suppliers, some will be developers, and others will be producers. There is also countless medicinal use for hemp.

Summary

In Chapter Four, a detailed description of the participants was given. Furthermore, the themes were identified and discussed. The themes that emerged from the data included love and belonging, education, safety needs, physiological needs, security needs, and esteem.

The themes also had subthemes. The subthemes for love and belonging included family relationships, male influence, sense of connection, social engagement, and mentorship. The subtheme for education was the impact of historically Black colleges and universities, STEM, curriculum design, and academic representation. The safety needs subtheme included property, land, economic stability, personal security, resources, and health. The subtheme for physiological needs was food desert, food security, environmental concerns, culture and lifestyle, and Healthy eating. Finally, the subtheme for esteem was Agriculture educators and community initiatives in addition to academic achievement, retribution for past misdeeds, and sustainability.

Most participants perceived that there is a space for Black Women in agriculture and that they can succeed with hard work and support. Education was also crucial, both academically and with hands-on experience. When provided with adequate resources, specifically land and funding, the participants were encouraged to make a difference in the food quality while protecting the land and the environment.

Lastly, the participants described the support of family, specifically the males, as a significant influence on their development and motivation in agriculture. The need for Black female representation as mentors, educators, or peers was also expressed. There was a feeling of alienation from being the only Black female and the challenges encountered. There was also an enhanced need to prove themselves capable as a female in a male-dominated environment. Therefore, social engagement was meaningful, such as opportunities available through professional organizations and non-profits that meet the community's needs while creating a sisterhood or bond.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this phenomenological study was to explore the perceptions and lived experiences of Black women and the influence of post-secondary education on their involvement in agriculture. Chapter Five begins with interpreting the thematic findings from the participants' experiences. In addition, this chapter addresses policy and practice implications. The rationale for theoretical and empirical implications is described, followed by a discussion of limitations and delimitations. The chapter concludes with recommendations for future research related to this study.

Discussion

The discussion section of this study emphasizes the interpretation of the findings, which are aligned with the empirical and theoretical literature review in Chapter Two. The research considered the five levels of Maslow's hierarchy, physiological, safety, love and belonging, esteem, and self-actualization (McLeod, 2020), coupled with the marginality of Black women as identified by the intersectionality theory (Collins & Bilge, 2016; Faktorovich, 2020; Lorde, 1984), to define further the relationship between agriculture science and the referenced theories. The discussion section begins with the interpretation of the findings, followed by the implications for policy and practices, and then the theoretical and empirical implications are outlined. Limitations and delimitations are explained, followed by recommendations for future research.

Interpretation of Findings

Five major themes emerged from the analysis of the study results: (1) Love and belonging with subthemes of family relationship, senses of connection, and Black female

mentors (2) Education with subthemes of 1890 Institutions, Curriculum Design, Representation in Academia (3) Safety needs with the subthemes of land equity, economic stability, personal security, resources (4) Physiological needs with the subtheme of food security, environmental, culture, health consumptions and (5) Esteem with the subtheme of community development, academic achievement, recovery, and sustainability. All of the themes and subthemes aligned with the central research question: What are the perceptions and lived experiences of Black women and the influence of post-secondary education on their involvement in agriculture? The interpretations are intended to synthesize and connect the phenomenon, participant experiences, literature, and theoretical framework. Findings from this study could be used to enhance curriculums and professional development for educators, administrators, and others involved in agriculture production.

Summary of Thematic Findings

The interpretations of these themes were developed under the theoretical framework of Maslow's hierarchy of needs theory and Crenshaw's intersectional theory. The thematic interpretations derived from the foundation of Maslow's hierarchy and Crenshaw's intersectional theory show a pattern linked to resilience, Christ-centered self-fulfillment, resourcefulness, and awareness.

Resilience Interpretation. The first interpretation of the findings relates to resilience. Maslow's hierarchy illustrates that human motivation is progressively satisfied through the five hierarchy levels. Maslow identified the lower levels on the pyramid as physiological needs (air, water, food, shelter) and safety needs (security, property, and employment) as basic requirements for human survival. Love and belonging, and esteem needs are considered the psychological needs of an individual.

When deprived of basic needs or psychological needs, human existence is deficient. Therefore, it is unsurprising that the major themes in this study aligned with the basic needs of safety and physiological and were followed by psychological needs of love and belonging, and esteem. These needs are the fundamental premise for human motivation. The history of enslavement is rooted deeply, and basic human needs, emotional well-being, self-confidence, and feeling valued have an underlying link running through the exclusion of Black women in the agricultural space. Littlefield (2019) posited that the basic needs of Black farmers were denied because of cultural deficiencies that prevented them from assimilating and attaining social mobility. The experienced interview participants spoke of the importance of sharing with their children about the plight of their ancestors while stressing the importance of not allowing history to repeat the same mistakes over again.

The findings support that social connectedness, be it with family, community, or workplace, creates a pattern of how a person deals with life's challenges to achieve a sense of wholeness. The family, including the church family, was the participant's first social setting and played an essential role in how they viewed life and behaved in other social settings later on. It takes extraordinary resilience to overcome the legacy of enslavement and ongoing systemic discrimination in a society where it is often ignored or overly politized.

Christ-Centered Interpretation. The second thematic interpretation relates to self-actualization. Maslow's model identifies self-actualization as a self-fulfillment level where the individual has achieved their growth potential. The idea is that when basic needs are met, people have the desire and ability to realize their full potential. Therefore, it is unsurprising that the absence of self-actualization as a major theme in the experiences shared by participants.

From a biblical perspective, the Black church has been a cultural vessel that Black people created to combat a system designed to diminish their spirits. The sheer will, determination to survive, and resilience has been grounded in faith. As such, self-fulfillment was not void of a Christ-centered perspective as the foundation of achievement is emphasized in Scripture, "for it is by grace you have been saved, through faith – and this is not from yourselves, it is the gift of God – not by works so that no one can boast." (Ephesians 2:8-9, NLT). Some of the Christian-centered comments that were notated during data collection included: "praying for rain," "God is not making any more land," "if it is God's will," "I am blessed," and "never underestimate the power of prayer."

Resourcefulness Interpretation. The resourcefulness interpretation encompasses financial, environmental, and cultural sustainability. In terms of understanding finances and equality, it is well documented that the absence of Black generational wealth results from the lack of land ownership. Noticeably, USDA has created a narrative that Black farmers' decline and land loss were due to the loss of heirs' property. While valid to an extent, however, the participants' voices collaborate with the documented accounts by Kennedy and Henderson-Lawson (2020) and others who validate that most of the land loss was due to unscrupulous business practices that stole, deceived, or defrauded Black families out of their inheritance.

The voices of these women, specifically Minnie and Kayla, embodied the idea that the discussion of land loss is not just financial; instead, it is about access to the land and the ability to create and maintain cultural roots. While there are currently meaningful discussions regarding reparation or other means of rectifying the wrong of enslavement, the focus has shifted from land ownership. As a result, the sentimental and cultural attachment to land has been diminished. As illustrated by Phyllis, who presented the deed to her aging mother, she loved the land, not

because of its monetary value but because of the cultural importance that it represents. Kayla submitted a picture of her grandfather's hand as a reminder of his sacrifices and hard work to sustain the land for his family. Minnie shared that her life would have been much better had her family not been denied the generational wealth.

Sustainability was also contingent on obtaining credit. For many producers of color interested in acquiring land, purchasing equipment, or even establishing conservation practices, access to credit was denied by private lenders and USDA. The Government Accountability Office (GAO) investigates and publishes its findings on how socially disadvantaged farmers and ranchers (SDFRs) are accessing agricultural credit. However, comprehensive data on agricultural debt is unavailable because regulations generally prohibit lenders from requiring demographic data on loan applications.

Awareness Interpretation. A third interpretation relates to health-related consumption and knowledge. For many families, financial resources influence food quality and intake. Food-related choices and decisions impact obesity and obesity-related health issues. The ability to acquire knowledge and skills to understand complex inter-relationships better may lead to developing interventions that promote health and reduce health inequities. Moreover, the recent health-related burden caused by the coronavirus disease 2019 (COVID-19) pandemic exposed other areas of injustice. The diet-related comorbidities (e.g., obesity, hypertension, diabetes, and some cancers) exacerbated the poor outcomes in the racial/ethnic minority population.

Implications for Policy and Practice

This study presented a portrait of the lived experiences of Black women in agriculture in the Southern United States. Their stories developed a foundation of knowledge surrounding how Black females in agriculture experienced and understood the source of motivation and the

linkage to intersectionality. The implications were based on the detailed descriptions that evolved from the lived experiences. The women's voices expressed through their lived experiences were always present. Their voices helped define the phenomenon; thus, they served as the basis for the recommendations. This section details the implications for policy and practice to include recommendations for agricultural stakeholders and policymakers.

Implications for Policy

Legislation has been introduced to reverse the longstanding trend of Black land loss while instituting key civil rights initiatives. However, the advance notice of proposed rulemaking (ANPR), as published by the Food Safety and Inspection Service (FSIS) analysis of USDA, reported that in 2019, $19 billion had been paid to farmers with payments based on production. Therefore, the bigger the farm operation, the more considerable the payment amount. Marcia Fudge, U.S. Secretary of Housing and Urban Development, described it as cruel and unfair, arguing that it is designed to support the president's base, as he sees it, as opposed to those he sees as undeserving (Eaton, 2019). The restriction limits the production potential for more farmers to feed and nurture the soil and create productive harvests and healthy livestock that benefit society as a whole. Of the Black female farmers interviewed, only one met the USDA criteria for being considered a large farm operation.

The Justice for Black Farmers Act was enacted to reform the USDA, end discrimination within the agency, and protect the remaining Black farmers from land loss trends (Booker, 2023). One of the more significant provisions of the Black Farmers Bill is to provide land grants with the intent of creating a new generation of Black farmers while also restoring the land base that Black farmers have lost over the past decades. The Justice for Black Farmers Act also provides for investments in agricultural education at historically Black colleges and universities.

It is noteworthy to mention that six of the ten students who participated in the focus group was the recipient of the USDA 1890 scholarship.

Likewise, in 2021, Black farmers were hopeful for emergency relief passed in conjunction with the American Rescue Plan. The promise of an additional $4B for debt forgiveness was positioned to help close discrimination gaps among disadvantaged farmers; however, it did not happen. Moreover, in August 2022, President Biden signed the Inflation Reduction Act (IRA) into law, primarily intended to address the climate crisis. In the revised Inflation Reduction Act, 3.1 billion was allocated to distressed borrowers, and another 2.1 billion was allocated to farmers that have experienced discrimination from the USDA. While race has been eliminated as a criterion for eligibility, the IRA alludes to the needs of disadvantaged farmers without specifying race. It provides $125 million for technical assistance regarding food, agriculture, and agricultural credit to underserved farmers, ranchers, or forest landowners, including those living in high-poverty areas.

A critical factor in determining the final priorities for the 2023 Farm Bill is that the Farm Bill reauthorization process will occur in an election year. For that reason, stakeholders will have to vote to ensure that priorities align with the needs of Black female farmers. The appeal is consistent with Kimberly's response about the importance of voting.

> It will take us to vote out the people in our community because that is the only way the funding will get there...to bring food into that community...to bring actual investment into that community. You can try your best to fight all you can as a rancher, but unless you change who the political people are in that community, you will not change them.

Finally, Critical Race Theory is the most dominant theory used to explain race and its role in society as related to social justice and oppression. Lawmakers in 44 states have introduced bills that regulate how teachers can discuss racism, sexism, and issues of systemic inequality in the classroom. Most argue that schools focused too much on race and overemphasized the dark, difficult chapters of American history. Crenshaw's theory of intersectionality aligns with CRT in describing how race, class, gender, age, and other individual characteristics intersect. Therefore, the consequences of these laws can manifest in increased scrutiny colleges, and universities face when teaching, designing curricula, or researching and publishing material that may be deemed controversial.

As it relates to agriculture, supporting social justice and reformation in the agriculture industry can only help to strengthen the foundation for all humanity by protecting the environment, eliminating food disparities, and providing healthy food options. As voiced by the participants, supporting social justice causes not only benefits Black females but similarly to affirmative action, there is a broad spectrum of others who can reap the benefits of equity and equality. For example, affirmative action was initially intended to level the playing field; however, many scholars suggest that White women were the biggest beneficiaries of affirmative action.

Implication for Practice

Rarely are images of Black women as farmers seen, even though agricultural traditions are a significant part of their past. By understanding the stories and lived experiences of Black women, efforts can be made to increase the number of Black women in both rural and urban environments who participate in sustainable agriculture. The data from this study revealed several practical applications.

First, examining the outdated images of femininity, racial stereotypes, and how society constructs images of Black females is necessary. Black females are subjected to varied oppressions and stereotypes, which can be attributed to the media's implicit bias. Consistent with the Institution for Women's Policy Research (2020) findings, these stereotypes ultimately impact the lived experiences of the Black female producers in this study. For example, Leah was stereotyped by her ability to drive a trailer filled with cattle; Bonnie stated that when she went to her internship, they were shocked that she was a woman and, in some cases, more competent than the men in the room; Colleen shared that she could shoot, rope, and drive a tractor, dispelling the stereotypical images of females. Pervasive messaging supporting the stereotypical view of Black women undermines efforts to increase equity in agriculture. Changing society's view of Black female farmers is necessary but, unfortunately, may not be a small undertaking.

Secondly, Historical Black colleges and universities (HBCUs) have a long history of successfully training Black students by offering high-quality education and leaders from various backgrounds. Jones and Lomax (2022) reports for the United Negro College Fund that 25% of all African American graduates earn their degrees at HBCUs. This number is noteworthy given that HBCUs represent only 3% of all 3,567 degree-granting post-secondary institutions in the United States (Jones & Lomax, 2022). Therefore, HBCUs should continue to lead the way for Black females to be educated in agriculture.

Furthermore, HBCUs have a well-established record of attracting and training disadvantaged students and providing a supportive environment for them to learn free from bias and discrimination. Black female students are directly impacted by representation, and according to this study's findings, representation is essential to building relationships and mentoring. Therefore, there is a need for more Black women to serve as faculty, administrators, and

researchers in the agriculture department to help foster critical thinking, problem-solving, leadership, and academic and technical skill attainment.

Lastly, an integrated academic and vocational curriculum in agriculture is needed that incorporates mission-focused classroom instruction, leadership activities, and supervised occupational experience opportunities. A more robust curriculum will enable local education agencies, specifically HBCUs, to improve students enrolled in agricultural education programs. Moreover, this starts by increasing the competence of future and current high school, middle school, and regional occupational centers and programs, thereby increasing the linkage between secondary and post-secondary institutions offering agricultural education programs. Agrarian education instructors can aid in developing and implementing a new integrated curriculum, student and program certification, and effective instructional methodologies.

Theoretical and Empirical Implications

This section explores the theoretical and empirical implications of this research study. The present study reexamines the theoretical context by which this study was designed within the context of the study's findings. Additionally, empirical implications are discussed, considering previous research and the study's findings. The unique findings resulting from these two implications are discussed, and any deviation is identified and reported. The theoretical and empirical implications are also discussed within the context of prior research to determine the similarities and differences.

Theoretical Implication

The research was informed by two theoretical frameworks, Maslow's hierarchy of needs (1943) and Crenshaw's (1989) intersectionality theory. Maslow (1943) believed that all people desire to achieve their maximum potential and are motivated by first fulfilling basic needs

(Maslow, 1943). This hierarchy approach, divided into different levels, explains how human motivation changes as each level is satisfied. Intersectionality theory calls for an analysis of racism and its intersection with other marginalized identities to provide a framework for examining the experiences of a marginalized population. By doing so, they have also provided recognition of bias toward the vulnerable population.

The main themes produced by data in this study are love and belonging, education, physiological needs, safety needs, and esteem needs, all reinforcing Maslow's hierarchy of needs and intersectionality theories. Specifically, the findings met each of Maslow's needs because, from a theoretical context, understanding the motivation of women in the agriculture profession or those pursuing a degree in agriculture is paramount to understanding the gaps. There was a shared consensus between the experienced producers and the agriculture students on several factors.

The motivations identified within the study included meeting the expectations of family members, engaging in production to help promote health and wellness, having the opportunity for hands-on training, and making efforts to safeguard the environment. The participants used words such as "supportive" and "respected" to describe their relationships with their families. Colleen described her father as being a visionary. She stated that he instilled in her not to limit herself by focusing on the issue of color or social or economic level. Alice Mae described her dad as an entrepreneur who, by his example, she learned to appreciate hard work and diversification. Minnie demonstrated safety needs in discussing her appreciation for being a landowner and the economic stability she receives from agriculture. Donna also showed esteem needs out of concern for the environment and her desire to address food disparities.

Furthermore, the theoretical implications of this study indicated in Crenshaw's intersectionality theory provided an ideal lens to view the data and results in variation. For example, societal influences such as healthy food options and affordability can intersect with the individual's cultural norms and practices, affecting dietary behavior and consequent risk for diet-related disease. Donna expressed that social interaction was an essential part of how she farms because, as she states that "when you are made to work with less, you start expecting less." Also, compared to the theory, using intersectionality as an analytic lens highlights the multiple nature of individual identities and how varying the combinations of categories are for each individual. For example, as a Black female, Leah experienced bias from other Black males. As stated by Collins and Bilge (2016), the axes of social division work together and influence on another to shape each individual biography.

Moreover, the study participants described their experiences as Black women in agriculture and the influence of post-secondary education on intersectionality. Leah's experiences indicated that racial, gender, and sometimes age bias is pervasive in the industry and educational institutions' policies and practices. Her experience illustrated how differential selection criteria drive social and economic inequities. Nevertheless, most participants noted they were confident that their education and experience could be catalysts for fairness and respect despite differences.

Empirical Implication

This study focused on the lived experience of Black females in agriculture and the influence of post-secondary education. Black farmers make up less than 1% of all farmers in the United States. In comparison, female farmers now make up 36% of farmers. Previous studies focused on Black and women farmers; however, the research did not include a voice dedicated explicitly to Black females. Similar research used broad-focus approaches that acknowledge the

need for further research on Black women in agriculture (Hopper, 2020), Jones-Branch (2019). The empirical implications can be supported by several broad categories: Historical Foundation, Trends, Women-owned businesses, Black Farmers, Sustainable Agriculture, and Alignment with Higher Education.

Historical Foundation

According to a study conducted by Wisconsin-Madison, Women's & Gender Consortium, Black women are left out of the early history of American agriculture. Mumma (2021) suggests that starting from slavery into emancipation, through Jim Crow, World Wars, and the mass migration of Black Americans out of the South, the journey of Black women in agriculture should be documented so that modern agriculture can learn from its past (Mumma, 2021). Past practices and policies prohibit Black women from enjoying the freedom and justice associated with landownership, which is necessary for agriculture. Bertocchi and Dimico (2020) and Acharya et al. (2015) further suggested that the current inequality is primarily influenced by slavery through unequal educational attainment.

This study's findings concur with previous conclusions because there were similar results among Black female farmers. Their experiences provided insight into the common perception of inclusion, education, and areas of basic survival. The data provided evidence of how past inequalities and education have impacted the accumulation of capital needed to succeed in agriculture. Even as families gained the right to own land, some institutional policies and practices hindered their ability to gain a foothold in the agriculture industry. Colleen communicated about zoning restrictions; Kayla spoke about the easements restricting the use of her family's property; Minnie shared instances of eminent domain that claimed her family's land. The research confirms that huge strides have been made to increase economic opportunities and

reduce educational disparities; however, a profound influence of the past continues to sway the attitudes of the present.

Also, historically, the struggles for black women were for civil rights and women's rights, and Black women were active participants in both movements (Brown, 2017; Hutchison, 1982; Rosser-Mims, 2018). This new generation also advocates for food justice and environmental protection. The data provided convincing evidence demonstrating a new generation of Black women following in the footprints of Anna Julia Cooper, Fannie Hamer, and Ida Wells toward activism and teaching to sustain southern communities. I concur with these findings, as seen in interview participants' persistence and resilience, such as Donna and Leah, who advanced through their circumstances while helping improve women's political, social, economic, and educational landscape in agriculture.

Finally, the history of agriculture is well documented by the roles that institutions such as Tuskegee Institute played in helping agriculture to evolve through education and self-help strategies (Jones, 1981). As demonstrated by Stella's voice, the influence of Booker T. Washington and the Tuskegee Institution helps substantiate Black females as essential stakeholders in agriculture. In previous literature, the historical foundation and self-efficacy were deterring factors influencing women to pursue agriculture careers. In exploring the lived experiences of a diverse population of Black women in agriculture, this study helped fill the gap in understanding how the intersects of race and gender bias experienced by the prior generations continue to be observed in practices of today.

Trends

Science, technology, and innovations are helping to create a space for Black women that had often been denied. The findings suggest an awakening demand for more relevant education

experience because of technological advances aimed at efficiency and productivity. These scientific innovation has helped dispel the stereotypes associated with gender or race inequality, as supported by Doss et al. (2018). The findings suggest that regardless of gender, race, or other intersect, women, are not limited in their ability to succeed as agriculture producers. The focus group participants spoke of drones to oversee crops, advanced equipment automation, hydroponics, aeroponics, vertical farms, and other innovations changing how farmers grow, transport, store, and manage their produce. The data provide evidence of an association between education and understanding technologies as a critical element in how women are propelled to make a difference. The focus group participants displayed excellent knowledge of technologies enabling farmers to produce healthier products with a greater yield, reduced labor costs, and less environmental stress.

Understanding the technologies has helped Kimberly diversify her farm portfolio while producing healthier produce with a greater yield, reducing labor costs and less environmental stress. Stella and Bonnie spoke of Influencing the supply chain. Rebecca said, " If you grow tomatoes and peppers, market salsa. Leah and her family are making efforts to get A. I. certified to increase animal welfare and farm productivity. Stella spoke about the advancement in farm equipment with computer systems, electronics, and sensors that help with daily operations and reduce the time needed for cultivating (harvesting, seeding, weeding).

The financial trends for Black women in Agriculture continue to show historical discrimination in agriculture lending. The National Sustainable Agriculture Coalition (2019) lists the barriers for farmers of color and women as farm size, farm revenue, credit history, and collateral. As reported by USDA, women of any race/ethnicity) account for 88% of private farm loans among social and disadvantaged farmers and ranchers (SDFRs). However, it is impossible

to disaggregate lending trends for each group independently, according to 2015-2017. In a Survey conducted by USDA ERS, Socially Disadvantaged Farmers and Ranchers represented an *ave*rage of 17 percent of total primary producers but only 8 percent of the outstanding total agricultural debt. This data confirms that a credit gap exists within the private sector.

Factors contributing to the challenges of obtaining credits are farm size, farm revenue, credit history, and collateral, all of which disadvantage black females. In 2017, farms with SDFRs as the primary producer were smaller, bringing in less revenue than non-SDFR farms. Lenders required crop insurance to receive a credit which many smaller producers still needed to have. Additionally, revenue is a criterion for measuring the capacity to repay farm loans. Credit history, specifically with the Farm Credit System associations, limits SDFRs. And finally, collateral, such as clear land title and access to comprehensive legal services, is another barrier to accessing credit for SDFRs

According to estimates compiled by the Food and Agriculture Organization (FAO), by 2050, the demand for food will surge 70%, consistent with rapid population growth (Van Dijk et al., 2021). With environmental changes hard to predict, relying upon innovation in agriculture technology will be necessary. Further research is needed to understand how innovative agricultural solutions can influence human life in the future. For example, the automated dairy installation that colleen spoke about has a sensor to help farmers monitor the milk quality. She believes the government put small dairy farmers out of business by funding the innovation for more extensive operations. She expressed concerns because the dairy installations allow cows to be milked without human intervention, and there is a possible risk of contamination with large operations.

Women-Owned Business

There remains a lack of diverse voices in understanding women's roles in agribusiness. American Express Commission (2019) states in the women-owned business report women-owned businesses grew 21% from 2014 o 2019. Women of color grew at a double rate (43%), with Black women showing the most increase. Further investigation is needed to determine the growth of Black women's agribusiness. Likewise, Basche (2016) reported that women are only 78% of the principal operator. Again, additional research is needed to scale down, especially to Black women producers.

Women in the U.S. continue to be underserved by agricultural education providers due to gender stereotypes, notions about what constitutes an "authentic" farmer, assertions of gender neutrality in programming, and incorrect assumptions regarding what types of education are helpful to women farmers. While there is a need for additional clarification, the results from this study yielded some interesting findings. Women tend to live longer than men, resulting in a significant increase of farmland being transferred to female surviving spouses, many of whom have not been provided the same education about agricultural practices and resources that can support their farm's *success.* The experienced farmers were either sole owners of their small operations, such as Stella, Rachel, Rebecca, Minnie, and Alice Mae. The participation also conflicted with the findings of Doss et al. (2018), which relegated women working on the farm to working in the kitchen, gardens, or tending small livestock or poultry is often not considered agricultural work. As reported by USDA, women-led operations tend to produce poultry, equines, small livestock, bees, and specialty crops. They are not represented in leading commodity-oriented operations such as dairy, cattle, pork, and row crops. Yet, Kimberly, Colleen, and Leah were experienced cattle ranchers.

Another significant factor that stood out was the patriarchal gender norms that make it difficult for women to acquire and retain land. Female farmers of color have reported experiencing discrimination in obtaining agricultural credit. Stella was an example of how access to credit, cultural norms, and lack of collateral often prevent women from borrowing money. Additionally, women farmers of color are more likely to operate smaller, low-revenue farms, have weaker credit histories, and lack clear titles to their agricultural land, making it difficult to qualify for loans. Without adequate capital investments, female farmers are less likely than men to procure and use fertilizer, and drought-resistant seeds, employ sustainable agricultural practices, and utilize advanced farming tools and techniques that increase crop yield.

Black Producers

Family-owned farming has been an essential part of the social and economic development of the United States, accounting for 96% of U.S. farms (U. S. Department of Agriculture, Economic Research Service. Small farms make up 88% of all U.S. farms, yet, many Black families are not included in that majority. Concern for inequality has been voiced and documented because Blacks have lost millions of acres of land. The U. S. Department of Agriculture, National Agricultural Library (2021) stated that heirs' property contributes to the decline of black farmers. USDA reports that heirs' property is over a third of Southern Black-owned land, 3.5 million acres, worth 28 billion dollars. The findings contradict the narrative created by USDA. While only one of the respondents expressed the lack of interest and appreciation that their children and grandchild have for the land, a lack of successors was not a trend that negatively impacted the continuity of the family farm. Instead, the finding leaned more toward unethical business practices propelled by political and economic powers that recreated the inequities from years past.

Additionally, the findings supported Gaither and Zarnoch's (2017) explanation that many Blacks did not access the legal system during Reconstruction because they were suspicious of the southern court system. As a result, many Blacks did not leave a last will because they assumed ownership would automatically transfer to their descendants. Gaither and Zarnoch (2017) reported that their property makes up over a third of Southern Black-owned land; however, with "clouded title," it is harrowing for heirs to leverage such assets to enhance land improvement. Failure to leave a will and an inability to pay property taxes often result in a forced sale of land and farmland loss, which placed Black farmers at a political and economic disadvantage. The young focus group participants recognized that the legal system had not favored many black families trying to save their land. Kayla, for example, shared that her family has gone through 4 attorneys trying to keep their land.

The findings added to the previous research because the legacy of Black Americans and the institution of slavery and exploitation of labor has profoundly impacted succession planning due to a lack of knowledge, capital, and access to resources. The extraction of resources further contributed to a downward trend as young people needed to recognize opportunities. Whereas before, young people migrated from rural-urban areas, resulting in the aging of the rural population. However, many are creating an agricultural space in an urban setting, such as Donna, while others are returning to their roots, such as Kimberly and Phyllis. These women demonstrated how inclusion in networks and connectivity with other women in agriculture helped to remove the barriers to access to grants, land, markets, and other critical resources.

Sustainable Agriculture

Finally, as related to the shift toward sustainable agriculture, in recent years, there have been appeals to transition to sustainable agriculture to address the challenges associated with

climate change, biodiversity loss, and water scarcity. A sustainable transition in agriculture would require growing and sustaining rural economies and a knowledgeable workforce (Carlisle et al., 2019). There are efforts at post-secondary educational institutes that are helping to reverse the trends by developing new sustainable farmers to be enabled, recruited, and trained to bolster a knowledgeable workforce (Lobao & Meyer, 2001). There is a continued need for equal access to resources to realize the potential of women as allies in conservation, climate-smart agriculture, and farmland protection.

Between 2015 and 2020, USDA's Natural Resources Conservation Service (NRCS) reports that they awarded 16 percent of conservation practice incentive contracts to women, while only 2 percent went to non-white women. Considering that 36% of the nation's producers were women during the 2017 U.S. Census, women, particularly women of color, remain underrepresented as beneficiaries of USDA's most critical conservation and climate-smart financial resources. The findings add to previous results. Although sustainable farming practices have been rooted in African wisdom, systemic discrimination by private and public institutions has led to the decline of black farmers (Browning, 2019; Carter & Alexander, 2020; Reiley, 2021).

There continues to be a challenge associated with climate change, biodiversity loss, and water scarcity. The policies have been geared toward productivity for larger farms as a primary goal. Aligned to Carlisle et al. (2019), a sustainable agricultural transition would require growing and sustaining rural economies and a knowledgeable workforce. Higher education institutions are doing their part to help reverse the trends by providing curricula to enable, train and bolster knowledgeful producers for the future. Developing sustainable producers Kimberly implements solar... Technological advancements are helping. The focus group participants shared how they

are learning ways to revolutionize the food system's functions today. The work is aligned with what Booker T. Whatley (1987) did to help minimize costs, limit waste, and maximize income and space with good crop selection. The data concur with the findings that capitalism is destroying prime farmland.

Other findings reiterated that the shift toward sustainable agriculture could be attributed to necessity, flexibility, and opportunity in the current environment (Duvall, 2021). THE COVID-19 pandemic showed another crisis woven into history, like the 1981 Flu Pandemic, that revealed the importance of ensuring the nation's food supply. The demand for fresh and organic products also increased, changing the food market. Shearing (2021) attributed the change to consumers preparing more meals at home.

Alignment with Higher Education

Research by Barham et al. (2020) has shown that gender dynamics and lack of knowledge and connections to service providers were among the top barriers women landowners face. Their research filled a gap by examining the involvement of agricultural and life science faculty at U. S. land grant universities. The findings consistently showed the effects were contingent on culture, history, location, and quality of science.

This study has demonstrated that academic socialization is one effective method for helping Black women farmers and landowners navigate such barriers. Ninety percent of women participants, including experienced and aspiring farmers, indicated that their mentorship and association with other women farmers benefited their motivation. The research also shows that the women were most likely to be innovative when they felt comfortable asking questions and sharing information with other like-minded individuals.

There is a need to be intentional in efforts to encourage more Black females for roles as agriculture professors, administrators, or researchers, as this can solve the disproportionality of representation in Higher Education. Participants reflected on being able to have a more considerable impact on the community and the environment. This study's findings help advance the study of issues related to lack of representation and provide a voice for Black women in agriculture.

Also, hands-on experiences and the opportunity to meet and learn from peers' experiences were valuable aspects of the college experiences for the focus group participants. The study expanded on previous research, revealing how childhood experiences in rural and urban environments have impacted Black women's perception of agriculture. Agricultural institutions, including land grant universities, are challenged to do more to confront gender and racial inequalities by partnering with agencies to help make resources accessible for food cultivation. By doing so, closing the racial and gender gaps in agriculture would increase food production and help to build a sustainable future for Black women—the difference in the valuation of skills. Stereotypes can manifest themselves in the schooling dimension through quantity and quality of education.

Limitations and Delimitations

There were research limitations that reflected the uncontrolled shortcomings of the study based on practical or theoretical constraints. In contrast, delimitations reflected the choices and intentional boundaries established to manage the scope of the research. Both the limitations and delimitations present a foundation for future research.

Limitations. When considering research limitations, Theofanidis and Antigoni (2018) noted this as being those constraints placed on a study that prevents the

generalization of the results. Some of those constraints are (a) the design of the study, (b) sample size, and (c) data collection and analysis processes. Jansen (2022) noted that research limitations are factors out of the researcher's control.

The current study has three limitations related to technology, statistical data content, and time constraints that influence validity and reliability. The first limitation was that data collection was done virtually due to the COVID-19 pandemic. The technology presented a challenge for many experienced producers, mainly because of internet connectivity in rural areas. A few interviews started late or were interrupted because of technical difficulties. As a result, some of the questions were rushed to remain on schedule. Technology also challenged the older participants when asked to submit images for the photo narrative. Although the participants were comfortable using the Zoom platform, there still needed to be some guidance and troubleshooting upfront.

Secondly, the most robust data source for women and Blacks in agriculture is taken from the USDA. This data is crucial for the research because it looks at land use and ownership, operator characteristics, production practices, income, and expenditures. However, the Census of Agriculture is taken once every five years; therefore, this study used data provided in 2017. Interest in agriculture has been amplified mainly because of the Farm Bill enacted into law in 2018, which will likely cause a sizeable shift reflected in the 2022 Census data. Data is being collected for 2022, with an anticipated release in Spring 2024 (U. S. Department of Agriculture, National Agriculture Statistics Services, 2023). For America's farmers and ranchers, the Census of Agriculture is their voice, future, and opportunity and is essential to future research findings.

Lastly, data collection could only occur after IRB approval, which was received on April 12, 2022. The focus group occurred on April 30, 2022, and because of conflicts with final exams,

graduation preparation, and other priorities, the response for member checking was lower than anticipated. Other limitations involved work schedules and time zone. For one of the interview participants, the interview was conducted at 5 am PST and 8 am EST.

Delimitations. Although there is a similarity to limitations, delimitations reflect the intentions of the researcher in terms of what the researcher will and will not try to achieve, as well as the focus of the research questions (Jansen, 2022). There were several delimitations when conducting the study. The first delimitation made was the study design used. The decision to use a transcendental phenomenological design for the study was the most appropriate because it is used to describe and understand the experience of a selected group of individuals (Creswell & Poth, 2018; Moustakas, 1994). The design established the boundaries of the research study while allowing individuals to share experiences in a particular setting to understand their personal experiences.

The second delimitation is related to the data collection methods. The benefit of conducting a focus group with college students majoring in agriculture was that it added validity to responses across the group. The diversity of the members ensured that multiple perspectives were captured. Whereas the interviews with the established producers allowed for more in-depth detail from their individual perspectives. There was a concern that if a focus group was conducted with the established producers, they would not express honest and personal opinions about the phenomena.

Another delimitating factor was in relation to the population and timeframe. The participants had to have experienced the phenom of being a Black female working in agriculture or currently enrolled in an agriculture program at a college or university. The geographical location was states located within the Black Belt in the American South. This choice provided a

reasonable expectation that the majority of the participants would be in a rural environment. Only one participant currently lived in a rural area in Southern California but had roots in the South.

Furthermore, the age range was from 19-65. No freshmen participated in the focus group, which confirmed that the participants were invested in the agriculture major. Interestingly, solicitation from a social media page invited attention from individuals who did not experience the phenomenon of being a Black woman in agriculture yet wanted to contribute or utilize the results. The choice was made to maintain the boundaries as initially established.

Recommendations for Future Research

This study is possibly the only exploration of lived experiences of Black women in agriculture and the role of post-secondary education in developing the skills and knowledge needed for success. This subject needs to be explored further. In light of this study's procedures, findings, and limitations, a key recommendation for future study is continued research on the lived experiences of Black females in agriculture and the impact of post-secondary education. The data collected from the study provides a direction to several areas where further research could be conducted to gather more insight into the perception of Black women in agriculture. Initially, this study should be replicated to compare the themes of love and belonging, education, physiological, safety, and esteem needs.

A replicated study could be used to collect data with a focus group from private or public Predominantly White Institutions (PWI), specifically those with A&M delineation and other Historically Black Colleges and Universities (HBCUs) in a different geographic area. Including PWIs and using multiple geographic could increase the number of participants, which increases the depth of data collection and provides richer meaning to the lived experiences of Black

females in agriculture. In addition, a further study could examine the experiences of the next generation in agriculture in light of the innovations and advancements that are taking place. The role of women in agriculture is expanding, as USDA statistics indicate. However, there remains a lack of diverse voices because the landscape is complex. Although much attention is being paid to women in Science, Technology, Engineering, and Math (STEM) careers, the reality is that there are disparities in Agricultural Science.

Women are the minority in all agricultural science fields compared to their male counterparts, and non-whites make up less than one-quarter of all faculty (Basche, 2016). Additionally, women are far more likely to be non-tenured faculty than their male counterparts. A study by the University of Florida Institute of Food and Agricultural Sciences found that despite earning 44% of the doctorates in agricultural sciences, women hold just 23% of the tenure-track faculty positions at U.S. land-grant institutions. A different theme would emerge by focusing more on the institutions of higher learning. It will also be noteworthy to examine the curriculum from PWI to see how the opportunities and resources differ from that of HBCUs in preparing the Black females enrolled in an agricultural program.

Additionally, women tend to be more disinclined to take risks than men. Research is still unclear, however, on how broadly this applies to the variety of entrepreneurial decisions Black women in agriculture may make. It also remains unclear the extent to which stereotypes and implicit biases held by lenders and other service providers may also be contributing to this dynamic. In addition to risk aversion, for example, lenders may implicitly or explicitly see Blacks and women as riskier borrowers, thus contributing to the disparities in Black women's access to credit.

Lastly, the research was limited to primarily rural areas. A recommendation for future research would be to expand the study to urban locations. The design would still be transcendental phenomenological design so that information would be gathered to understand the experience of a group of individuals that have experienced the same phenomenon (Creswell & Poth, 2018; Moustakas, 1994).

Conclusion

Black women in agriculture bring richly diverse perspectives and skills to the field. A growing body of research indicates particular strengths that Black women producers and land stewards bring to their roles in agriculture. This study helps to address the void in the scholarly literature by exploring the perception of Black women in agriculture and the impact of post-secondary education.

Previous studies had not investigated the experience of Black women in agriculture nor posed questions related to their post-secondary education. This study was guided by the theoretical model of Maslow's (1943) hierarchy of needs theory and Crenshaw's (1989) intersectionality theory. Maslow's hierarchy of needs theory was pertinent to the study because it reveals the characteristics that motivate Black women to persist, as was evidenced by the themes and sub-themes that emerged in the research. Intersectionality theory helped establish the framework to document the unique needs of Black females in agriculture by acknowledging and documenting the challenges of inequalities that continue to stifle the voice of Black women.

The findings in the study suggest that positive relationships, education, and basic safety needs (including land equity, resources, economic stability, and freedom), in addition to physiological (food security, environment, and culture), are all essential components to the success of Black women in agriculture. Documenting the crucial role that Black women's farms

and ranches were pivotal to highlighting the significant contributions that can be made to impact food production in their communities while allowing them to be good stewards of the environment

Finally, the lack of females in agriculture is likely fueled by minimum representation in academia and media, lack of resources, particularly land, and implicit bias and stereotypes. Therefore, by examining and documenting the barriers to participation and the cultural and structural challenges Black women face in agriculture, policymakers, colleges, and universities, specifically HBCUs, may take an intersectional approach when making decisions and designing curriculums. By adversely affecting the representation of Black females in the profession, it reimages agriculture as a place where Black women are not only present but actively contributing to decisions and production.

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Appendix A: IRB Approval Notice

Date: 4-12-2022

IRB #: IRB-FY21-22-549

Title: Reviving the Roots: A Qualitative Phenomenological Study of Black Women in Agriculture and the Influence of Post-Secondary Education

Creation Date: 12-12-2021

End Date:

Status: Approved

Principal Investigator: Alvy Davis

Review Board: Research Ethics Office

Sponsor:

Study History

Submission Type	Review Type	Decision
Initial	Expedited	Approved

Appendix B: Consent Form

Title of the Project: Reviving the Roots: A Qualitative Phenomenological Study of Black Women in Agriculture and the Influence of Post-Secondary Education
Principal Investigator: Alvianna Woodard-Davis, Doctoral Candidate, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study of Black women in agriculture. To participate in the focus group, you must be age 19-29 and currently enrolled in an agriculture studies at a post-secondary educational institution. To participate in the interview, you must be age 30-65 and a post-secondary graduate, currently working in agriculture either professionally or personally. For both interview and focus group participates must self-identify as Black female. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to explore the perceptions and lived experiences of Black women as it pertains to the influence of post-secondary education on their involvement in the field of agriculture in the southern areas of the United States.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Participate in a sixty-minute, one-on-one interview with the researcher. The interview will take place virtually and will be audio and/or video recorded.
2. Participate in a sixty-minute focus group with the researcher and other participants. The focus group will take place virtually and will be audio and/or video recorded.
3. Submit a photo narrative through email or mobile text messaging to the researcher, which will take thirty minutes. The activity will require you to capture a picture related to agriculture and send the image and a brief narrative explaining the significance to your role in agriculture.
4. Participate in the member-checking process to provide feedback on the accuracy of the information you provided. The transcripts will be emailed to participants after the interview and focus group is completed. The participant will have one week to review for accuracy and email any corrections back to the researcher. This activity will take approximately sixty minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Appendix C: Recruitment Letter

[Recipient]
[Address 1]
[Address 2]
[Address 3]

Dear [Recipient]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a Doctor of Philosophy degree. The purpose of my research is to understand the perceptions and lived experiences of Black women concerning the influence of post-secondary education in their involvement in agriculture, and I am writing to invite eligible participants to join my study.

Participants must be 19-65 years of age or older, self-reported as Black and female and either currently enrolled in a post-secondary education program or have graduated from a post-secondary institution and is actively involved in agriculture, either personally or professionally. Participants, if willing, will be asked to participate in either an interview or focus group, and a photo narrative. Participants will also be asked to review the interview transcript to ensure accuracy. It should take approximately 60-90 minutes to complete the procedures listed. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please contact me at adavis262@liberty.edu for more information and to schedule an interview.

A consent document is attached to this email. The consent document contains additional information about my research. Because participation is anonymous, you do not need to sign and return the consent document unless you would prefer to do so.

Sincerely,

Alvianna Woodard-Davis
Doctoral Candidate
[redacted]
Adavis262@liberty.edu

Appendix D: Photo Narrative

Definition: A photo narrative is when the participants provides pictures to the researcher and discuss the contents of the pictures. The images in this study should relate to Black women in agriculture in either a rural or unban environment.

Purpose: As participants in this study you are to explain your emotions and how the images impact your desire to continue working in agriculture. Photo narratives will give you an opportunity to tell a story about your experience using pictures related to the study.

Directions: Please take a minimum of one photo per day for five days that best represent your experience of being a Black woman in agriculture using a cell phone, iPad, camera, or any other Smart device. Pictures can be work related, school, community, family, colleagues, and more. Next, upload your picture as a text message and a brief notation stating how the image impact or influence your perception of agriculture.

For example:

This picture represents my desire to continue the legacy of farming and ranching that my father and grandfather established for our family.

Adaptation from Creswell, 2013

Photo Narrative (Experienced) Producers Submissions

This photo is significant because I spent many days visiting this museum and learning about George Washington Carver as a kid. He has done so much for agriculture and sometimes doesn't get the recognition he deserves. He also went through so much and was able to overcome it all and still make a significant impact on society. I keep this in mind at all times while I'm navigating the world as a Black woman farmer. There may be obstacles, but I can overcome them (Stella)

The ultimate symbol of freedom and equality for all. (Colleen)

This is a photo of me learning to operate a BCS tractor: I chose this picture of myself because it was the first time I actually saw myself as a Black woman farmer and not just a gardener or an ex-engineer (Stella)

This is a picture of my great-grandfather. It reminds me of just how far we have come by faith, leaning on the Lord and trusting in His Holy Word. It's never failed me yet (Minnie)

The tenacity and work ethic of my grandfather holds an endearing memory for me. He made farming fun (Alice Mae)

These are census records that I found a few years back for 6 of my great-grandparents. At least 3 of my great-grandfathers were farmers and being in agriculture has really been a full-circle journey for me. I work as hard as I do because I know that I'm doing things that they were unable to do" (Minnie)

A reminder of how blessed we are to be able to grow the food that we eat. (Phyllis)

My husband is a ranch manager, so I told him there's no point in taking care of someone else's herd and not having his own. Now we have cattle and other livestock that can now be passed down to our daughter. We are like old McDonald over here (Leah)

Photo Narrative (Aspiring) Producers Submissions

While most kids at three would just be playing in the dirt, I was planting seeds. Thanks, Grandma, for planting the seed in me to appreciate agriculture (Kayla, May 2022).

My grandmother dropped out of school in sixth grade to go work on the family farm. I will always remember her sacrifice (Lexie).

This is a picture of my grandfather's hand that was taken during his final hours of life.

"My grandfather literally worked his fingers to the bone to provide for his family. In return, he only asked for three things: That we know the Lord, stay out of jail, and get a good education. I promise I will not let him down" (Kayla)

I chose this picture of Farmer Cee Stanley (owner of Green Heffa Farms): I am inspired by Farmer Cee because she has been navigating the agriculture space as an unapologetic Black woman with integrity and grace. On days when I struggle with the hard work of farming, I watch a few of her TikTok videos, and they definitely inspire me to keep on going" (Megan).

Appendix E: Permission Request

Date

[redacted]

Dear Dr. [redacted]
As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a Doctor of Philosophy degree. The title of my research project is Reviving the Roots: Black Women in Agriculture and the Impact of Post-secondary Education. The purpose of my research is to understand the perception and lived experiences of Black women concerning the influence of post-secondary education in their involvement in agriculture.

I am writing to request your permission to conduct research at [redacted] University. Participants must be 19-29 years of age, self-reported as a Black female, and currently enrolled in the College of Agriculture and Human Science.

Participants, if willing, will be asked to participate in a focus group to comment on their agricultural program experiences. Participants will also be asked to participate in a photo narrative to document their thoughts and emotions about the significance of the image presented. Member checking will also be requested to aid with trustworthiness. It should take approximately 60-90 minutes to complete. Participation will be completely anonymous, and no personal, identifying information will be collected.

Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval. A permission letter document is attached for your convenience.

Sincerely,

Alvianna Woodard-Davis
Doctoral Candidate
[redacted]
adavis262@liberty.edu

Appendix F: Site Approval Confirmation

From: [redacted]u.edu>
Sent: Tuesday, April 26, 2022 9:10 PM
To: Davis, Alvianna Woodard <adavis262@liberty.edu>
Cc: C[redacted].edu>
Subject: [External] Fw: Focus group interest

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Hello Ms. Woodard,

Below is the list of interested students. I expect that you will able to get valuable information to support your dissertation.

[redacted]
Professor & Research Scientist
[redacted]

From: [redacted]U.EDU>
Sent: Monday, April 25, 2022 9:01 PM
To: Grif[redacted]du>
Subject: Focus group interest

Good evening ,

Hope all is well below are a few people who are interested in the focus group . I have also listed their emails and phone numbers.

Name :

Appendix G: Focus Group Discussion Guide