

Increasing Virginia Youth's Exposure to Agriculture

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In

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Abstract

This study delves into the alarming decrease in youth involvement in agriculture, with a specific focus on the state of Virginia. The diminishing connection between the younger demographic and agriculture poses a potential threat to the future of farming. Through extensive research and data collection, the project aims to uncover the obstacles impeding youth engagement and advocates for increased exposure to agricultural practices. The survey highlights a growing necessity for educational enhancements surrounding agriculture. Key observations include a substantial portion of farmers operating within generational family structures, indicating a disruption in the traditional path to agriculture due to the decline in family-owned farms. Recommendations involve support for first-generation farmers, the development of comprehensive agricultural curricula, and initiatives to amplify the influence of professionals in promoting agricultural awareness. The project aspires to nurture a more inclusive, knowledgeable, and dynamic agricultural community for the benefit of present and future generations.

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Introduction

Against the backdrop of agriculture's pivotal role in economic structure, ensuring food security, and shaping the trajectory of our collective future, a disquieting trend emerges – a notable decline in youth involvement in agriculture. This shift poses a multifaceted challenge, echoing concerns about the potential ramifications on the agricultural sector and, consequently, the well-being of consumers. This issue is particularly pronounced in the state of Virginia, where the farming landscape is integral to its economic and societal fabric. This downward trend raises alarms, as the continuity of the farming profession is at stake, leaving future generations with a potential deficit in skilled agricultural professionals.

The purpose of this project is twofold: to meticulously identify the barriers preventing youth engagement in agriculture and to advocate for increased exposure to agricultural practices among young individuals. There exists an urgent necessity for collaborative efforts among agricultural professionals, educators, government officials, and influencers who have interactions with the youth. By doing so, we can actively involve and engage the younger generation in agricultural activities, fostering a more accurate understanding of the field and encouraging their active participation.

The project objectives outline a comprehensive approach involving surveys of Virginia farmers and those supporting agriculture, interviews with educators, and an exploration of innovative learning methods to enhance youth engagement in agriculture. Through these methods, the project aims to compile valuable information about the current state of agriculture in Virginia, pinpointing areas that demand intervention to reignite youth interest in this vital field.

A comparison of responses from two categories of survey respondents is pivotal in this project for unraveling the intricate relationships between educational and personal family backgrounds and their impact on individuals' choices to pursue agriculture. By discerning patterns within survey data, we aim to understand the factors that influenced farmers and supporters to enter the agricultural sector, contributing valuable insights for future interventions.

The summary and significance of the problem are underscored by alarming statistics, such as the revelation that only 13 percent of high school and college students' express interest in agricultural careers (Texas Farm Bureau, 2019). Moreover, the acknowledgment that farm and ranch families comprise less than 2% of the U.S. population (AFBF, n.d.) emphasizes the urgent need to address the diminishing presence of young people in agriculture. The poignant recognition that young individuals serve as both the bearers of agricultural practices to the future and catalysts for transformative change (Man, 2012) adds a sense of urgency to the project's objectives. In light of these challenges, it is imperative to rally efforts and resources to inspire and equip the next generation, ensuring the resilience and vitality of agriculture and its profound impact on our communities.

Definition of Keywords (Webster)

Youth: the time of life when one is young; a young person

Agriculture: the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products

Education: the action or process of educating or of being educated, also: a stage of such a process; the knowledge and development resulting from the process of being educated

Exposure: the fact or condition of being exposed: such as the condition of being presented to view or made known

Review of Literature

To identify ways to boost youth participation in agriculture, it is essential to understand the factors influencing their decisions to pursue interests and careers. Family influences, personal factors, and curriculum materials are identified as key influencers in educational and career decisions. These considerations broaden to encompass the geographical and environmental context of an individual's upbringing, as well as the specific grade schools they attend. The impact of location and surroundings, coupled with the nuances of educational institutions, further contributes to the intricate web of influences shaping a person's perspectives and choices in the realm of agriculture.

A notable geographical challenge lies in the diminishing number of family farms and the reduction of agricultural land in the United States. The significance of this is highlighted by the stark reality illustrated in **Appendix A**, the USDA graph that traces the historical trajectory of U.S. farms. Starting from a peak of 6.8 million farms in 1935, there was a sharp decline until the early 1970s, marked by heightened agricultural productivity and the expansion of non-farm employment opportunities. While the rate of decline has moderated since 1982, the number of U.S. farms continues to diminish, recording at 2.00 million in 2022—a decrease from 2.20 million in 2007. In tandem, the acres of land in farms demonstrate a comparable downward trend, with 893 million acres in 2022 compared to 915 million acres a decade earlier. The average farm size, documented at 446 acres in 2022, only marginally surpasses the 440 acres noted in the early 1970s (USDA, 2023). Beyond signaling a transformation in the agricultural landscape, this dwindling number of family farms raises critical questions regarding the transfer of essential knowledge and experiences to the succeeding generation.

The impact on agricultural knowledge goes beyond familial ties; it also extends to the educational curriculum. A study titled "The Benefits of Teaching and Learning About

"Agriculture in Elementary and Junior High Schools" reveals that teachers perceive agriculture as a source of situatedness, connectedness, and authenticity in delivering their content to students. The findings align with the existing knowledge base, indicating that integrating agriculture into the general curriculum facilitates student learning. This integration is rooted in the principles of experiential learning, a community-based curriculum, and the application of authentic learning in real-life situations. Furthermore, the beliefs and mental images held by teachers regarding agriculture are pivotal in shaping the content and methods applied when integrating agricultural topics into their instruction. The study emphasizes that educators' perceptions and attitudes toward agriculture have a substantial impact on their approach to teaching this subject. This emphasizes the significance of comprehending and addressing these factors to promote effective agricultural education (Knobloch, N. A., et.al).

In addition to the curriculum in formal courses, extracurricular activities hold a considerable impact, especially in the domain of agriculture where participation is key. An article I have authored delves into the various groups and communities established to bolster youth engagement in agriculture. Among these, prominent entities include Farm Credit of the Virginias (FCV), Virginia Farm Bureau, and the FFA (Feaster and Dalton, 2023).

The exploration of extracurricular avenues sheds light on the diverse support networks available to young individuals interested in agriculture. The involvement of organizations such as FCV, Virginia Farm Bureau, and FFA underscores the multifaceted approach taken to cultivate the next generation's interest and participation in agriculture. These groups not only contribute to skill development but also foster a sense of community, providing valuable networks and resources that extend beyond traditional educational settings.

In order to gather insights directly from agricultural educators, the study also involved an interview with Eric Fitzgerald, a renowned Virginia agricultural educator

boasting over four decades of teaching experience in the field. Mr. Fitzgerald acknowledges the crucial role of youth in agriculture and reflects on the methodologies employed in agricultural education. Having recently retired from Rockingham County Public Schools after a remarkable career, he now shares his expertise at Blue Ridge Community College within its agricultural department.

Mr. Fitzgerald emphasizes that fostering interest and understanding among young individuals in agriculture is most efficiently achieved through hands-on experiences. According to him, providing youth with direct exposure to the practical aspects of agriculture is not only the most effective way to kindle their interest but also the most efficient means of imparting essential knowledge about the industry.

In his extensive tenure as an agricultural educator, Eric Fitzgerald has witnessed the transformative impact of experiential learning on students. Now, in his role at Blue Ridge Community College, he continues to advocate for a pedagogical approach that prioritizes practical engagement, believing that this approach not only captures the attention of the youth but also equips them with a profound understanding of the intricacies of agriculture.

Project Overview

Targeted Population

The focus of this study encompasses various key demographics. It targets young individuals, specifically high school and college students, with the objective of inspiring them to explore interests in agriculture. Farmers and agriculturalists are crucial participants in this study, recognized as the stewards of the future of agriculture, entrusted with passing down knowledge to the next generations. Educators, who directly influence the lives of the youth, are integral to the study's scope. Government officials, industry professionals, community leaders, and advocacy groups also constitute essential segments of the targeted population, reflecting the diverse stakeholders involved in shaping the future landscape of youth engagement in agriculture.

Program Methodology

This study utilized a survey designed for farmers and support individuals in the agricultural sector, primarily focusing on Virginia residents but open to participants from any location to gather comprehensive insights. The support roles encompassed agricultural educators, extension agents, farm input sales professionals, individuals in transportation related to farming, and those with a general interest in farm and agriculture matters. Two distinct sets of questions were crafted—one for farmers and another for those in supporting agricultural roles—to explore potential correlations between agricultural interest or pursuit and the educational and personal backgrounds of participants. The survey aimed to highlight differences and similarities between these two groups. Distribution of the survey occurred through various Virginia agricultural contributors and on multiple Virginia agricultural Facebook pages. The total number of

responses amounted to 159, with 72 surveys completed, resulting in a completion rate of 45%. Survey questions can be found in **Appendix B**.

Summary of Outcomes, Discussion, and Recommendations

Survey Results

Among the respondents, 62% identified themselves as existing farmers, predominantly collaborating with family members, while the rest either operated independently or partnered with someone outside their family. The remaining 38% did not currently farm or had no prior farming experience. This group was primarily composed of individuals in supportive roles within agriculture, although some had previously farmed, aspired to engage in farming in the future, or held a genuine concern for the agricultural sector; see **Appendix C**.

Within the initial group of respondents (farmers), 47% indicated that they grew up on a farm when asked about their initiation into agriculture. Additionally, 24% identified themselves as first-generation farmers. Other responses included having assisted friends or extended family in farming activities or seeking employment on a farm during their earlier years; see **Appendix D**.

A significant majority, comprising 74% of the farmer respondents, reported that they have been actively engaged in farming for a decade or more. A smaller portion, constituting 10%, indicated a farming experience ranging from 4 to 6 years. Another 8% mentioned a farming tenure of 1 to 3 years, while only 7% had been farming for a span of 7 to 9 years; see **Appendix E**.

In contrast, the second group of respondents (agricultural supporters) comprised 50% agricultural educators, 12% individuals with a general concern for agricultural issues but not holding specific roles, and 10% extension agents; see **Appendix F**. Similar to the farmers, a significant majority (75%) in this category reported having a decade or

more of experience in the agricultural sector. For other durations—less than a year, 4 to 6 years, and 7 to 9 years—each accounted for 7% of the respondents; see **Appendix G**.

Among farmers surveyed, 46% reported working less than 6 hours during peak seasons, with 20% dedicating 7-9 hours, and only 6% allocating 10 or more hours; see **Appendix H**. In contrast, during non-peak seasons, 37% mentioned working 10 or more hours a day, 30% worked 7-9 hours, and 37% worked less than 6 hours; see **Appendix I**. These results are somewhat surprising, as one would expect more reported hours during peak season. Agricultural supporters shared insights into their workdays, with 60% stating they typically worked between 7-9 hours, 25% indicating a workday of 10 or more hours, and 10% noting variations in their work hours depending on the season; see **Appendix J**.

In response to inquiries about their educational background in agriculture, only 40% of farmers reported having taken agriculture classes in high school, while 48% had pursued agriculturally related courses in college; see **Appendix K**. Conversely, among agricultural supporters, 55% affirmed having taken agriculture classes in high school, and a higher percentage, specifically 72%, had taken college-level agriculture courses; see **Appendix L**. The lower percentage of farmers who pursued agriculturally related courses during high school and college may suggest that they perceive their upbringing on a farm, as seen in the majority of surveyed farmers, as providing sufficient agricultural insights for their needs.

Survey Implications

The findings from the survey align with the notion that a significant number of farmers operate within generational family farming structures, suggesting that the traditional pathway into agriculture has been disrupted due to the decline in family farms. However, it is noteworthy that a positive aspect emerges, with a substantial quarter of the respondents identifying as first-generation farmers. This trend reflects a rising interest in sustainability and a preference for cultivating one's own food. The diversity within this demographic in the farming community underscores the changing landscape and the emergence of new participants in the agricultural sector.

The data related to high school and college agricultural courses points to an increasing demand for enhanced agricultural curricula. A significant proportion of respondents, both among farmers and agricultural supporters, have pursued agricultural education at these levels. This highlights the importance of strengthening and expanding agricultural education programs to meet the evolving needs and interests of individuals entering the agricultural field.

It is important to recognize that the majority of respondents in the agricultural support category are educators and extension agents. This emphasizes the crucial role played by educational professionals in supporting and guiding individuals within the agricultural sector. Their presence as respondents signifies their engagement and interest in fostering a positive environment for agricultural education and development. This alignment between respondents' roles and the nature of their responses underscores the significance of educators and extension agents in shaping the future of agriculture, as well as the diverse options of employment.

Recommendations

In light of the survey findings and the evolving landscape of agriculture, several recommendations emerge to address the challenges and opportunities identified. Firstly, recognizing the substantial number of first-generation farmers underscores the need for targeted support programs and resources tailored to the unique needs of this demographic, facilitating their integration into the agricultural sector. The working paper, titled "Virginia's Youth in Agriculture," outlines opportunities for novice farmers, such as the Virginia Beginning Farmer and Rancher Coalition (VBFRC), which offers training in farm planning along with various resource and networking prospects. The article also references the Virginia Cooperative Extension, which provides a range of outreach opportunities (Feaster, et al., 2023). The data emphasizing the demand for agricultural education at the high school and college levels signals the necessity for the development and enhancement of a comprehensive and accessible agricultural curriculum, ensuring that individuals entering the field are well-equipped with the knowledge and skills necessary for success. Introducing agricultural-related modules for non-agricultural courses can play a crucial role in enhancing awareness. Integrating topics such as food, agriculture, and sustainability into core courses typically pursued by students in college-prep pathways can help broaden the interests of youth. Moreover, considering a combination biology/agriculture course could offer a comprehensive approach to education in these interconnected fields. Collaborative efforts between educational institutions, agricultural organizations, and policymakers can play a pivotal role in this regard. Initiatives such as the Virginia Farm Bureau's *Agriculture in the Classroom* exemplify the impact of statewide educational programs. This program offers resources,

training, and support to schools, educators, and volunteers, facilitating a meaningful connection between children and agriculture (Virginia Farm Bureau, n.d). Additionally, given the prevalence of educators and extension agents among agricultural supporters, fostering initiatives that amplify their influence in promoting agricultural awareness and engagement is crucial. Consideration could be given to establishing mentorship programs and networking opportunities, leveraging their expertise to guide aspiring farmers.

Encouraging their active participation in organizations such as FFA and 4-H can serve as a valuable means to foster a positive environment for agricultural education and increase youth engagement in these important initiatives. Ultimately, these recommendations aim to cultivate a more inclusive, informed, and vibrant agricultural community for the benefit of both current and future generations.

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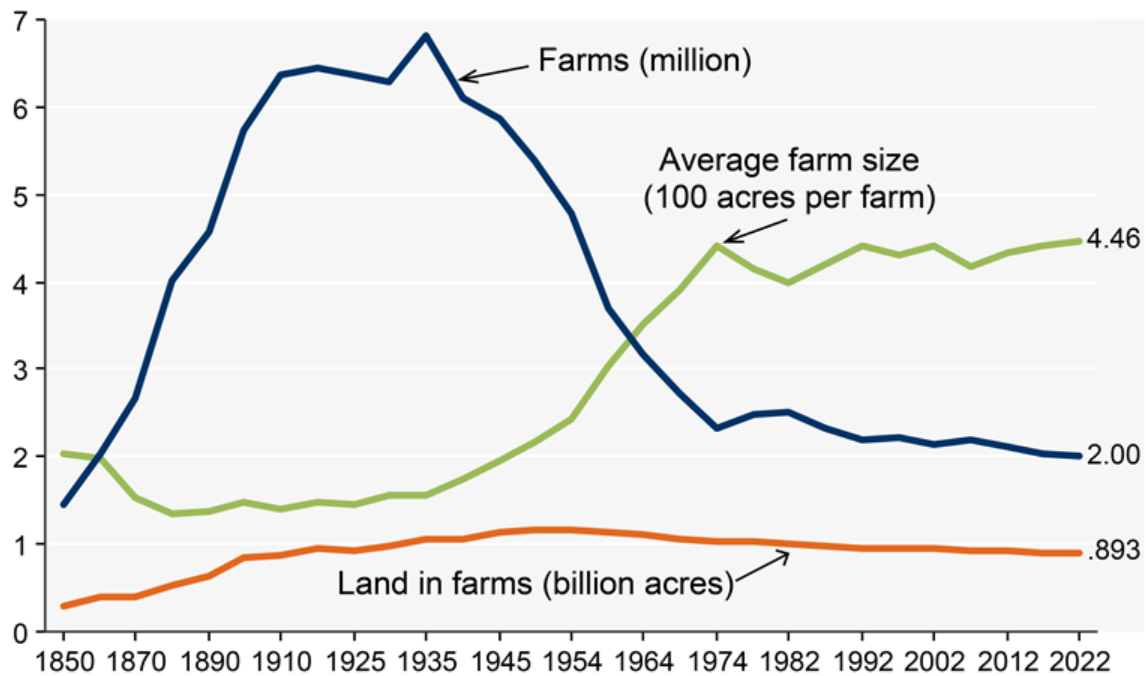
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Appendices

Appendix A:

Farms, land in farms, and average acres per farm, 1850-2022. USDA ERS. (2023). *The number of U.S. farms continues slow decline*. <https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=58268>

Million farms, billion acres, or 100 acres per farm



Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, Census of Agriculture (through 2017) and *Farms and Land in Farms: 2022 Summary* (February 2023).

Appendix B: Consumer Survey

In what state do you work?

Virginia

Other

Are you currently actively farming?

Yes, I farm alone

Yes, I farm with a family member

Yes, I farm with a non-family partner

No, not currently, but I have farmed in the past

No, not currently, but I hope to in the future

No, I don't farm, but I hold a career that is a supportive role in agriculture

No, I don't farm, but I have concern for farm and agricultural issues

First set of questions: Farmers

How did you get started in farming?

I am a first generation farmer

I grew up on a farm

I had friends/extended family that I helped on their farms

I sought a job on a farm when I was younger

Other

How many years have you been in agriculture?

Less than a year

1-3 years

4-6 years

7-9 years

10 or more years

How long is your farm workday during peak season(s)?

Less than 6 hours

7-9 hours

10 or more hours

If you would like to comment on your peak season, please click [here](#).

How long is your farm workday during off-peak season, if applicable?

I don't have an off-peak season

Less than 6 hours

7-9 hours

10 or more hours

If you would like to comment on your peak season, please click [here](#).

What area of agriculture/farming are you in? (Check all that apply)

Agronomic Crops

Horticultural Crops

Livestock

Forestry

Other

Did you take agriculture classes in high school?

Yes

No

Did you take agriculture classes in college?

Yes

No

With what member organizations have you been involved? (Check all that apply)

FFA

4-H

Virginia (or your state's) Farm Bureau

Other

Not applicable

From which of these organizations have you received support or resources?

Virginia (or your state's) Cooperative Extension

Virginia (or your state's) Department of Agriculture and Consumer Services

Farm Service Agency

Natural Resource Conservation Service

Other

Not applicable

Please describe how you market your farm products.

What is the most important and/or satisfying part of farming to you?

What is the most difficult part of farming to you, and/or what would you like to see change?

What advice would you give to those who want to go into the field of agriculture?

In your opinion, what is the biggest barrier for those who want to go into the field?

What does your state do effectively that impacts the agricultural field and the potential interest of its youth, to support the next generation of agriculturalists?

Additional comments are welcome:

Second set of questions: Agricultural supporters

Which of the following roles apply to you? (Check all that apply)

Agricultural educator

Extension agent

Banker/lender

Insurance

Farm input sales or manufacturing

Commodity marketer

Processor

Transportation

Other

None of the above: I just have concern for farm and agricultural issues

How many years have you been in a supportive role in the sector of agriculture, or had a concern for agriculture?

I do not work in the agriculture sector

Less than a year

1-3 years

4-6 years

7-9 years

10 or more years

How long is your work day?

Less than 6 hours

7-9 hours

10 or more hours

Differs between seasons

What area of agriculture/farming do you support or have interest in? (Check all that apply)

Agronomic crops

Horticultural crops

Livestock

Forestry

Other

Did you take agriculture classes in high school?

Yes

No

Did you take agriculture classes in college?

Yes

No

With what member organizations have you been involved? (Check all that apply)

FFA

4-H

Virginia (or your state's) Farm Bureau

Other

Not applicable

From which of these organizations have you received support or resources?

Virginia (or your state's) Cooperative Extension

Virginia (or your state's) Department of Agriculture and Consumer Services

Farm Service Agency

Natural Resource Conservation Service

Other

Not applicable

Please describe how you became interested in or started your supportive role, or gained interest in the agricultural field:

What's the most important aspect of your role in supporting farmers, or having concern for farm and agricultural issues?

From your perspective, what are the main challenges faced by supportive roles in agriculture, or by those who have concern for farm and agricultural issues?

Which specific skills or qualities do you believe are the most valuable for individuals working in supportive roles within the agricultural sector, or for those who have concern for farm and agricultural issues?

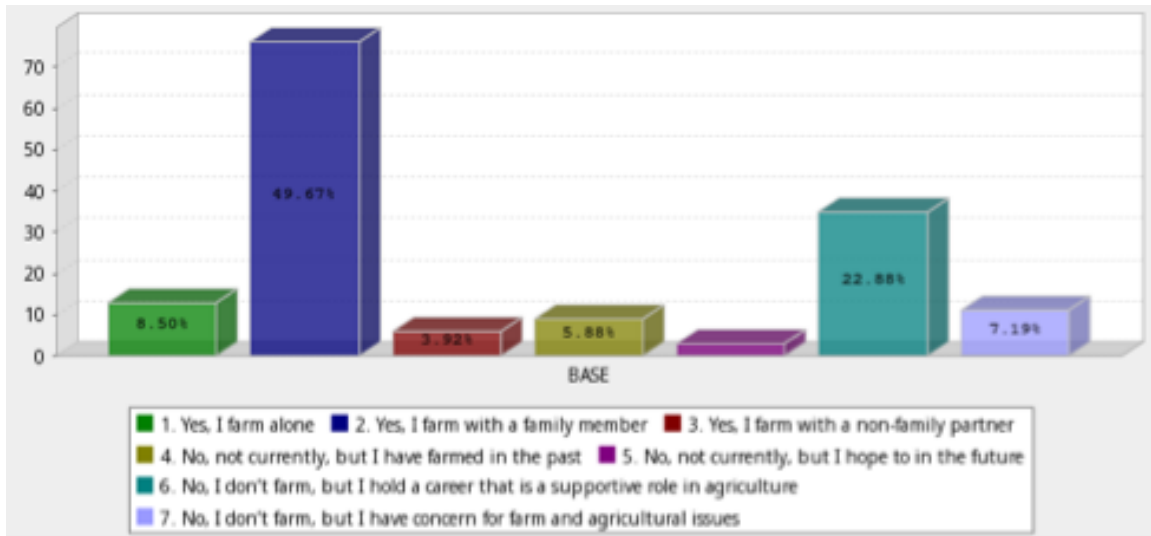
In your opinion, what is the biggest barrier for those who want to go into the field of agriculture and what advice would you give to those who want to go into the field?

What does your state do effectively that impacts the agricultural field and the potential interest of its youth, to support the next generation of agriculturalists?

Additional comments are welcome:

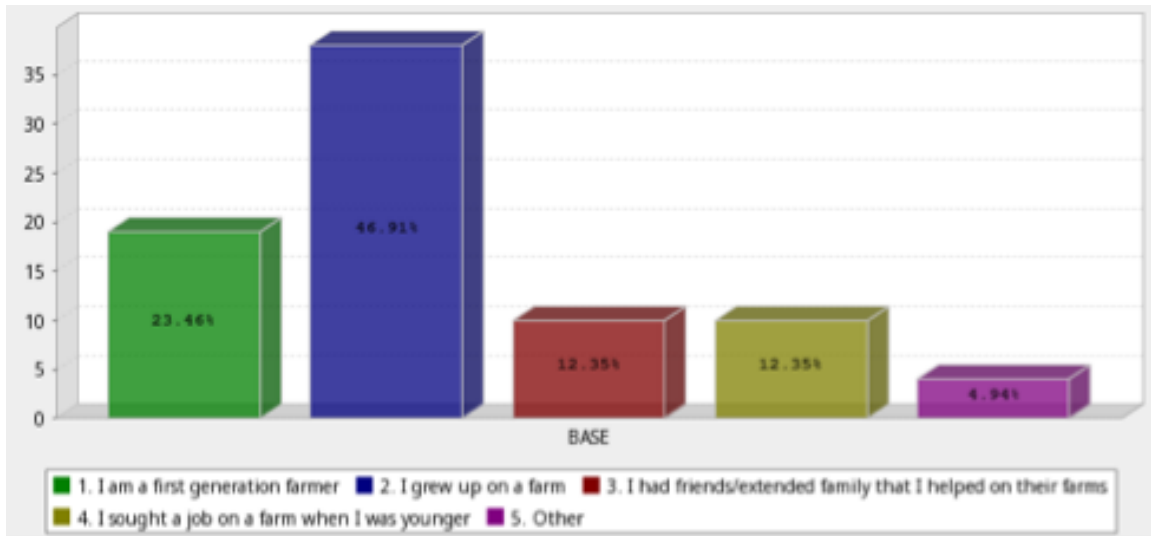
Appendix C:

Question: Are you currently actively farming?



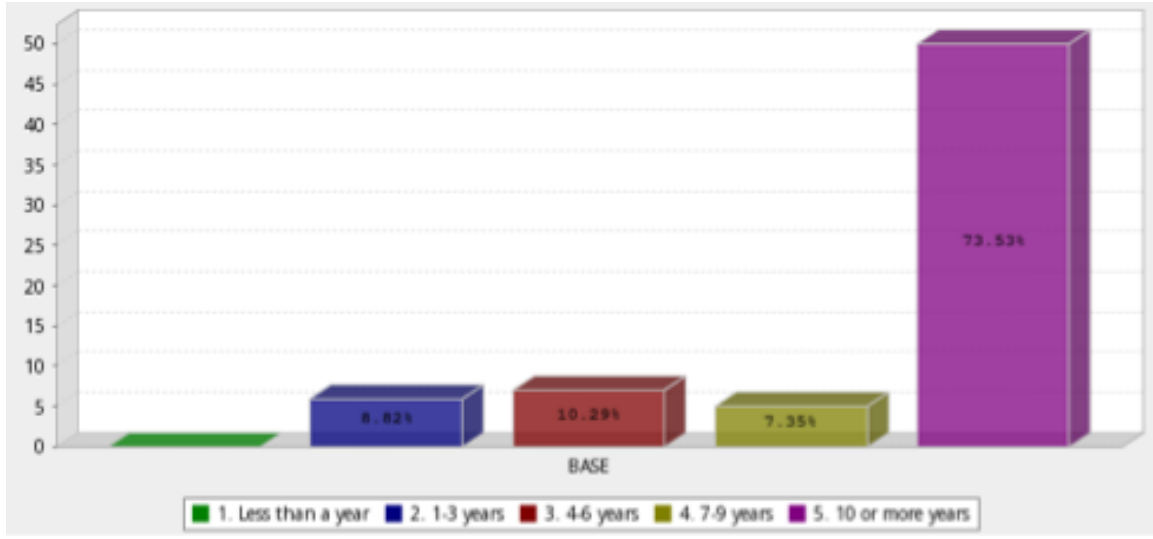
Appendix D:

Question: How did you get started in farming?



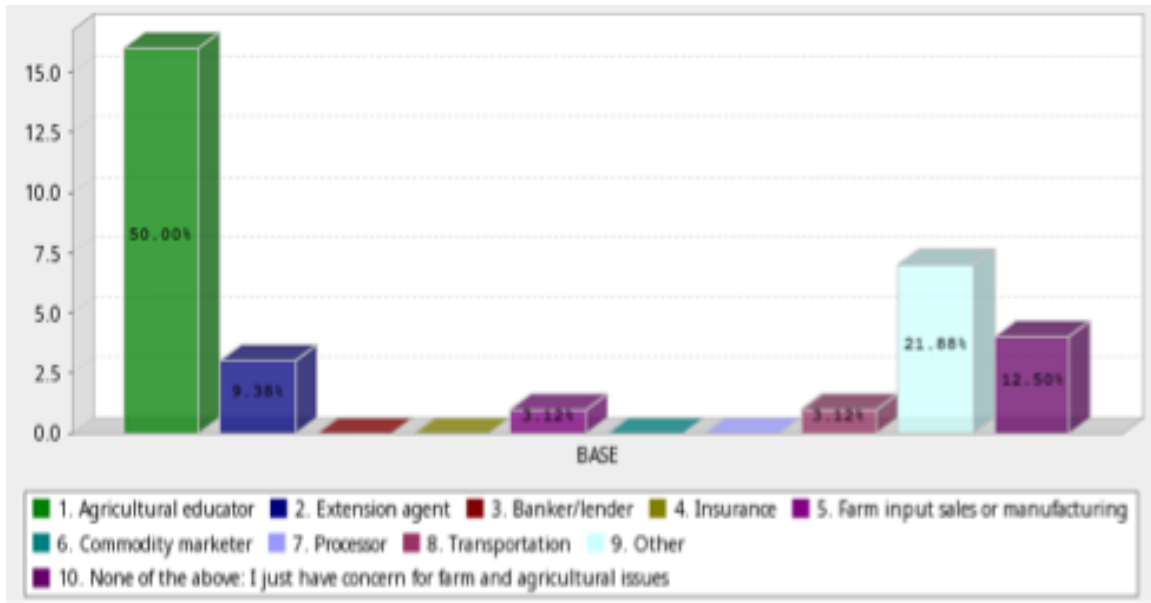
Appendix E:

Question: How many years have you been in agriculture?



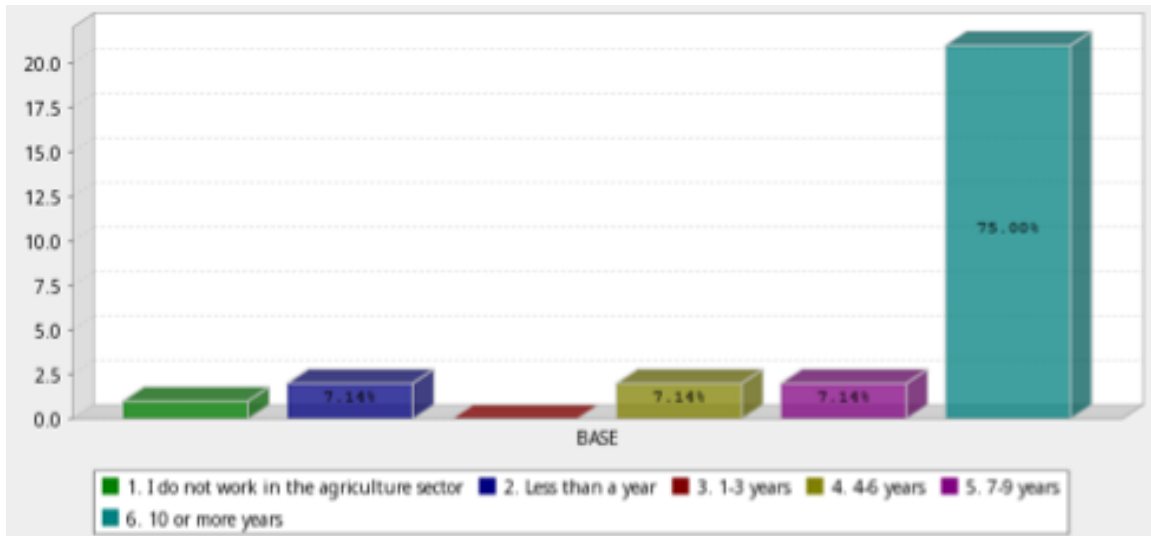
Appendix F:

Question: Which of the following roles apply to you?



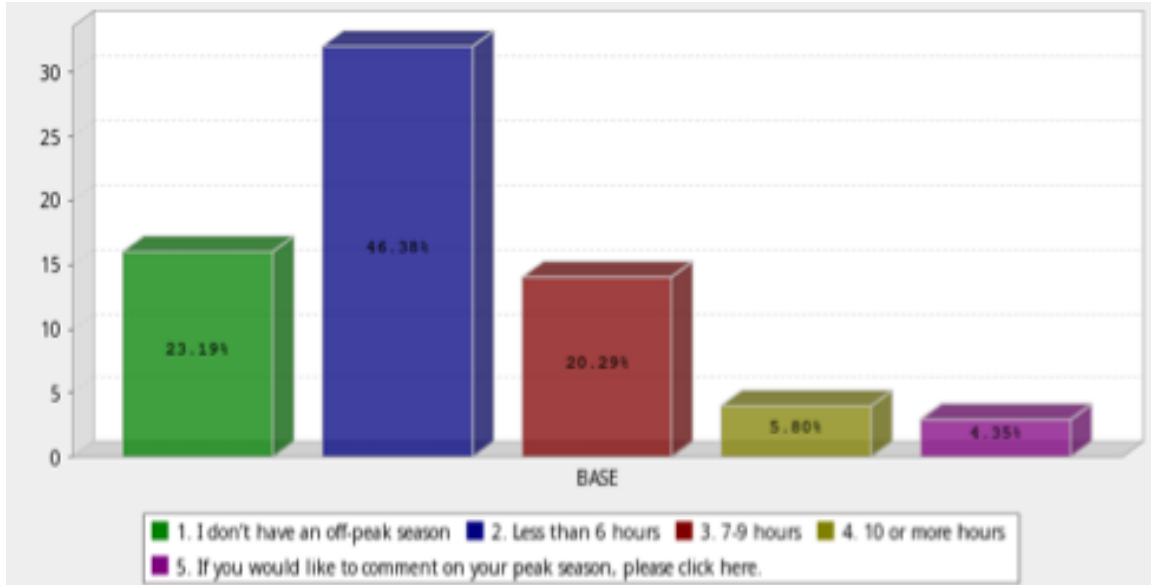
Appendix G:

Question: How many years have you been in a supportive role in the sector of agriculture, or had a concern for agriculture?



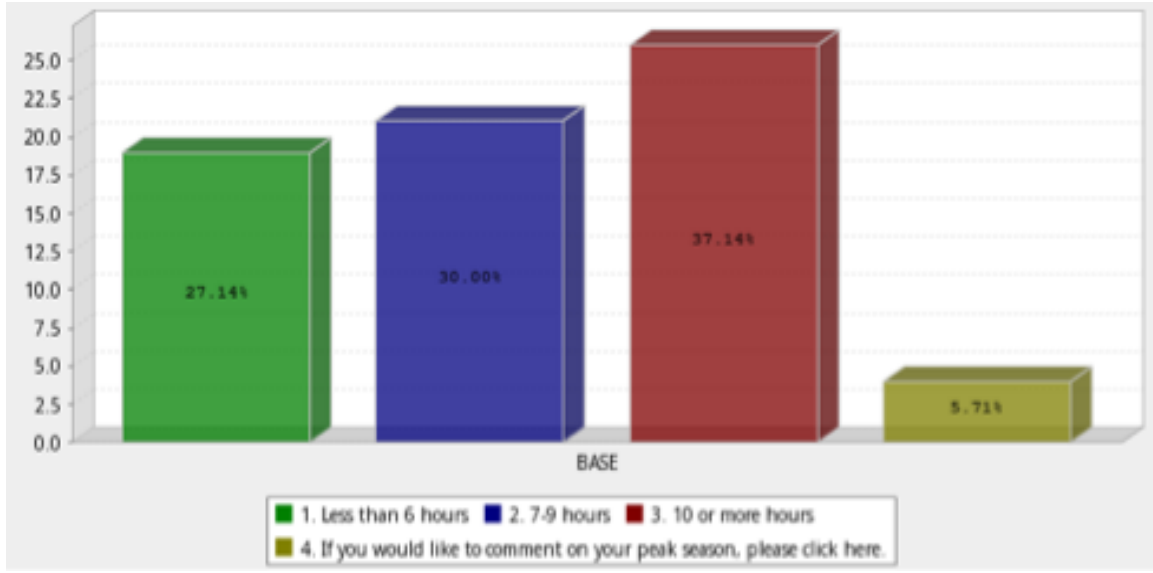
Appendix H:

Question: How long is your farm workday during off-peak season, if applicable?



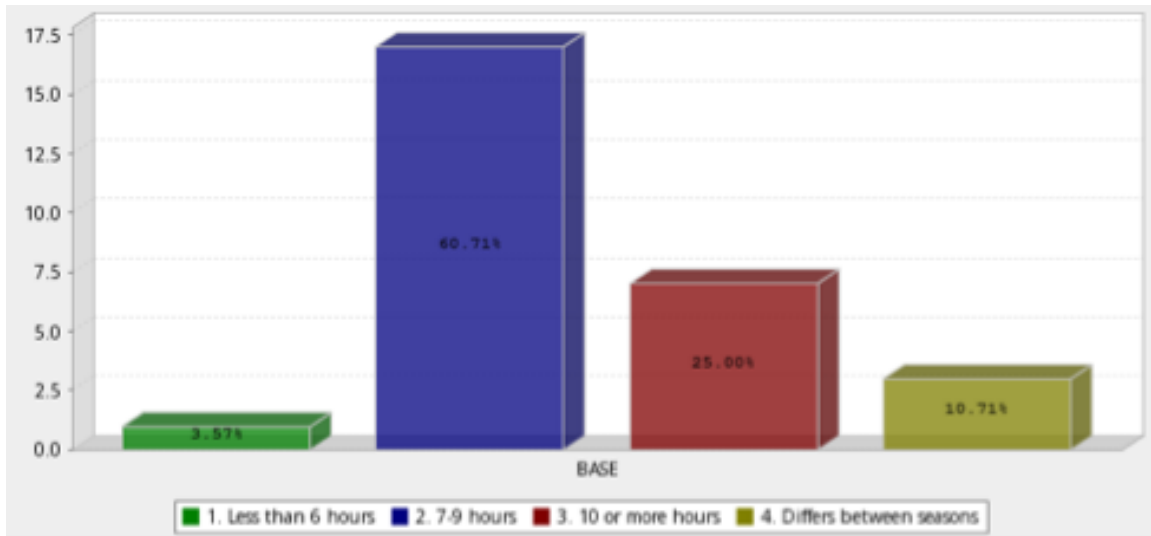
Appendix I:

Question: How long is your farm workday during peak season(s)?



Appendix J:

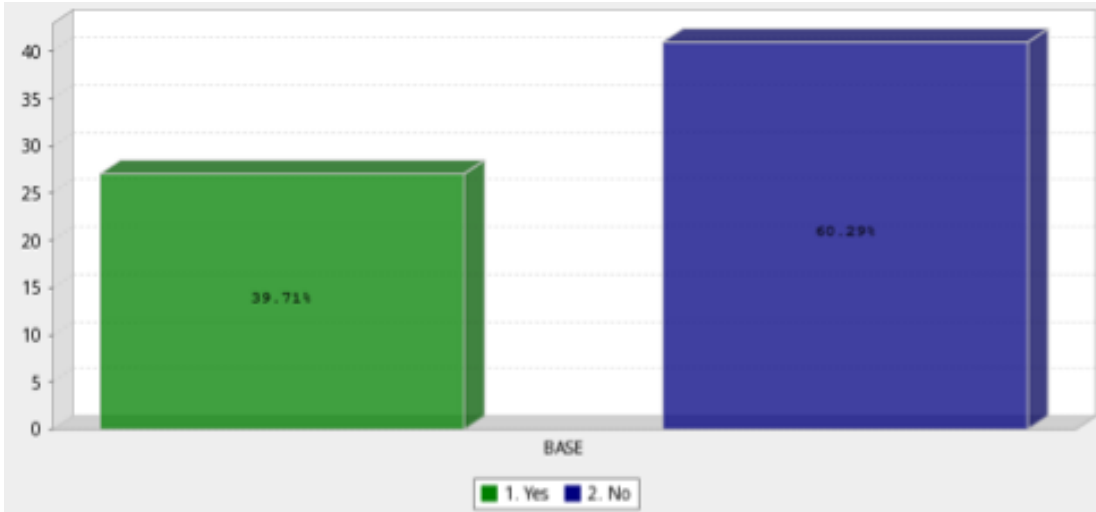
Question: How long is your workday?



Appendix K:

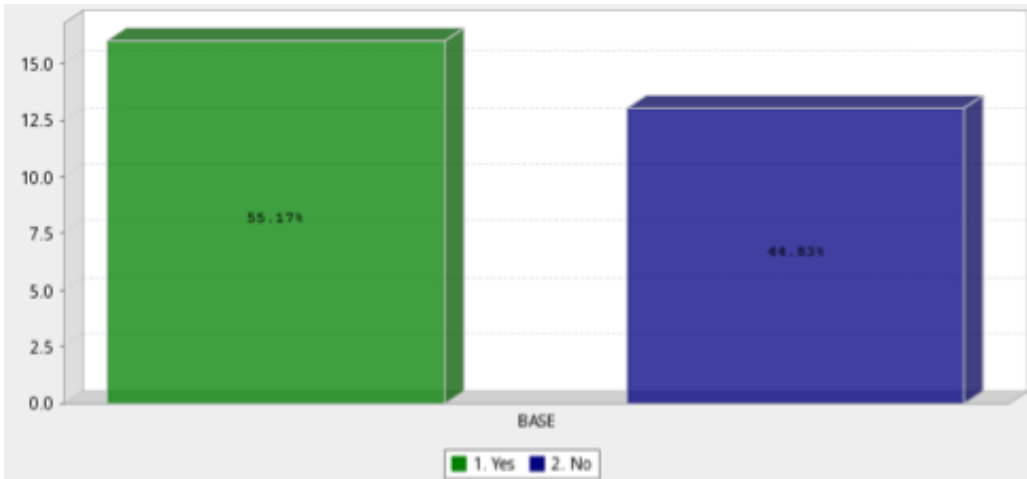
Question: Did you take agriculture classes in high school?

Farmers answered,



Question: Did you take agriculture classes in college?

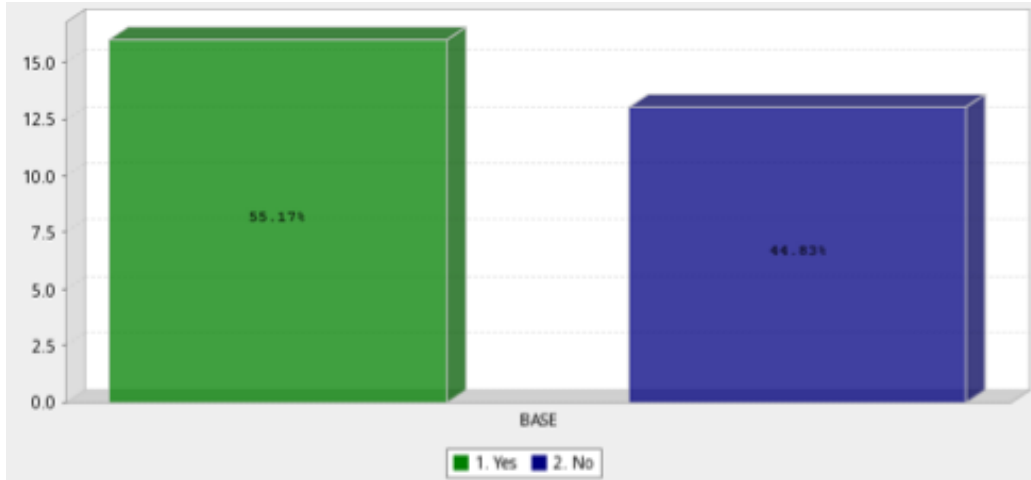
Farmers answered,



Appendix L:

Question: Did you take agriculture classes in high school?

Agricultural Supporters answered,



Question: Did you take agriculture classes in college?

Agricultural Supporters answered,

