

An Evaluation of Program, Training, and Resource Needs of Virginia Beginning Farmers and Ranchers: Virginia Beginning Farmer and Rancher Coalition Program

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VIRGINIA
Beginning Farmer & Rancher
COALITION PROGRAM

The Virginia Beginning Farmer and Rancher Coalition Program is a state-wide and coalition-based Extension program housed in Virginia Tech's Department of Agricultural and Extension Education. Funding was sponsored by the Beginning Farmer and Rancher Development Program (BFRDP) of the USDA-National Institute of Food and Agriculture (NIFA) Award No. 2010-49400. Program activity is also funded, in part, with an integrated, competitive grant from VAES, VCE, and the College of Agriculture and Life Sciences at Virginia Tech. For more USDA resources and programs for beginning farmers and ranchers, please visit www.Start2Farm.gov, a component of the Beginning Farmer and Rancher Development Program.



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Executive Summary

Initiated in the fall of 2010, the Virginia Beginning Farmer and Rancher Coalition Program provided the opportunity for beginning farmer stakeholder groups across Virginia to collaboratively establish and sustain viable agricultural operations in Virginia through the development and enhancement of whole farm planning programs, online resources, and farmer mentoring networks. These stakeholder groups represent a coalition of farm businesses; land-grant universities; federal, state, and local agencies; and nonprofit organizations serving the agricultural industry. The premise of this program is that a collaborative, capacity-building, community-based participatory approach is a precursor and prerequisite to building sustainable partnerships and educational experiences for and with beginning farmers — both of which are required for building effective outcomes as they are applied to the beginning farmer situation in Virginia.

As an aim, the coalition sought to explore the program, training, and resource needs of Virginia beginning farmers. (**Note:** We use the shorter term “beginning farmers” to include beginning farmers and ranchers.) Our approach was a statewide mixed-methods evaluation of farmers and service providers. This evaluation included a survey of Virginia beginning farmers and service providers, as well as a series of regional focus groups with Virginia beginning farmers in Southwest, Southside, and Eastern Virginia. In total, 264 completed questionnaires were received from Virginia beginning farmers and service providers. Beginning farmers rated “financial record keeping” as the most important issue for their success. Overall, respondents rated business planning and financial management and marketing issues the most important issues for Virginia beginning farmer success. Virginia beginning farmers reported having the least knowledge about “using export markets.”

Focus groups with Virginia beginning farmers revealed that they experience a number of farm startup challenges, especially those related to finding access to technical assistance, particularly for dealing with the farm transition process. Focus group participants described the need for greater access to markets and the challenge of finding customers willing to pay a premium for locally grown or raised food.

Virginia beginning farmers also described the resource and information priorities that would help individuals continue to explore or develop their farming operations. This included the use of online webinars and other Web-based programs, as well as other resources and programs to support Virginia beginning farmers. When asked to describe the beneficial topic areas that should be included in the whole farm planning curriculum, participants described a number of topics areas, including business planning, insurance options, product and market diversification, and hiring labor.

Findings from this mixed-methods research evaluation can help Virginia Cooperative Extension and other agricultural service providers understand the priority training and resource needs of Virginia beginning farmers. Findings can also help guide how informal agricultural educators and service providers develop educational training programs and curriculum to support Virginia beginning farmers.

Through this evaluation, recommendations and new strategies for both beginning farmer education and research were found, including the implementation of place-based, whole farm planning approaches and the development of online learning programs designed for beginning farmers.

One limitation of this study is that results cannot be generalized for the entire population of Virginia beginning farmers and service providers. However, these results represent the first comprehensive attempt to understand this unique Extension clientele in Virginia. Results of this evaluation were used to develop and implement the Virginia Whole Farm Planning curriculum across the commonwealth.

Introduction

With funding from the USDA Beginning Farmer and Rancher Development Program in fall 2010, the Virginia Beginning Farmer and Rancher Coalition Program aims to meet the expressed needs of Virginia's beginning farmers and support the development of social networks through which they can gain vital skills, information, technical assistance, and business capacity for long-term agricultural viability (see www.vabeginningfarmer.org).

The objectives include:

1. Establish a diverse coalition of organizations, farm businesses, agencies, and land-grant universities to support the development and growth of education, training, and networking opportunities for Virginia's beginning farmers.
2. Collaboratively develop and deliver whole farm planning curriculum using experiential learning and classroom delivery methods.
3. Collaboratively develop and deliver online resources illustrated by examples from programming activities and events.
4. Develop and strengthen mentoring networks to facilitate the exchange of knowledge and skills of experienced farmers with the beginning farmer community.

The VBFRCP is aimed at addressing the needs of the spectrum of beginning farmers and ranchers in Virginia. We recognize a diversity of farming experiences, backgrounds, and aims held by Virginia beginning farmers and ranchers. Many groups find it useful to look at the stages of commitment, decision-making, and skills that farmers pass through as they begin a career in farming.

We have adapted a typology to understand and clarify a pathway to successful farm startup. These categories of farmers are a modification of those referred to by the New England Small Farm Institute. For the complete reference, see "What Does the Term 'Farmer' Mean?" (Sheils 2004).

Prospective or explorer farmers – Individuals interested in starting a farm or ranch. This includes next-generation farm family members as well as those who do not come from a farming background.

Startup farmers – Individuals who are in the early stages of their agricultural operation, often within one to three years of farming or ranching.

Re-strategizing farmers – Farmers who are making changes to their operation after farming for approximately four to seven years. These individuals usually have increased decision-making responsibility and commitment to farming.

Establishing farmers – Farmers who are expanding, diversifying, and stabilizing within years eight to 10 of the beginning farmer period.

Transitioning farmers – Individuals who are family farm members who have decision-making roles on the farm without having primary farm operator status.

The purpose of this mixed-methods research evaluation was to provide a comprehensive understanding of the program, training, and resource needs of Virginia beginning farmers and the service providers who work with them. This approach followed a community-based participatory research (CBPR) framework where coalition members were engaged in the design and implementation of these needs. For instance, the survey was designed with direct input from Virginia beginning farmers and agricultural service providers who participate in the VBFRCP. Following the Virginia Cooperative Extension model, this evaluation represents a needs assessment for research-based program planning.

Results

This section reports findings from a mixed-methods evaluation that informed the programming of the VBFRCP. The findings are reported in two sections: (1) quantitative data collected as part of a statewide survey of Virginia’s beginning farmers and agricultural service providers and (2) qualitative data collected from three regional focus groups with beginning farmers. Together, survey and focus group results were used to understand the priority needs and educational preferences of Virginia beginning farmers and agricultural service providers. See appendix A for a complete explanation of data collection and analysis processes for this research.

Survey Findings

All survey data were analyzed using the SPSS statistical package. In total, 264 completed questionnaires were received from two rounds of data collection. This included 201 beginning farmers (76 percent) and 63 agricultural service providers (24 percent). Table 1 summarizes the responses by stakeholder group and data collection period. Mean scores in subsequent tables that report rankings were based on a three-point Likert scale (high = 3, medium = 2, low = 1; Dillman, Smyth, and Christian 2009).

Table 1. Summary of survey respondents.

Respondent group	Round 1 responses (n =)	Round 2 responses (n =)	Total responses (n =)	Percentage (of total)
Beginning farmer or rancher who lives in Virginia	116	85	201	76.1%
Service provider who works with beginning farmers or ranchers in Virginia	51	12	63	23.9%
Total	167	97	264	100%

When ranking the level of importance or priority for beginning farmer success for the Production Practices and Management category, respondents stated that “nutrient management and soil health” was the most important item. Table 2 summarizes the ranking of items from the Production Practices and Management category.

Table 2. Rankings for beginning farmer success in the Production Practices and Management category.

Rank	Item	Responses (n = 264)	Mean score
1	Nutrient management and soil health	257	1.30
2	Weed, pest, and disease management	260	1.32
3	Specialty crops (e.g., vegetables, fruit, nuts, herbs, flowers, ethnic food crops)	256	1.55
4	Tractor and equipment handling, safety, maintenance, and repair	256	1.61
5 (tie)	Animal/livestock husbandry	255	1.68
5 (tie)	Pasture and hayland management	257	1.68
5 (tie)	Conservation Best Management Practices (BMPs)	260	1.68
8	Extending the growing season (e.g., greenhouse and high tunnel)	254	1.72
9	Food safety and Good Agricultural Practices (GAP) certification	255	1.82
10	Irrigation systems	252	1.92
11	Livestock processing capacity	252	2.14
12	Agronomic crops (e.g., corn, soy, cotton, cereal grains)	254	2.16
13	Organic certification	256	2.22

When ranking the level of importance or priority for beginning farmer success for the Land Acquisition and Tenure category, respondents stated that “successful models and case studies for new farm purchases” was the most important item. Table 3 summarizes the ranking of items from the Land Acquisition and Tenure category.

Table 3. Rankings for beginning farmer success in the Land Acquisition and Tenure category.

Rank	Item	Responses (n = 264)	Mean score
1	Successful models and case studies for new farm purchases	244	1.62
2	Legal arrangements for land purchases and leases	240	1.63
3	Land-based business financing services	239	1.66
4	Credit for land purchase and maintenance	242	1.67
5	Land linking services between landowners and land seekers	243	1.78
6	Assistance with renting farmland	243	1.79
7	Assistance with short- and long-term land leases	243	1.80
8	Land conservation easements	242	1.88
9	Intergenerational farm transfers	241	1.90
10	Third-party farm transfers	235	2.23

When ranking the level of importance or priority for beginning farmer success for the Marketing category, respondents stated that “assessing and selecting market options” and “identifying a market niche” were tied as the most important items. Table 4 summarizes the ranking of items from the Marketing category.

Table 4. Rankings for beginning farmer success in the Marketing category.

Rank	Item	Responses (n = 264)	Mean score
1 (tie)	Assessing and selecting market options (e.g., marketing channel assessment)	234	1.36
1 (tie)	Identifying a market niche	237	1.36
3	Product pricing	234	1.38
4	Direct marketing (e.g., farmers market, roadside stand, on-farm sales, U-pick, etc.)	238	1.41
5	Marketing value-added products	237	1.53
6	Cooperatives for product marketing and distribution	238	1.59
7	Product and business branding	232	1.62
8	Internet marketing (e.g., websites and social media)	238	1.63
9	Wholesale marketing	223	1.80
10	Marketing for agritourism	224	1.96
11	Using export markets	222	2.41

When ranking the level of importance or priority for beginning farmer success for the Self-Employment and Labor category, respondents stated that “insurance issues and regulations” was the most important item. Table 5 summarizes the ranking of items from this category.

Table 5. Rankings for beginning farmer success in the Self-Employment and Labor category.

Rank	Item	Responses (n = 264)	Mean score
1	Insurance issues and regulations	231	1.48
2	Farm mentor programs	229	1.64
3	Requirements and regulations associated with farm employment	230	1.68
4	Farm safety training for employees	227	1.75
5	Models for farms to pool labor and other resources	228	1.77
6	Finding and hiring the right employees	228	1.79
7	Employee management	230	1.86
8	Employee compensation strategies	227	1.94
9	Transitioning from internship/apprenticeship programs to self-employment	225	1.96

When ranking the level of importance or priority for beginning farmer success for the Business Planning and Financial Management category, respondents stated that “financial record keeping” was the most important item. Table 6 summarizes the ranking of items from the Business Planning and Financial Management category.

Table 6. Rankings for beginning farmer success in the Business Planning and Financial Management category.

Rank	Item	Responses (n = 264)	Mean score
1	Financial record keeping	226	1.21
2	Business planning	225	1.24
3	Tax planning and preparation	223	1.40
4	Financial risk management for small farms	222	1.44
5	Managing debt	221	1.49
6	Access to affordable health insurance	222	1.50
7 (tie)	Financing options	224	1.55
7 (tie)	Financing grants and low-interest loans	219	1.55
9	Enterprise budgets	215	1.69
10 (tie)	Business structure options	219	1.72
10 (tie)	Cooperative equipment sharing	223	1.72
12	Government loan and loan guarantee programs	222	1.73
13	Small loan and peer-to-peer lending programs	223	1.77
14	Development of software tools	216	2.00

When ranking the current level of skill or knowledge for the Production Practices and Management category, respondents stated that “livestock processing capacity” had the lowest current level of skill or knowledge. Table 7 summarizes the ranking of items from the Production Practices and Management category.

Table 7. Ranking of level of skill or knowledge from the Production Practices and Management category.

Rank	Item	Responses (n = 264)	Mean score
1	Livestock processing capacity	249	2.61
2	Agronomic crops (e.g., corn, soy, cotton, cereal grains)	250	2.54
3	Food safety and Good Agricultural Practices (GAP) certification	255	2.46
4	Irrigation systems	252	2.43
5	Organic certification	252	2.40
6	Pasture and hay land management	257	2.36
7	Extending the growing season (e.g., greenhouse and high tunnel)	252	2.35
8	Conservation Best Management Practices (BMPs)	256	2.32
9	Animal/livestock husbandry	257	2.29
10	Specialty crops (e.g., vegetables, fruit, nuts, herbs, flowers, ethnic food crops)	253	2.25
11 (tie)	Weed, pest, and disease management	259	2.19
11 (tie)	Tractor and equipment handling, safety, maintenance, and repair	259	2.19
13	Nutrient management and soil health	260	2.12

When ranking the current level of skill or knowledge for the Land Acquisition and Tenure category, respondents reported the lowest current level of skill or knowledge regarding “third-party farm transfers.” Table 8 summarizes the ranking of items from the Land Acquisition and Tenure category.

Table 8. Ranking of level of skill or knowledge from the Land Acquisition and Tenure category.

Rank	Item	Responses (n = 264)	Mean score
1	Third-party farm transfers	235	2.79
2	Credit for land purchase and maintenance	239	2.67
3	Assistance with short- and long-term land leases	241	2.66
4 (tie)	Intergenerational farm transfers	239	2.65
4 (tie)	Land-based business financing services	241	2.65
6 (tie)	Legal arrangements for land purchases and leases	240	2.64
6 (tie)	Assistance with renting farmland	240	2.64
8	Land-linking services between landowners and land seekers	241	2.59
9	Successful models and case studies for new farm purchases	242	2.48
10	Land conservation easements	242	2.46

When ranking the current level of skill or knowledge for the Marketing category, respondents reported the lowest current level of skill or knowledge in “using export markets.” Table 9 summarizes the ranking of items from the Marketing category.

Table 9. Ranking of level of skill or knowledge from the Marketing category.

Rank	Item	Responses (n = 264)	Mean score
1	Using export markets	218	2.80
2 (tie)	Wholesale marketing	222	2.52
2 (tie)	Marketing for agritourism	220	2.52
4	Cooperatives for product marketing and distribution	233	2.45
5	Product and business branding	231	2.39
6	Marketing value-added products	234	2.38
7	Assessing and selecting market options (e.g., marketing channel assessment)	232	2.37
8	Product pricing	230	2.30
9	Internet marketing (e.g., websites and social media)	235	2.29
10	Identifying a market niche	235	2.23
11	Direct marketing (e.g., farmers market, roadside stand, on-farm sales, U-pick, etc.)	234	2.12

When ranking the current level of skill or knowledge for the Self-Employment and Labor category, respondents reported the lowest current level of skill or knowledge for “models for farms to pool labor and other resources.” Table 10 summarizes the ranking of items from the Self-Employment and Labor category.

Table 10. Ranking of level of skill or knowledge from the Self-Employment and Labor category.

Rank	Item	Responses (n = 264)	Mean score
1	Models for farms to pool labor and other resources	224	2.76
2	Transitioning from internship/apprenticeship programs to self-employment	222	2.67
3	Farm mentor programs	225	2.65
4	Requirements and regulations associated with farm employment	226	2.62
5	Insurance issues and regulations	227	2.59
6	Employee compensation strategies	222	2.56
7	Finding and hiring the right employees	226	2.45
8	Farm safety training for employees	224	2.37
9	Employee management	227	2.27

When ranking the current level of skill or knowledge for the Business Planning and Financial Management category, respondents claimed the lowest current level of skill or knowledge in “small loan and peer-to-peer lending programs.” Table 11 summarizes the ranking of items from the Business Planning and Financial Management category.

Table 11. Ranking of level of skill or knowledge from the Business Planning and Financial Management category.

Rank	Item	Responses (n = 264)	Mean score
1	Small loan and peer-to-peer lending programs	221	2.77
2	Cooperative equipment sharing	222	2.63
3 (tie)	Financing grants and low-interest loans	222	2.62
3 (tie)	Government loan and loan-guarantee programs	221	2.62
3 (tie)	Financial risk management for small farms	219	2.62
6	Access to affordable health insurance	220	2.59
7 (tie)	Development of software tools	217	2.51
7 (tie)	Tax planning and preparation	224	2.51
9	Business structure options	218	2.45
10	Enterprise budgets	217	2.40
11	Financing options	223	2.37
12	Managing debt	221	2.16
13	Business planning	224	2.12
14	Financial record keeping	224	2.00

Table 21 in appendix A summarizes a comparison of all 57 items by level of importance for beginning farmer success. Information about the category in which each item was placed as well as the corresponding knowledge or skill mean score are also included. Overall, respondents rated “financial record keeping” as the most important item for beginning farmer success. Additionally, respondents were found to have the least knowledge about “using export markets.” Eight of the top 20 items were classified in the Business Planning and Financial Management category, while six of the top 20 items were classified in the Marketing category. Only one the top 20 priorities was classified in the Land Acquisition and Tenure category, and only one of the top 20 priorities was classified in the Self-Employment and Labor category.

Survey respondents were also asked about their preferences regarding the types of educational training programs organized to support Virginia beginning farmers. In this section, respondents were asked to check all of the preferences that applied to their perspective or situation. As expected, this resulted in a total number of responses that exceeded 100 percent. Approximately 70 percent of respondents (n = 184) stated they preferred one-day workshops as a type of educational program. Table 12 summarizes the responses for the types of educational programs participants most prefer. Table 12. Preferences for educational program delivery (check all that apply).

Approximately 96 percent of respondents reported that online resources, self-help guides, and social networking would be useful forms of education or information for farmers in Virginia (n = 218). Approximately 96 percent of respondents also stated they would personally use online resources (n = 218).

When examining the demographics of beginning farmer respondents, Virginia beginning farmer respondents were slightly more likely to be male (55 percent; n = 95) than female (45 percent; n = 77).

Table 12. Preferences for educational program delivery (check all that apply).

Rank	Item	Responses (n = 264)	Percentage
1	One-day workshop	184	69.7%
2	Online materials	159	60.2%
3	Mentoring	158	59.8%
4	Farm tours	157	59.5%
5	Online classes/webinars	138	52.3%
6	Hands-on training course (approximately 4 weeks over a season on a part-time basis)	134	50.8%
7	Printed materials	131	49.6%
8	Consulting	124	47.0%
9	Classroom-based short course (approximately 2- to 3-day course)	96	36.4%
10	Internships or apprenticeships	93	35.2%
11	Classroom-based workshop series (approximately 4 weeks over a season on a part-time basis)	68	25.8%
12	Other	15	5.7%

Eighty-nine percent of beginning farmer respondents reported being white or Caucasian (n = 150). Approximately 2 percent of beginning farmer respondents reported that they were African American (n = 4), while approximately 2 percent identified themselves as Hispanic (n = 3). Approximately 60 percent of beginning farmer respondents indicated they were 41 years of age or older (n = 100). Table 13 summarizes the gender, race, and age of Virginia beginning farmer respondents.

Table 13. Gender, race, and age of beginning farmer respondents.

Gender	Responses (n = 172)	Percentage
Male	95	55%
Female	77	45%
Race	Responses (n = 172)	Percentage
White/Caucasian	150	88.8%
African American	4	2.4%
Hispanic	3	1.8%
Asian	3	1.8%
Native American	4	2.4%
Pacific Islander	0	0%
Other	5	3.0%
Age	Responses (n = 172)	Percentage
18-20 years of age	2	1.2%
20-25 years of age	11	6.5%
26-30 years of age	18	10.7%
31-35 years of age	21	12.5%
36-40 years of age	16	9.5%
41-50 years of age	40	23.8%
51-60 years of age	52	31.0%
Over 60 years of age	8	4.8%

* Categories are derived from a beginning farmer typology developed by Sheils & Descartes (2004).

Approximately 82 percent of beginning farmer respondents categorized themselves as explorers (someone actively planning their farm entry but may not be farming as a career option yet) or startup farmers (someone in their first few years of commercial agricultural production; n = 140). Eleven percent of beginning farmer respondents said they were establishing farmers (someone who is expanding, diversifying, and/or stabilizing their farming enterprise but still within the first 10 years of operation; n = 19). Seven percent of beginning farmer respondents called themselves transitioning farmers (family farm members who have decision-making roles on the farm without yet having primary farm operator status; n = 12). Table 14 summarizes the type of beginning farmer respondents by these categories.

Table 14. Beginning farmer respondents by farmer experience.

Type of beginning farmer*	Responses (n = 172)	Percentage
Explorer	75	43.9%
Startup farmer	65	38.0%
Establishing farmer	19	11.1%
Transitioning farmer	12	7.0%

* Categories are derived from a beginning farmer typology developed by Sheils & Descartes (2004).

Beginning farmer respondents reported that the top five commodities they were currently producing were vegetables (42 percent; n = 72), fruit (26 percent; n = 45), poultry (22 percent; n = 38), forages (19 percent; n = 33), and beef (16 percent; n = 28). Table 15 summarizes the rankings of commodities beginning farmers grow or produce in Virginia.

Table 15. Beginning farmer commodities grown or produced (check all that apply).

Rank	Item	Responses (n = 172)	Percentage
1	Vegetables	72	41.9%
2	Fruit	45	26.2%
3	Poultry	38	22.1%
4	Forages, hay	33	19.2%
5	Beef	28	16.3%
6	Greenhouse	27	15.7%
7	Flowers	25	14.5%
8	Feed grains	14	8.1%
9 (tie)	Other livestock	11	6.4%
9 (tie)	Nursery	11	6.4%
11 (tie)	Sheep	10	5.8%
11 (tie)	Swine	10	5.8%
13	Grains, dry beans, oil, seeds for human consumption	9	5.2%
14	Equine	8	4.7%
15	Dairy	5	2.9%
16	Fiber	4	2.3%

Beginning farmer respondents reported that the top five market outlets they used were farmers markets (30 percent; n = 52), home delivery (13 percent; n = 22), roadside stands (12 percent; n = 21), restaurants (11 percent; n = 19), and a livestock auction (9 percent; n = 15). Table 16 summarizes the types of marketing outlets beginning farmers use in Virginia.

Table 16. Beginning farmer market outlets (check all that apply).

Rank	Item	Responses (n = 172)	Percentage
1	Farmers markets	52	30.2%
2	Home delivery	22	12.8%
3	Roadside stand	21	12.2%
4	Restaurants	19	11.0%
5	Livestock auction	15	8.7%
6	Commodity markets	12	7.0%
7 (tie)	Community Supported Agriculture (CSA)	11	6.4%
7 (tie)	Wholesale markets	11	6.4%
7 (tie)	U-pick	11	6.4%
10	Retail store on farm	8	4.7%
11	Retail store	7	4.1%
12	Marketing co-op	6	3.5%
13	Institutional sales (e.g., farm-to-school, farm-to-hospital, farm-to-prison)	4	2.3%
14	Produce auction	1	0.6%

The top five types of farmers that service provider respondents reported providing support to include specialty crop farmers (79 percent; n = 45), limited-resource farmers (67 percent; n = 38), livestock farmers (65 percent; n = 37), diversified crop-livestock farmers (60 percent; n = 34), and transitioning farmers (58 percent; n = 33). Table 17 summarizes the types of farmers beginning farmer service providers are supporting in Virginia.

Table 17. Types of farmers supported by beginning farmer service providers (check all that apply).

Rank	Item	Responses (n = 57)	Percentage
1	Specialty crop farmers	45	78.9%
2	Limited-resource farmers	38	66.7%
3	Livestock farmers	37	64.9%
4	Diversified crop-livestock farmers	34	59.6%
5	Transitioning farmers	33	57.9%
6	Minority farmers	32	56.1%
7	Women farmers	31	54.4%
8	Commodity grain farmers	24	42.1%
9	Migrant farm laborers and farmers	13	22.8%
10	Immigrant/refugee farmers	11	19.3%
11	Other	7	12.3%

Forty-one percent of service provider respondents said they work for Virginia Cooperative Extension (n = 23). Approximately 18 percent of respondents said they worked for a nonprofit organization (n = 10). Approximately 20 percent of service provider respondents also reported working for local government (n = 11). Nine percent of service provider respondents stated they work for a higher education organization (n = 5). Over half of service provider respondents reported being county-based service providers (n = 31).

Additionally, almost half of these respondents said they were regionally based service providers (n = 26). This response was followed by having a statewide service territory (n = 25). Table 18 summarizes the place of employment and the type of service territory for beginning farmer service provider respondents.

Table 18. Place of employment and service territory for beginning farmer service providers.

Place of employment	Responses (n = 57)	Percentage
Virginia Cooperative Extension	23	41.1%
Nonprofit organization	10	17.9%
Government organization	11	19.6%
Higher education organization	5	8.9%
Secondary education (i.e., high school)	1	1.8%
Other	6	10.7%
Service territory	Responses (n = 57)	Percentage
County-based	31	54.4%
Regional	26	45.6%
Statewide	25	43.9%
Online	8	14.0%
Other	4	7.0%

The top five activities beginning farmer service provider respondents use to support beginning farmers include training/workshops/conferences (72 percent; n = 41); printed materials, videos, informational resource CDs (65 percent; n = 37); consulting (60 percent; n = 34); online materials (40 percent; n = 23); and educational development tools such as curricula, lessons, and train-the-trainer (33 percent; n = 19). Table 19 summarizes the types of materials and activities beginning farmer service providers use in Virginia.

Table 19. Beginning farmer service provider materials and activities (check all that apply).

Rank	Item	Responses (n = 57)	Percentage
1	Training/workshops/conferences	41	71.9%
2	Printed materials, videos, informational resource CDs	37	64.9%
3	Consulting	34	59.6%
4	Online materials	23	40.4%
5	Educational development (curricula, lessons, train-the-trainer)	19	33.3%
6	Online classes/webinars	7	12.3%
7	Mentorship training	5	8.8%
8 (tie)	Farm incubator programming	4	7.0%
8 (tie)	Land link service (matching landowners with land seekers)	4	7.0%
10	Apprentice training	3	5.3%

Focus Group Results

In total, 27 individuals participated in the three regional focus groups. The majority of participants classified themselves as explorer or startup farmers (n = 13). From the participants who said they were currently farming, the most commonly produced commodities were livestock (n = 9) and vegetables (n = 9). Additionally, from the participants currently farming, the total area under production ranged from less than 1 acre to approximately 125 acres.

Participants in each of the focus groups had their own unique experiences as beginning farmers in Virginia; however, there were a number of similar experiences found among participants. A few of the focus group participants described the challenge of being accepted as part of the Virginia farming community as a beginning farmer. For example, a few participants clearly noted that it is “difficult being able to get started in farming ... and being accepted for starting off.” While the difficulty of gaining acceptance as a beginning farmer was not a primary theme found throughout the focus groups, we believe it lays the foundation for research and investigation regarding this unique farming stakeholder group. The following results are the primary themes that emerged from the three focus groups.

Startup Challenges

The most common Virginia beginning farmer experience discussed throughout the focus groups was farm startup challenges. When participants were asked which farm startup topics or issues they thought were most pressing, the most common theme was access to technical assistance, particularly dealing with the farm transition process. Farm transitioning is a very nuanced and wide-ranging process. It is not always a well-defined or understood term. From the focus group results, the farm transfer process generally referred to transferring a farm or farm business from one generation to the next. This may include intergenerational transfer within a family or a transfer between nonrelated parties. Considering the challenges beginning farmers face, individuals stated that they had trouble finding assistance to help with the technical aspects of the farmland transition process. One participant said:

“I think the biggest gripe that I have is during the transition process. We couldn’t find any help. ... You are going to have to have somebody. You are not going to go to a seminar and learn how to transition your farm. There has to be somebody there that has some sort of experience and says, ‘OK, this is what we have to do.’ And is not just a fly-in, fly-out type of person.”

This same individual also described experiences having trouble finding an appropriate specialist with technical expertise to help with the next step of developing their farm operation after they had already completed a series of educational courses in farming. The following quote may illustrate the desire of one farmer to participate in an intimate, one-on-one training or mentoring experience to help mitigate the risks of starting a farm:

“There is no specialist that can help with this sort of thing. There is nobody there that can say, ‘OK, I went to these courses, and we’ve got all this communication stuff down’ and he has this set of goals, and I have this set of goals, and we can maybe work together. Who is going to help us do it? There is nobody there.”

Another participant reported feeling overwhelmed with the federal requirements for business operations. When asked what advice they would give service providers or policy makers to help address farm startup challenges, the farmer wished for access to someone with more technical expertise, stating:

“It is bewildering when you are looking at some of these topics and you start reading the government requirements. It almost makes your eyes blur if you are not a lawyer or an attorney or someone who is experienced to understand the requirements that they are requiring.”

Focus group participants also described the need for greater access to markets with competitive prices for product distribution, particularly in rural areas of Virginia. Participants stressed the need to find a market where they can sell their products for enough money to live off of. One participant stated:

“I could live off this whole thing if I could get someone to pay something for vegetables.” The participant went on to say, “That is the other kicker... I could make it at a market that would pay. I could make a living on that.” Another participant agreed, “And that means I have to have markets that will pay a premium price.”

In general, focus groups revealed that Virginia beginning farmers are excited to be farming and are willing to raise crops and livestock for local markets, but they struggled with determining which markets were best for distribution. One participant explained:

“The other thing I could use some help on is what products are going to get me the best price. I talked to one farmer in Floyd and his strategy is to avoid the summer annual vegetables. He goes for the early and late markets, goes for the roots and sells only to restaurants because they will pay the money. So where are the markets that are going to help, how do I get in touch, and what do they want? I don’t know.”

For participants, the challenge of finding markets coincided with the challenge of finding customers willing to pay a premium for locally grown or raised food. One participant said:

“For me, I think we need to educate the consumer. These folks [customers] that think it is outrageous to spend \$4 or \$5 on a melon need to [learn how difficult it is to] grow melon.”

Beginning farmer participants were found to be familiar with other parts of the state where local food systems were thriving and thought it was in part because of the higher incomes residents were earning and the price residents in these locations were willing to pay at farmers markets and other local food markets.

Resource and Information Priorities

The second most common beginning farmer experience discussed in the focus groups was the resource and information priorities that would help individuals continue to explore or develop their farming operations. Participants described resource and information preferences in terms of educational program delivery, the availability of resources, and, lastly, general preferences. When describing their preferences for educational program delivery, participants were enthusiastic about both experiential learning experiences as well as Web-based educational programs.

Many participants expressed an interest in and need for farm tours as a way to learn best practices and to see how other farmers have set up their operations. One participant explained, “Farm field days are the times I have learned the most.” Another participant said, “I like visiting farms and learning and picking up mentors on the way. You can see how people are doing stuff; you can ask questions as well.”

When describing their experiences and preferences for online program delivery, participants stated that they liked the opportunity to join online learning experiences such as webinars. For example, a few participants liked the idea of online trainings because it helped cut down on travel expenses. One focus group participant stated, “I can see a webinar being beneficial because of the distance I would have to travel [to attend a standard training].”

Participants also had suggestions for areas of improvement in terms of offering more online resources and delivery, stating, “I would like to see that kind of stuff [standard trainings] filmed so it could be put into a webinar format.”

Another participant acknowledged the limitations of online learning, saying, “Better use the Internet. That is where I get a lot of my information, and Virginia Tech does a wonderful job. It is the first place I go, but there are gaps and limitations.” Furthermore, one participant suggested greater online networking and information sharing: “Somebody here needs to put up a bulletin board online so we can all get on there and talk to each other.”

When it came to describing the availability of resources for Virginia beginning farmers, participants discussed a variety of diverse resource opportunities. Participants described resources to assist with business development, agricultural production, and educational programs targeted to beginning farmers. For example, participants mentioned business development resources such as regional small business forums and SCORE, the Senior Corps of Retired Executives. In terms of agricultural production resources, several participants mentioned the Virginia Cooperative Extension Master Gardener Program, conferences targeted toward sustainable farming, such as the Virginia Biological Farming Association annual conference, Virginia State University’s Small Farm Outreach and Technical Assistance Program, and community colleges that teach sustainable agricultural production.

General resource and information priority needs for Virginia beginning farmers primarily focused on agricultural production needs, such as soil health, livestock production, and crop rotation.

Whole Farm Planning

The third most common Virginia beginning farmer experience discussed in the focus groups involved issues related to the development of the whole farm planning curriculum. When asked to describe the beneficial topic areas that should be included in the whole farm planning curriculum, participants described a number of topics, including business planning, insurance options, product and market diversification, and hiring labor. Participants suggested formatting the curriculum to help individuals who are just getting into farming either as a primary career or as a second career after retirement. One participant explained, “We have a lot of people in Pittsylvania and Halifax County that’s done that. They are retired; they come here and buy land. They buy farms and try to figure out what they [are] going to do with it. A lot don’t have any agriculture background.”

When asked to describe how the whole farm planning curriculum should be delivered, participants suggested using a blended approach of both face-to-face and online learning opportunities. Participants liked the idea of attending local and regional events but also liked the idea of participating in online learning programs, such as webinars. When describing

the advantages of using both online and face-to-face learning opportunities, one participant explained, “Online learning has plenty of advantages because you can do it at your own pace, you can do it after the sun goes down, or to meet perhaps a work schedule. And then you can follow that up with regional face-to-face reinforcement.”

Participants also suggested asking local Virginia Cooperative Extension offices to host small groups of individuals to participate in the online learning program together because of slow Internet connection issues in some rural locations.

In addition to online learning opportunities and local or regional programs, other participants suggested including one-on-one assistance directed by experienced service providers or farmers. One participant explained:

“The online program is convenient; you can do it when you want. But you don’t get the experience. You need to get one-on-one with someone who has been down the road and they can steer you by the potholes that you would hit if you didn’t know. And you can do all the online you want, but you will never pick that up until you sit in a meeting and talk with people.”

Discussion and Conclusions

Survey results revealed that business planning and financial management topics as well as marketing topics are the most important issues for Virginia beginning farmer success. Eight out of the top 10 priority items were from these two categories. Survey results also revealed that the majority of Virginia beginning farmers would use online resources, self-help guides, and social networking. Additionally, Virginia beginning farmers prefer one-day workshops and experiential learning opportunities, such as farm tours. Virginia beginning farmers who participated in the survey were found to be producing a variety of agricultural products, such as local vegetables and fruits. They were also found to be utilizing a variety of direct marketing outlets, such as farmers markets, home delivery services, and roadside stands.

Survey results reveal that Virginia beginning farmer service providers support a wide variety of different beginning farmers, including specialty crop farmers, limited resource farmers, and livestock farmers. Additionally, Virginia beginning farmer service providers represent numerous types of organizations. Through the survey, Virginia beginning farmer service providers were found to employ a variety of educational training approaches to best address the diversity of farmers they instruct.

Focus group results revealed that Virginia beginning farmers grapple with a diverse set of farm startup challenges, but largely those associated with access to technical assistance for gaining access to land, capital, markets, and production practices. Focus group results showed that beginning farmers thought gaining access to technical assistance was particularly difficult when dealing with the farm transition process.

Focus group participants also described feeling overwhelmed with federal requirements for monitoring different production practices to meet food safety standards. Participants noted that it is difficult to compare federal regulations with state regulations. Additional startup challenges described by participants include access to markets.

Focus group participants revealed several resource and information priorities, including experiential and online learning program opportunities. Participants also stated that they needed additional

resources related to business development, agricultural production, and specific educational programs developed for Virginia's beginning farmer population. Focus groups suggested that the whole farm planning curriculum should include business development and agricultural production resources and that curriculum programs should be delivered using a blended approach of both face-to-face learning programs and online learning programs.

Through this mixed-methods evaluation, we can make the following recommendations for beginning farmer education and future research. For practice, we recommend that service providers:

1. Incorporate a site-specific (i.e., place-based), whole farm planning approach to their beginning farmer training and educational programs so that participants are exposed to a comprehensive and wide variety of topic areas, including business planning and financial management, land acquisition and tenure, agricultural production and management practices, and farm labor management. The whole farm planning approach should also teach farmers to identify and assess goals, resources, and means for long-term sustainability. That is, this approach should not only provide farmers with important "whole farm" content for successful startup, it should help farmers learn how to identify and implement a holistic assessment process for short and long-term viability.
2. Include diverse learning opportunities for a range of beginning farmers based on their different levels of experience and perspectives. As stated earlier, the VBFRCP recognizes prospective or explorer farmers, startup farmers, re-strategizing farmers, establishing farmers, and transitioning or heritage farmers. These learning options should include a variation of face-to-face sessions, field-based, and online opportunities that match their cultural and social needs. Programs may last for a full day or span several days or weeks. We recommend including some components of online learning, such as webinars and other Internet-based training programs, to reduce geographical barriers to gaining access to education when possible.
3. Include experiential learning activities that emphasize the on-farm experience, including farm tours, farm-based field trainings, and market site visits. These on-farm learning experiences are important so that beginning farmers can meet and consult with knowledgeable, new and established farmers and marketers about a wide range of startup issues.
4. Help farmers learn about different agricultural resources and networks through social networking and mentoring with other beginning farmers and experienced farmers. This networking could incorporate face-to-face social gatherings, coordinated farmer mentoring, or online networking vis-à-vis social media technology like blogs and Listservs. When completing online or Internet-based networking, it is important for service providers to consider farmers having limited access to high-speed Internet connections.

For future research in the area of beginning farmer training and resource needs, we recommend the need to explore:

1. The development of some online learning programming designed for Virginia beginning farmers. There is a need to investigate and understand how online learning programs for beginning farmers compare to face-to-face programs such as the standard one-day meeting or conference. By understanding the similarities and/or differences, online programs can be designed for improved engagement and learning.

2. The educational training and resource needs of limited-resource, women, and socially disadvantaged farmers in Virginia. The population was not as well represented in this research study, and we believe there is a need for further examination.

3. How beginning farmers are connecting to local and regional markets, such as farmers markets, home delivery services, roadside stands, and restaurants. These markets were the places that Virginia beginning farmers stated they were most utilizing; therefore, further research is needed to help beginning farmers better connect to these direct marketing opportunities as part of a local and regional food system strategy for successful startup.

We believe the findings of this mixed-methods evaluation can help Virginia Cooperative Extension and other agricultural service providers understand the priority training and resource needs of Virginia beginning farmers. Findings can also help guide the development of agricultural education training programs and curriculum to support Virginia beginning farmers.

One limitation of this study is that these results cannot be extended across the entire population of Virginia beginning farmers and beginning farmer service providers. However, they do represent a first comprehensive attempt to understand this unique farm audience in Virginia. Results of this evaluation were helpful when developing the Virginia whole farm planning curriculum and also when developing educational programs for members of the Virginia Beginning Farmer and Rancher Coalition Program.

References

- Creswell, J. W., and V. L. Plano Clark. 2007. *Designing and Conducting Mixed Methods Research*. Thousand Oaks, Ca.: Sage Publications.
- Creswell, J. W., and V. L. Plano Clark. 2011. *Designing and Conducting Mixed Methods Research*. 2nd ed. Thousand Oaks, Ca.: Sage Publications.
- Dillman, D. A., J. D. Smyth, and L. M. Christian. 2009. *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method*. Hoboken, N.J.: John Wiley and Sons.
- Greene, J. C. 2007. *Mixed Methods in Social Inquiry*. San Francisco: John Wiley & Sons.
- Greenwood, D., and M. Levin. 2007. *Introduction to Action Research: Social Research For Social Change*. 2nd ed. Thousand Oaks, Ca.: Sage Publications.
- Israel, B. A., E. Eng, A. J. Schulz, and E. A. Parker. 2005. *Methods in Community-Based Participatory Research for Health*. San Francisco: Jossey-Bass.
- Reason, P., and H. Bradbury, eds. 2001. *Handbook of Action Research: Participative Inquiry and Practice*. London: Sage Publications.
- Schwandt, T. A. 2007. *The Sage Dictionary of Qualitative Inquiry*. 3rd ed. Thousand Oaks, Ca.: Sage Publications.
- Sheils, C. 2004. "What Does the Term 'New Farmer' Mean?" In *Working With New Farmers: Topics in Professional Development*, by C. Sheils and M. Descartes, 4-7. New England Small farm Institute. Special Project: A Growing New Farmers Publication. Professional Development Series No. 101. Belchertown, Mass.: New England Small Farm Institute. www.smallfarm.org/uploads/uploads/Files/WORKING_WITH_NEW_FARMERS.pdf.
- USDA (U.S. Department of Agriculture). Census of Agriculture. 2009. *USDA-NASS, Census of Agriculture: 2007 Census Publications*. National Agricultural Statistics Service. www.agcensus.usda.gov/Publications/2007/index.php.

Appendix A. Methodology

Historically, little information has been known about the approximately 13,000 principal operators in Virginia who are classified as beginning farmers (USDA 2009). Using a community-based participatory research (CBPR) approach, the members of the Virginia Beginning Farmer and Rancher Coalition worked together to understand the expressed training and social support needs of this important clientele in Virginia. CBPR (sometimes referred to as “action research”) is an action-oriented framework that aims to equitably involve all partners in the process of conducting research and educational programming (Greenwood and Levin 2007; Israel et al. 2005; Reason and Bradbury 2001). The CBPR process recognizes the unique strengths each stakeholder brings to the coalition and its project aims, and helps build healthy partnerships and community capacity for sustainable outcomes. For this research, coalition members participated in survey design, testing, and dissemination. Focus group questions were also co-drafted and confirmed through coalition members. The Virginia Tech management team provided analytical leadership, training support, and primary responsibility for implementing research aims.

Mixed-methods research has been defined a variety of different ways; however, a common definition is “collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies” (Creswell and Plano Clark 2007, 5). According to Greene (2007, 13), mixed-methods research “involves a plurality of philosophical paradigms, theoretical assumptions, methodological traditions, data gathering and analysis techniques, and personalized understandings and value commitments.” Six different types of mixed-methods research designs have been developed (Creswell and Plano Clark 2011), and this statewide evaluation follows the explanatory-sequential design. It does so by first collecting and analyzing quantitative data from a statewide survey of Virginia’s beginning farmers and agricultural service providers, followed by a subsequent collection and analysis of qualitative data through three regional focus groups. Together, survey and focus group results were used to understand the priority needs and educational preferences of Virginia beginning farmers and agricultural service providers. This research utilizes a quantitative priority — with greater emphasis placed on the survey — and can be represented using the following notation: QUAN→Qual (Creswell and Plano Clark 2011).

Survey of Virginia Beginning Farmer Training Needs

The goal of the Virginia Beginning Farmer and Rancher Coalition Program survey was to identify the program, training, and resource needs of Virginia’s beginning farmers as well as its agricultural service providers. The survey was designed with direct input from Virginia beginning farmers and agricultural service providers who participate in the VBFRCP. The survey development process started at the end of 2010 with a review of the literature to determine if external beginning farmer survey instruments existed. Only one instrument was found; it was developed by Cornell University as part of its 2009 NIFA-funded Beginning Farmer and Rancher Project. The project coordinators from Cornell were contacted for more information about their survey instrument and project. Cornell project directors agreed to allow Virginia Tech to use the instrument as a model framework. Cornell also provided a second instrument for additional potential questions. From these surveys, the Virginia Tech survey was developed over a period of approximately three months, from February 2011 to the end of April 2011.

Members on the project management team developed and reviewed the survey internally several times to complete an initial draft instrument that could be shared with coalition members. From this, the instrument was shared and discussed with coalition members. Representatives of the coalition reviewed the survey at two specific intervals where they subsequently provided feedback, editorial comments, and input on survey instrumentation. This information was incorporated into further and final drafts of the survey. Content validity was assured through a review of the instrument by the panel

of experts consisting of approximately 47 program coalition members from the agricultural industry, Virginia Cooperative Extension, Virginia Tech, Virginia State University, the nonprofit sector, and state and federal agencies. Fourteen individuals were asked to complete a pilot test of the instrument to ensure the online survey instrument functioned correctly. The Virginia Tech Institutional Review Board reviewed the instrument and gave approval for administration (IRB No. 10-657).

The survey instrument was finalized into a 19-page document. The first two pages acted as an introduction to the survey with instructions for completion. The survey instrument was designed in three main sections in accordance with Dillman, Smyth, and Christian (2009).

Section 1 consisted of 57 different items in five distinct categories. The five categories were:

1. Production practices and management (13 items).
2. Land acquisition and tenure (10 items).
3. Marketing (11 items).
4. Self-employment and labor (9 items).
5. Business planning and financial management (14 items).

Respondents were asked to rank each item on two three-point scales (high, medium, and low). The first three-point scale measured the item's level of importance or priority for beginning farmer success. A lower mean item score meant a higher rating of importance/priority, while a higher mean item score indicated a lower level of importance/priority.

The second three-point scale measured the current level of skill or knowledge in regard to that item. A lower mean item score indicated a higher level of skill or knowledge for that item. A higher mean item score meant a lower level of skill or knowledge.

Section 2 consisted of three questions asking respondents about beginning farmer educational program delivery preferences.

Section 3 asked respondents about their demographics and information about other characteristics that describe their farming situation. The third section classified respondents into two categories: Virginia beginning farmers or Virginia agricultural service providers. Respondents answered a subsequent series of questions depending on their selection into one of these two subsamples.

Data collection occurred twice — the first time in spring 2011 and the second time in winter 2012. Survey distribution occurred either through an online instrument or a hard copy format. The survey was available online through Qualtrics (www.Qualtrics.com) and in hard copy format during events the project team attended, through coalition member organizations, and through the project website.

Round 1 of the data collection process occurred during the spring of 2011 for approximately three weeks at the end of April and beginning of May in accordance with Dillman, Smyth, and Christian (2009). Coalition members facilitated the distribution of the survey Web link to obtain as many responses as possible. Coalition members that helped distribute the survey to potential respondents included Virginia Cooperative Extension, Virginia State University, Virginia Farm Bureau, Virginia Association for Biological Farming, Virginia Team Ag Ed, Virginia Department of Agriculture and

Consumer Services, and others (see appendix B for a list of coalition members). Information about the survey was also posted on several agriculture-based Listservs. Two reminders were sent to project partners and several Listservs at the end of weeks one and two. The survey was also available to download from the website of Virginia Tech's Department of Agricultural and Extension Education.

Round 2 of the data collection process occurred during the winter of 2012, from early January 2012 through the end of March 2012. Once again, coalition members helped communicate and facilitate the distribution of the survey Web link. The survey was again available in hard copy format to download from the project website. During the second round of data collection, one question was added to the instrument that asked respondents if they had completed the survey in round one.

Regional Focus Groups With Virginia Beginning Farmers

Regional focus group sessions were coordinated in three distinct areas of Virginia: the Southwest, Southside, and Eastern regions. The overall goal of each focus group was to explore participant experiences and resource needs as Virginia beginning farmers. A series of nine questions in three categories were asked to generate participant experiences. Focus group sessions are a research method for bringing a group of people together to discuss a particular topic or range of issues and can be used as a stand-alone method of generating data or in combination with other methods (Schwandt 2007). The research team and coalition chose to use focus groups in combination with a survey because this provided for more in-depth discovery of training needs and delivery preferences for curriculum development. Members specifically thought focus groups would be more effective compared to individual interviews because they provided an opportunity for more collective input as a follow-up on the first phase of the survey results. Table 20 summarizes the topics and questions in the focus group protocol.

Two of the focus group sessions — those in Southside and Eastern Virginia — were included as part of a large educational program targeted to Virginia farmers; the Southwest focus group was organized as a separate event. Participants in the focus groups represented each region of Virginia and did not come from solely the host region.

Participants were selected for each focus group using a number of methods.

1. Participants were recruited by advertising each focus group to individuals who had completed the survey during the first phase.
2. Participants were recruited through the newly developed beginning farmer Listserv and partnering coalition member Listservs.
3. Participants were recruited through marketing to individuals participating in the two educational events the focus groups were part of.

Prior to the start of the focus groups, participants were asked to complete a worksheet to help the research team learn about their backgrounds and farming operations. All of the focus groups were recorded and transcribed verbatim. Each session lasted from 60 to 75 minutes. Prior to the coding and analysis of the qualitative data, an *a priori* schematic was developed to identify potential themes based on previous literature. The schematic included five categories: (1) whole farm planning; (2) resource and information priority areas; (3) beginning farmer identity; (4) farm startup challenges such as access to markets, land, labor, and capital; and (5) farm startup opportunities.

Table 20. Beginning farmer focus group topics and questions.

Topics	Questions
Virginia farm startup challenges	<ol style="list-style-type: none"> 1. What farm startup topics or issues do you think are the most pressing for Virginia’s beginning farmers? 2. What advice would you offer service providers or policy makers to address these issues so that beginning farmers might be successful in Virginia?
Resource and information priority areas	<ol style="list-style-type: none"> 3. What are your specific resource or information priorities? 4. What are your specific hands-on training priorities? 5. How should beginning farmer resources, information, and trainings be made available to best help you and others begin farming and stay thriving? (What works/doesn’t work? Why?)
Whole farm planning curriculum	<ol style="list-style-type: none"> 6. Are you familiar with whole farm planning? 7. What topic areas within this curriculum do you think will be most beneficial? 8. What additional topics need to be included in the curriculum? 9. How should this kind of curriculum be delivered? (For example, one-day conferences, evening workshops, online courses, etc.)

Table 21. Summary of priority and knowledge rankings for all survey items.

Rank	Item	Category*	Priority mean	Knowledge mean
1	Financial record keeping	BPFM	1.21	2.00
2	Business planning	BPFM	1.24	2.12
3	Nutrient management and soil health	PPM	1.30	2.12
4	Weed, pest, and disease management	PPM	1.32	2.19
5 (tie)	Assessing and selecting market options	MKTG	1.36	2.37
5 (tie)	Identifying a market niche	MKTG	1.36	2.23
7	Product pricing	MKTG	1.38	2.30
8	Tax planning and preparation	BPFM	1.40	2.51
9	Direct marketing	MKTG	1.41	2.12
10	Financial risk management for small farms	BPFM	1.44	2.62
11	Insurance issues and regulations	SEL	1.48	2.59
12	Managing debt	BPFM	1.49	2.16
13	Access to affordable health insurance	BPFM	1.50	2.59
14	Marketing value-added products	MKTG	1.53	2.38
15 (tie)	Specialty crops	PPM	1.55	2.25
15 (tie)	Financing options	BPFM	1.55	2.37
15 (tie)	Financing grants and low interest loans	BPFM	1.55	2.62
18	Cooperatives for product marketing and distribution	MKTG	1.59	2.45

* BPFM = Business Planning and Financial Management, LAT = Land Acquisition and Tenure, MKT = Marketing, PPM = Production Practices and Management, SEL = Self-Employment and Labor.

Table 21. (cont.)

Rank	Item	Category*	Priority mean	Knowledge mean
19	Tractor and equipment handling, safety, maintenance, and repair	PPM	1.61	2.19
20 (tie)	Successful models and case studies for new farm purchases	LAT	1.62	2.48
20 (tie)	Product and business branding	MKTG	1.62	2.39
22 (tie)	Legal arrangements for land purchases and leases	LAT	1.63	2.64
22 (tie)	Internet marketing	MKTG	1.63	2.29
24	Farm mentor programs	SEL	1.64	2.65
25	Land-based business financing services	LAT	1.66	2.65
26	Credit for land purchase and maintenance	LAT	1.67	2.67
27 (tie)	Animal/livestock husbandry	PPM	1.68	2.29
27 (tie)	Pasture and hay land management	PPM	1.68	2.36
27 (tie)	Conservation Best Management Practices (BMPs)	PPM	1.68	2.32
30	Requirements and regulations associated with farm employment	SEL	1.68	2.62
31	Enterprise budgets	BPFM	1.69	2.40
32 (tie)	Extending the growing season	PPM	1.72	2.35
32 (tie)	Business structure options	BPFM	1.72	2.45
32 (tie)	Cooperative equipment sharing	BPFM	1.72	2.63

* BPFM = Business Planning and Financial Management, LAT = Land Acquisition and Tenure, MKT = Marketing, PPM = Production Practices and Management, SEL = Self-Employment and Labor.

Table 21. (cont.)

Rank	Item	Category*	Priority mean	Knowledge mean
35	Government loan and loan guarantee programs	BPFM	1.73	2.62
36	Farm safety training for employees	SEL	1.75	2.37
37 (tie)	Models for farms to pool labor and other resources	SEL	1.77	2.76
37 (tie)	Small loan and peer-to-peer lending programs	BPFM	1.77	2.77
39	Land linking services between landowners and land seekers	LAT	1.78	2.59
40 (tie)	Assistance with renting farmland	LAT	1.79	2.64
40 (tie)	Finding and hiring the right employees	SEL	1.79	2.45
42 (tie)	Assistance with short- and long-term land leases	LAT	1.80	2.66
42 (tie)	Wholesale marketing	MKTG	1.80	2.52
44	Food safety and Good Agricultural Practices (GAP) certification	PPM	1.82	2.46
45	Employee management	SEL	1.86	2.27
46	Land conservation easements	LAT	1.88	2.46
47	Intergenerational farm transfers	LAT	1.90	2.65
48	Irrigation systems	PPM	1.92	2.43
49	Employee compensation strategies	SEL	1.94	2.56
50 (tie)	Marketing for agritourism	MKTG	1.96	2.52

* BPFM = Business Planning and Financial Management, LAT = Land Acquisition and Tenure, MKT = Marketing, PPM = Production Practices and Management, SEL = Self-Employment and Labor.

Table 21. (cont.)

Rank	Item	Category*	Priority mean	Knowledge mean
50 (tie)	Transitioning from internship/ apprenticeship programs to self-employment	SEL	1.96	2.67
52	Development of software tools	BPFM	2.00	2.51
53	Livestock processing capacity	PPM	2.14	2.61
54	Agronomic crops	PPM	2.16	2.54
55	Organic certification	PPM	2.22	2.40
56	Third-party farm transfers	LAT	2.23	2.79
57	Using export markets	MKTG	2.41	2.80

* BPFM = Business Planning and Financial Management, LAT = Land Acquisition and Tenure, MKT = Marketing, PPM = Production Practices and Management, SEL = Self-Employment and Labor.

Appendix B. Virginia Beginning Farmer and Rancher Coalition Program Background

Virginia Beginning Farmer and Rancher Coalition Members

AgrAbility Virginia

Agricultural Development, Fauquier County

Appalachian Sustainable Development

Attimo Winery

Bracketts Farm

Farm Service Agency, U.S. Department of Agriculture

Fauquier Education Farm

Grayson LandCare

Hethwood Market

Laurel Farm

Local Food Hub

Mountain View Farm and Vineyard

Natural Resource Conservation Service, U.S. Department of Agriculture

Piedmont Environmental Council

Rural Development, U.S. Department of Agriculture

SustainFloyd

Virginia Association for Biological Farming

Virginia Cooperative Extension

Virginia Department of Agriculture and Consumer Services

Virginia Farm Bureau Young Farmers

Virginia Farm Credit

Virginia Forage and Grasslands Council

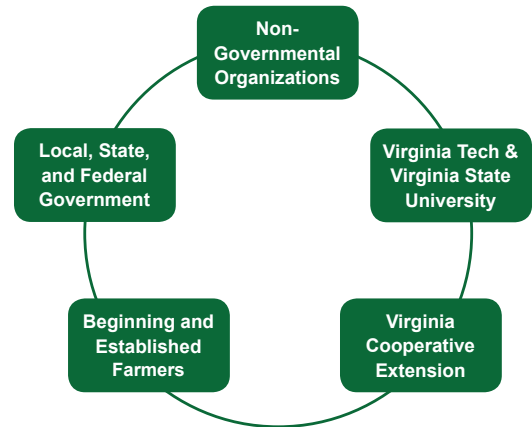
Virginia State University

Virginia Team Ag Ed

Virginia Tech

VT Earthworks

Young Farmers of Virginia



Additional Information

For more information, please contact the Virginia Beginning Farmer and Rancher Coalition program director:

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Complete results of the Virginia beginning farmer survey can be found on the program website at www.vabeginningfarmer.org.

Steering Committee

The Virginia Beginning Farmer and Rancher Coalition Steering Committee comprises seven committed individuals from the coalition who represent both farmer and service provider perspectives in Virginia. This elected committee is responsible for guiding program activity to best address the expressed needs of the coalition.

Alvin Blaha, Laurel Farm

William Crutchfield, Virginia State University

Kim Niewolny, Virginia Tech

Jim Schroering, Virginia Cooperative Extension

Megan Seibel, Mountain View Farm and Vineyard

Scott Sink, Hethwood Market

Donna Westfall-Rudd, Virginia Tech

Management Team

The VBFRCP is a program of Virginia Cooperative Extension. Its management team is housed in the Department of Agricultural and Extension Education at Virginia Tech. This team is responsible for the management and evaluation of programming activity.

Matt Benson, Department of Agricultural and Extension Education

Debbie Carroll, Department of Agricultural and Extension Education

Lisa Hightower, Department of Agricultural and Extension Education

Jennifer Helms, Department of Agricultural and Extension Education

Jim Hilleary, Farm Mentor Coordinator, Northern Virginia

Steve Hodges, Department of Crop and Soil Environmental Sciences

C.J. Isbell, Farm Mentor Coordinator, Central Virginia

Sarah McKay, Department of Agricultural and Applied Economics

Kim Niewolny, Department of Agricultural and Extension Education (Program Director)

Rick Rudd, Department of Agricultural and Extension Education

Kelli Scott, Farm Mentor Coordinator, Southwest Virginia

Maurice Smith, Department of Agricultural and Extension Education

Donna Westfall-Rudd, Department of Agricultural and Extension Education

Althea Whitter-Cummings, Department of Agricultural and Extension Education

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Contact Kim Niewolny, program director, at niewolny@vt.edu or 540-231-5784 for more information; www.vabeginningfarmer.org.

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VIRGINIA

Beginning Farmer & Rancher

COALITION PROGRAM



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