Conservation and Farm Viability on Vermont Small Farms

A Survey of Vermont's Certified Small Farm Operations in 2019

FBRR035 - 5/20

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Contents

Introduction and Methods

In spring 2019 the UVM Extension Agricultural Business program conducted a survey of Certified Small Farms (CSFO) in Vermont. The goal of this survey is to gather information on the economic situation across Vermont's small farms, explore their adaptation to water quality regulations and to understand the next steps for farms moving forward. Vermont implemented new Required Agricultural Practices (RAPs) in 2017. The anonymous survey was distributed to 334 CSFO businesses owners through postal mail. Farm owners received a pre-survey postcard, a hard copy survey instrument, a reminder postcard and a second hard copy survey over an 8-week period. The survey was completed by 173 respondents.

Demographics

The majority of respondents to this survey (86%) identified their primary farming enterprise as dairy. The remaining 14% of respondents are split evenly between beef, produce, field crops, maple or a self-defined "other" category. No single business category other than dairy farming composed more than 2% of the responses. Several responses to the farming category "other" indicated a farm equally split between two enterprises (ex. "dairy and beef").

Respondents indicated the presence of an additional significant farm enterprise if one existed. Sixty-two percent (62%) of small farms identified a secondary enterprise. The top three secondary enterprises are Field Crops, Beef and Maple.

Survey respondents actively farmed 72,149 total acres in Vermont with an average farm size of 434 acres at the time of this survey. Eighty-four percent (84%) of respondents rented farmland in addition to their owned property.

The survey collected the ages of farm owners for up to four current owners or partners. The average age per farm varies based on how many owners are included in the calculation. Thirty-eight farms (23% of those responding to this question) had three or more owners and partners. Responses demonstrate that most farms with three or four owners listed are multi-generational farms, with at least a 20-year age difference with one of the owners.

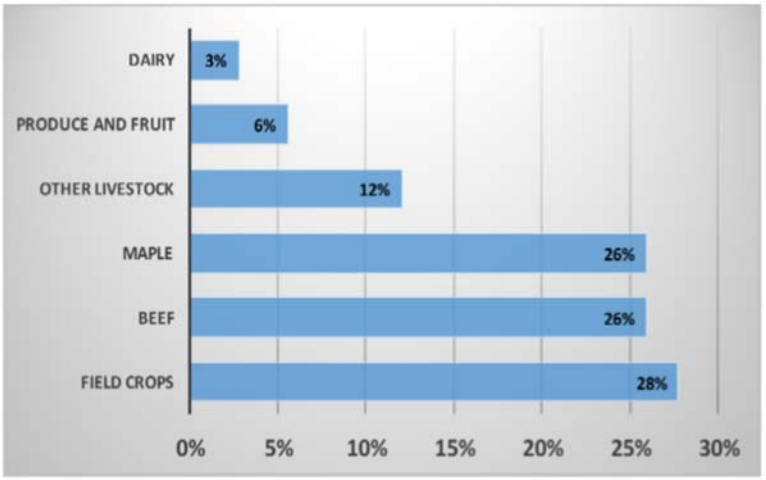


Figure 1: Additional significant enterprises to the farm business

The table below provides average ages reported.

Owners	Average Age (years)
Owner/Partner #1	58
Owner/Partner #2	53
Owner/Partner #3	42
Owner/Partner #4	34

Table 1: Age of owners and partners

Responding farms indicated the number of employees working throughout the year. Employee data is shown in Table 2 on the next page.

Owners	Average
Full Year - Full Time	2
Full Year - Part Time	2
Seasonal - Full Time	2
Seasonal - Part Time	2

Table 2: Average number of employees

Farms reported gross sales for the 2018 calendar year. Respondents are distributed across all sales classes ranging from "less than $100K" to "$500k or more". The largest response rate is observed for "$500k or more" but this category also includes a potential income span that is larger than $99,000 (ie. $500k-$599k). The responses are relatively evenly distributed across the $99,000-spaced intervals from "$100k-$199k" through "$400k-$499k."

Visitations

Seventy-one percent (71%) of respondents had received a water quality visit or inspection in the previous two years of 2017-2018. The majority of farm visits were conducted by staff from either the USDA Natural Resource Conservation Service (NRCS) or the Vermont Agency of Agriculture, Food and Markets (VAAFM)—40% by NRCS and 25% by VAAFM. Many of the respondents were visited by more than one organization. UVM Extension and conservation organizations were also listed as organizations completing water quality farm visits during this time.

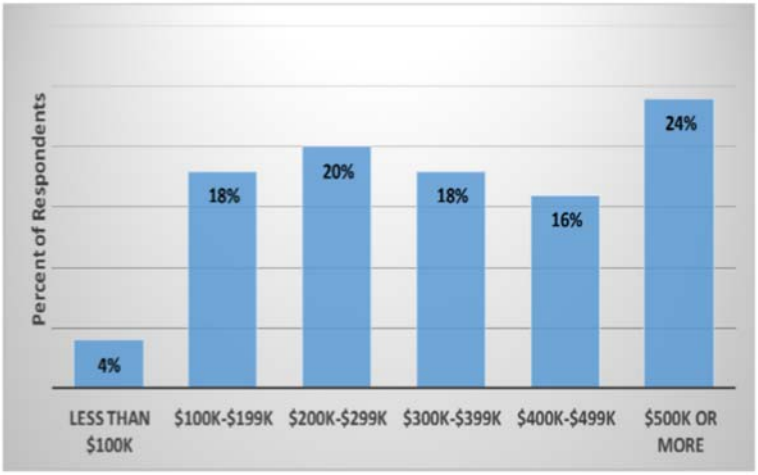


Figure 2: Gross sales in 2018

Compliance with Regulations

Survey respondents provided compliance status for specific features of their farm. In cases where farms indicated a specific farm feature did not apply to them, their responses were removed from the analysis in the figures below. The achievement of compliance based on specific farm features ranges from a low of 71% (silage leachate/feed storage and barnyard) to a high of 87% (agronomic practices).

For those farm features that required changes to achieve compliance, manure storage (20%) is most frequently cited. Next are barnyards (17%), Silage leachate/feed storage (15%), milk house waste (12%) and agronomic practices (7%).

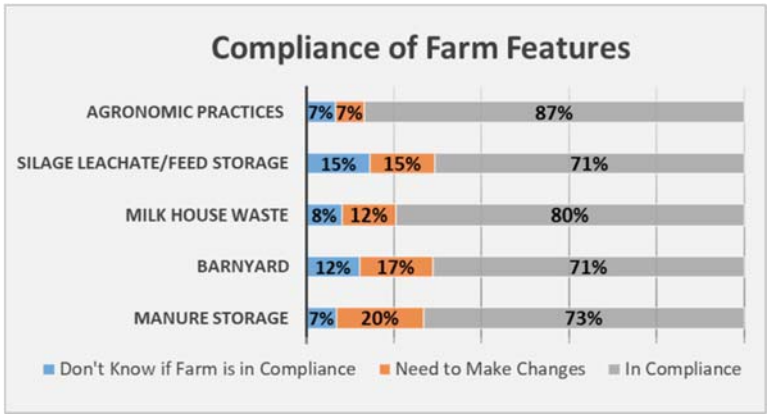


Figure 3: Compliance of farm features

Conservation Changes in Response to Required Practices

This survey is able to document the significant changes Vermont farmers have made to their conservation practices over the period of 2016-2018 in response to the Required Agricultural Practices (RAPS) The most common practice implemented is adding buffer strips or grassed waterways to their farm fields (62%). Of the 167 farm owners responding to this question, only eight percent (8%) of respondents report they had not adopted any of the practices listed here. Several respondents provided comments that indicate they had already previously adopted rotational grazing or other practices listed here before the implementation of new RAPS in Vermont. The aim of this survey was not to document universal use of these practices, only the newly adopted practices from 2016-2018.

For many farms the new conservation regulations have required additional investments to be made into the farm property and infrastructure. The most common new investments made in response to RAPs are investments in "Fencing, Water and Land Improvements" (51% of farms), followed by Manure Storage (41% of farms), and Barnyards/Housing (39% of farms). A number of respondents used the "other" option to indicate specific situations for their farm. Several of these comments indicate projects that are in the planning phase or in process but not yet completed.

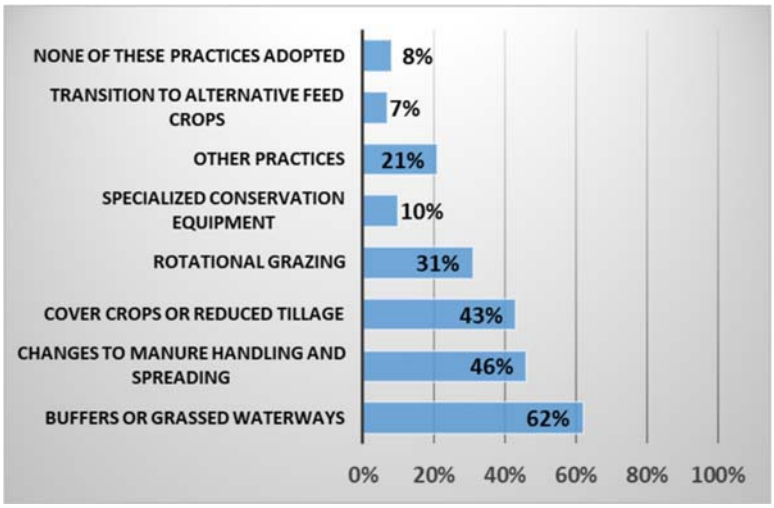


Figure 4: Practices adopted in response to RAPs

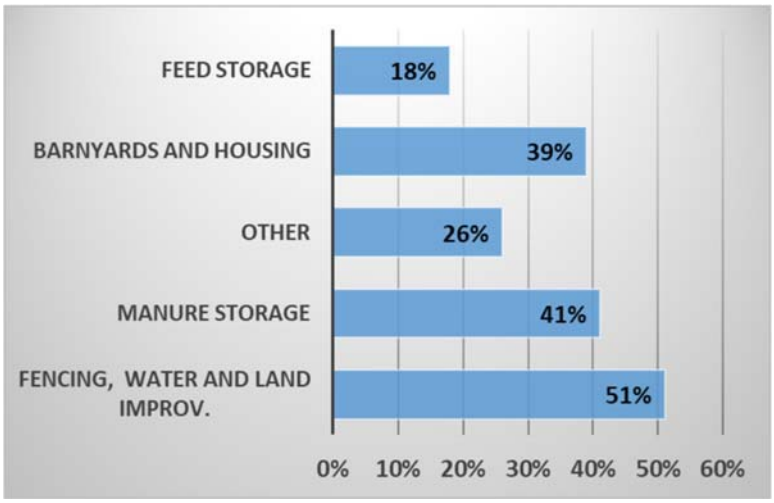
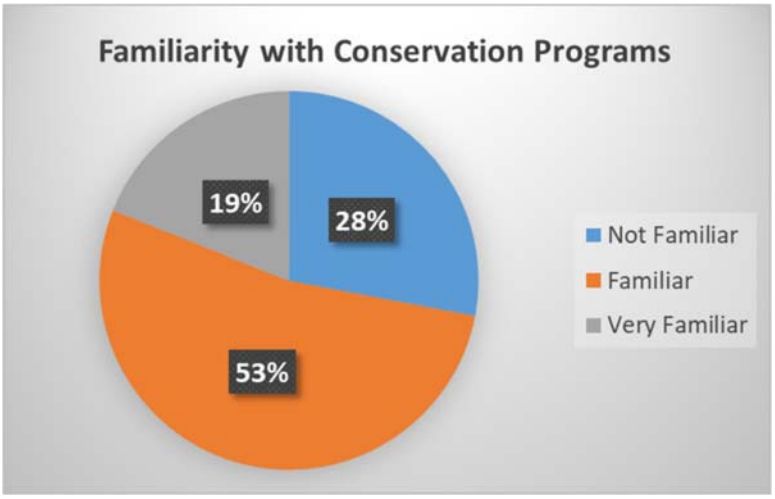


Figure 5: New investments made in response to RAPs

Familiarity with Grants and Conservation Programs

With the passage of new regulations supporting public conservation goals, access to conservation technical assistance and financial assistance becomes an increasingly important feature of the public response. Farm owners responding to the survey indicate their familiarity with grants and conservation programs that support water quality projects. Twenty-eight percent (28%) of respondents say they are "not familiar" with these programs. The remaining 72% are either "familiar" or "very familiar".



When asked about the likelihood that respondents would apply to existing grant programs to make water quality improvements 46% of respondents said "yes". Those that are "unsure" make up 36% of respondents and 17% of respondents indicated they are not likely to apply.

Figure 6: Familiarity with conservation programs (percent of respondents)

Alternative Water Quality Practices

Survey respondents were given the opportunity to write in suggestions for alternative water quality practices that deserve more support. Sixty-two respondents (36%) provided comments and 111 participants skipped the question. The open ended questions are coded into five categories: alternative agricultural practices, equipment and sampling, focus on non-ag polluters, manure spreading/pit changes and regulatory critique. The two most common responses fall into the categories of "Alternative Agricultural Practices" (43%) and the recommendation to "Focus on Non-Agricultural Polluters" (33%). The most cited "Alternative Agricultural Practices" included reference to increased support for livestock watering systems, fencing, pasture improvements and grass seeding. The responses that referred to non-agricultural polluters indicate the presence of concern from farm owners that other sectors, landowners or municipal activities deserved increased regulatory scrutiny.

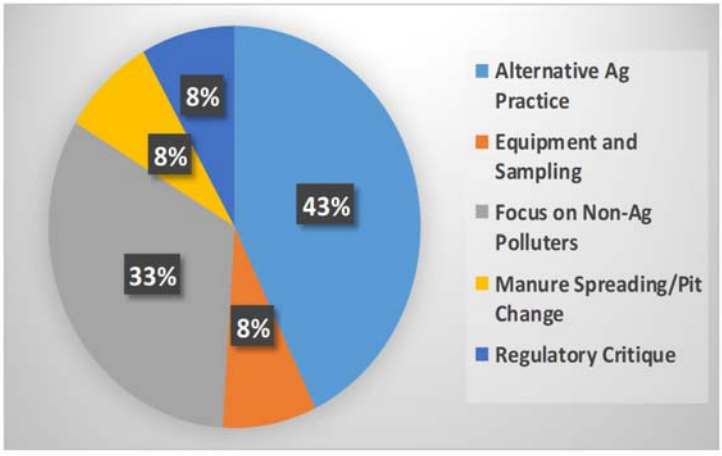


Figure 7: Alternative practices deserving more support (percent of farm respondents)

Business Management

Survey respondents answered three significant questions about business management and business planning. The majority of farm owners (70%) indicate they know the cost of production for their primary enterprise.

Roughly half of farm owners completing the survey have prepared a business plan in the past four years. Preliminary analysis, however, indicates there is not a strong a correlation between recent preparation of a business plan and demonstrated business viability. More research will be done with these data to determine if business owners completing business plans tend to be experiencing difficulty or business challenges that have prompted them to develop a plan.

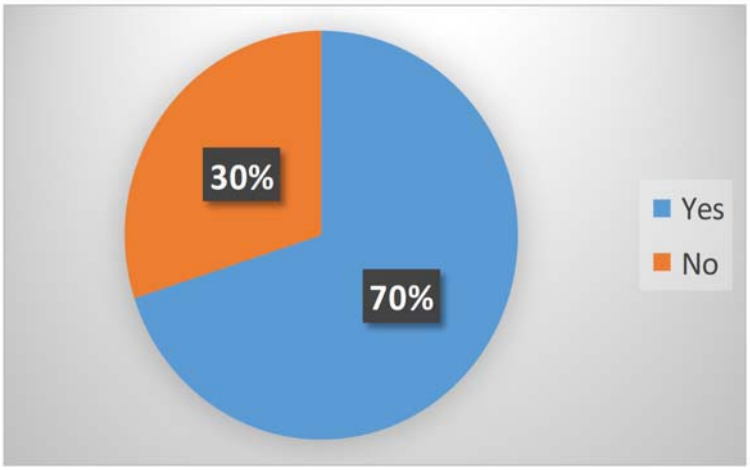


Figure 8: Farm owners know the cost of production for the primary enterprise (percent of farm respondents)

Despite the clear trend of an increasing average age of farm owners, less than one-third (31%) of respondents have a current farm transfer-succession plan in place. This statistic, coupled with farm profitability level, will have a major impact on the development of relevant farm business succession programming in Vermont moving forward (see Figure 11 and Figure 12). The feasibility of business sale, succession or exit will vary dramatically based on the demonstrated economics of the business.

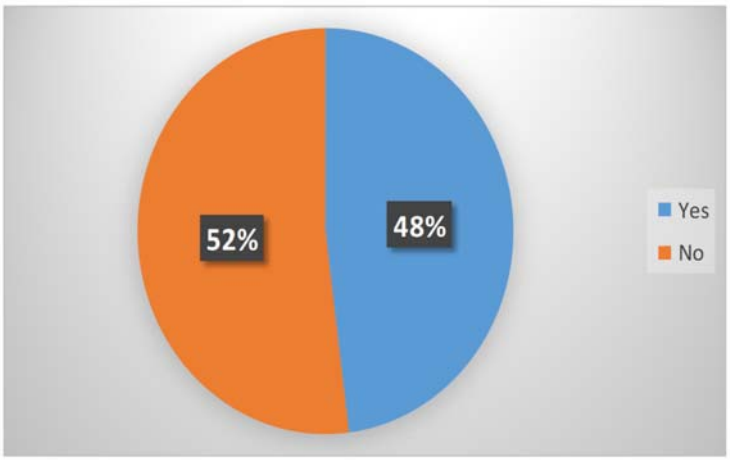


Figure 9: Farm prepared a business plan in the past four years (percent of farm respondents)

Farm Situation and Profitability

Farm owners indicate the level of significance of several potential challenges to their farm's viability. The three most cited challenges are "Short – Term Profitability" (83% of respondents), "Lack of Capital for New Investments" (80% of respondents), and "Labor-Employee Concerns" (67% of respondents). The first two factors fit the timing of the survey given the depressed milk prices during spring 2019 and the continual need to make investments to operating farm infrastructure and equipment. Given the number of respondents that indicate they are in compliance with RAPs, however, we do not assume that "Lack of Capital for New Investments" is strictly linked to the need for new investments to reach compliance. With the addition of the third most common challenge of "Labor-Employee Concerns" followed closely

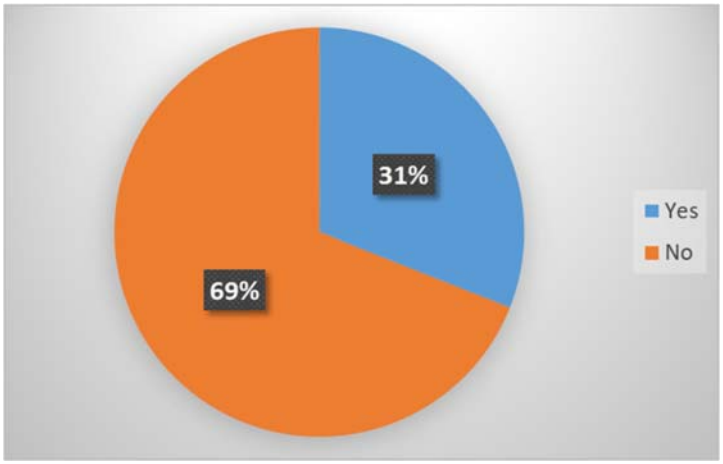


Figure 10: Farm has a current transfer-succession plan in place (percent of farm respondents)

by “Long-Term Farm Profitability” we see the pattern of chronic economic challenges facing small (predominantly dairy) farms in Vermont. These chronic issues pre-date the RAPs and will outlast the current adaptation to conservation regulations.

It is notable that, at the time of this survey, more farm owners indicate that “Adapting to Other Regulations” (64%) impacted business viability compared to “Challenges to Meet the RAPs” (60%). This result is inconsistent with commonly voiced concerns that the implementation of RAPs is the reason farms will be going out of business.

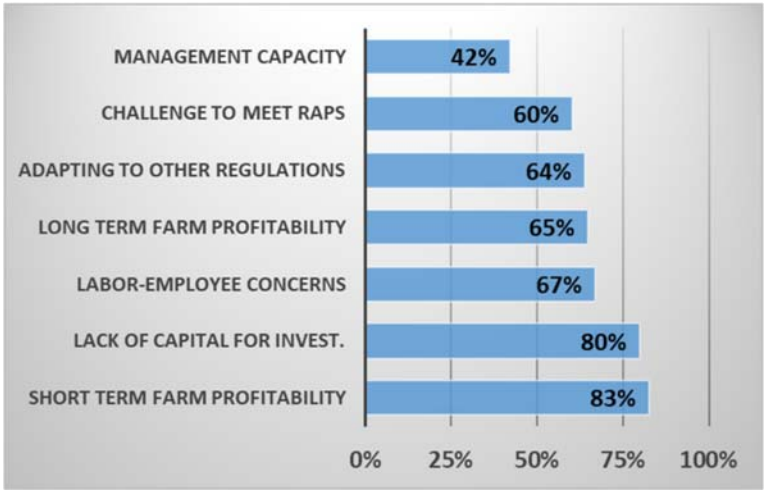


Figure 11: Significant issues that challenge farm viability (percent of respondents)

Respondents indicate their business viability by selecting from four provided definitions. Economic viability is described as “being able to cover all costs, pay family labor at the average agricultural wage and generate a profit.” The two “sustainable” categories are defined by the presence of either non-farm income or utilization of built equity in property, owned assets or savings. Vulnerable is defined as being at the most economic risk, when compared to the other three categories.

Twenty percent (20%) of respondents indicate that their farm is vulnerable. It is not clear what factors are most important in assessing vulnerability given that the milk price varied in the years prior to and during the time of this survey.

Twenty-nine percent (29%) of respondents indicated that their farm business is economically viable. The remaining respondents (51%) indicated that their farm business needed either off-farm income or the use of equity (or both) to be “sustainable”.

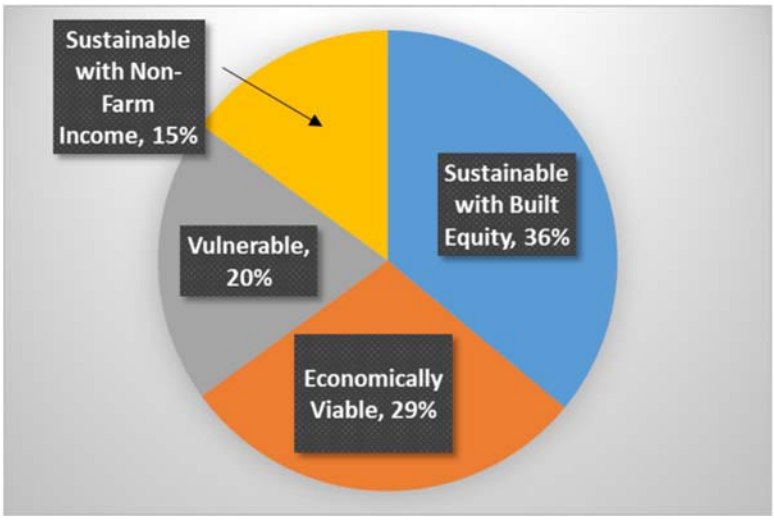


Figure 12: Business viability (percent of respondents)

Farm Outlook and Planning Trajectory

At the time of this survey, spring 2019, the dairy markets were at the tail end of over four years of low milk prices. This period of time is marked by the realization of a "new-normal" in dairy markets. The pervious trend of three-year milk price cycles from 2000-2014 had been replaced by expert commentary indicating that $18.00-$19.00 per cwt. milk will be the normal and not to expect much more. Not surprisingly, the survey respondents who are primarily dairy farmers are uncertain about the next five years for their business. Compounding factors impacting farm viability (see Figure 11) have resulted in a low confidence for the future of the business.

Figure 14, below, shows the variety of business alternatives that will be considered by farm owners moving forward. This table reflects the diversity of economic positions (see Figure 12) that different farms owners are in. The majority of farm owners (52%) will be exploring the diversification into different farm enterprises. Meanwhile, the second most common business alternative (43%) is the consideration to begin farm exit planning. A much smaller number of respondents are planning to expand the existing farm enterprise or expand land holdings through ownership or rental.

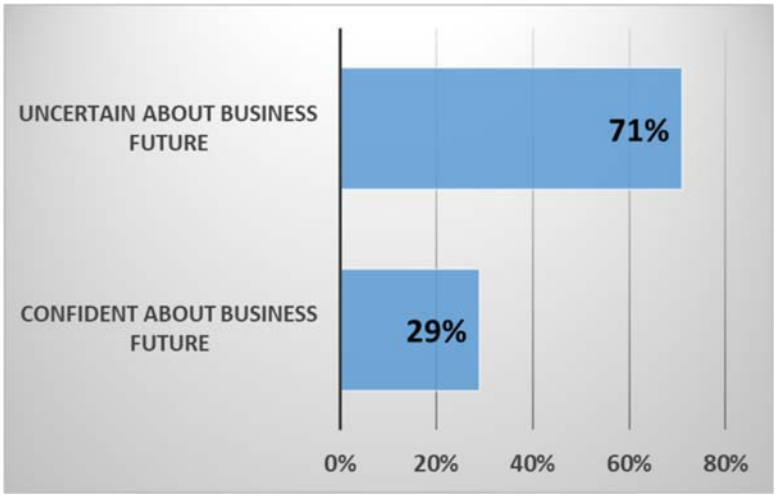


Figure 13: Farm outlook over the next five years (percent of respondents)

There are Extension programs, agricultural development organizations, and other agencies potentially positioned to offer programs to support Vermont's small farms exploring the planning alternatives listed in Figure 14. Figure 15 reports the services and resources that farm owners indicate will help their farm planning. The responses in Figure 15 closely mirror the most likely business alternatives in Figure 14. The top four responses (feasibility planning for alternative crops, transfer-succession planning, financial analysis-recordkeeping and marketing resources) are in highest demand from this group of farmers that will be exploring diversification alternatives and potentially exiting farm operations based on the results of this feasibility planning.

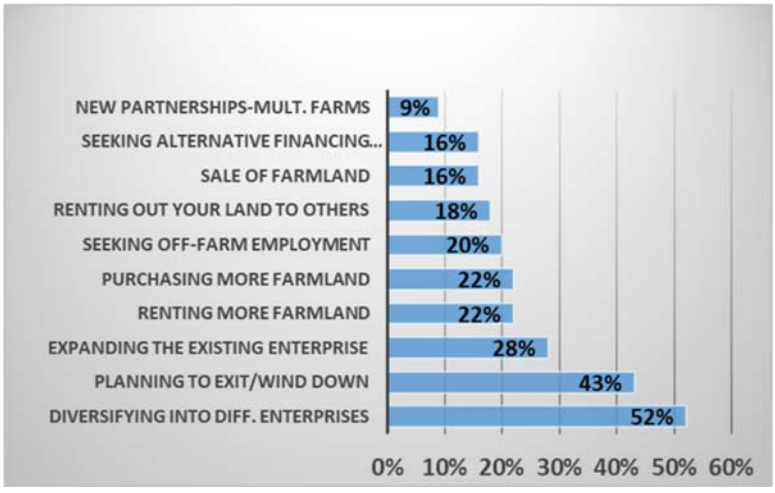


Figure 14: Business alternatives likely to be considered in the next

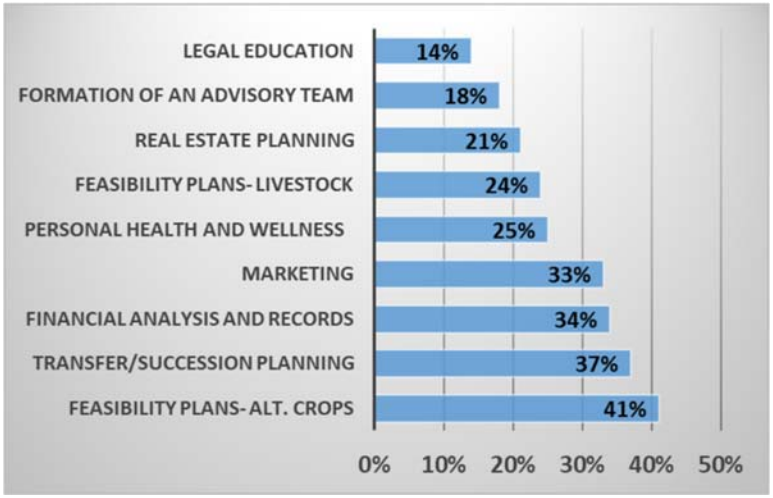


Figure 15: Service or resource to help with farm planning (percent of respondents)

Conclusions

Survey results demonstrate a profile of small farm owners that is in the midst of major transition and positioned for even more change in the next several years. The farm owners represented in this survey are managing three different phases of business adaptation simultaneously as they plan the next steps for the farm business. The first phase requires identifying what changes can and need to happen to meet conservation goals and remain in compliance with water quality regulations. The second phase is looking at alternative enterprises and alternative practices needed to improve the economic viability of the farms. The majority of farms face both short-term and long-term profitability challenges that need be addressed. The third phase is the preparation for farm ownership transfer or business exit. Most of Vermont's small farms, whether profitable or not, have aging owners and many of these owners are not in a position to maintain their current management role 5-10 years out.

This survey shows that operating farms have adopted many new practices and made new investments to achieve compliance with new conservation regulations. The majority of farms have achieved compliance but up to 20% of small farms still need to make changes to meet standards. A larger portion of farms demonstrate uncertainty if their feed storage or barnyards are in compliance compared to other features, indicating that a larger amount of those projects may need to be initiated as farm inspections progress statewide. Responses in Figure 3, Figure 4 and Figure 5 demonstrate the rapid adoption of agronomic practices and new conservation investments that have been put in place in response to water quality regulations. Many of these agronomic projects are low in cost but provide significant phosphorus reductions within watersheds.

The magnitude of routine farm investment plus new conservation-related investments prompt important discussions and decisions about who will own the farm assets and any associated debt. The majority of farm owners and operating businesses in this survey do not have a transfer or succession plan developed. The absence of these plans paired with new investment requirements are likely to manifest in a potentially problematic situation. Business succession planning processes routinely take many months or more and the prospect of the family communication and financial planning under duress and short-term deadlines will be a persistent challenge in the next five years. A lack of capital for new investments is indicated from this survey as a major factor impacting farm viability. Existing debt burden and solvency issues will play a major role in the determination of feasible succession or exit planning strategies.

Business succession, however, brings the opportunity to integrate new people or new roles into the operating business. This survey shows that over half of farm owners are considering the diversification into new enterprises. An exploration into new enterprise feasibility is likely to reveal an opportunity and need for new managerial skill sets. Farm owners in this survey do show a rapid adoption of new conservation practices since the implementation of the Required Agricultural Practices. Moving forward, the implementation of new enterprises presents a helpful disruption in managerial and labor roles that will facilitate the transfer of responsibilities and eventual ownership.

This survey shows the importance of ongoing federal and state grants or contracts to complete the farm infrastructure projects remaining. More than 80% of respondents said that short-term profitability and lack of investment capital are important factors to their overall business viability, presenting a major obstacle to initiating conservation improvements. Advancing manure structures and barnyard projects, arguably the most expensive projects, are to be improved if farmers will benefit from continued public program assistance.

As programs continue to support high-cost infrastructure investments, the clear dilemma of business viability adds tension to the situation. The combination of farmer uncertainty demonstrated in this survey, paired with statistics on the declining number of Vermont dairy farms, looms over long-term infrastructure projects that have a 10 year or longer lifespan.

In addition to ongoing conservation grants and contracts, a variety of business technical assistance resources will be needed to support small farms. Business owners seeking to make changes indicate several program/service foci that could support their next steps. Specific situations, risk tolerance, solvency, market forces and entrepreneurship are a few of the many factors that will influence business adjustments. A farms owners interest in business diversification is not predictive of a successful shift to new products and new market channels. A number of factors will need to align to facilitate adaptive changes. To adequately serve the population represented in this survey, Vermont business service providers need to offer a robust set of programs that support a combination of adaptive strategies and also embrace the need to prepare contingencies that maximize benefits or minimize consequences. A balanced program portfolio will be needed to accelerate the development of executive skills for owners positioned for success, provide adequate support for current or next owners facing uncertain outcomes, consider working lands conservation options and embrace proactive exit planning.

List of Figures

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