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Conservation and Farm Viability on Vermont Medium and Large Farms

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Conservation and Farm Viability on Vermont Medium and Large Farms— 2021 Survey

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Introduction and Methods

In winter 2021 a survey of Medium Farm Operations (MFO) and Large Farm Operations (LFO) was conducted in Vermont. A similar survey was conducted for Certified Small Farms in 2019. The goal of this survey was to gather information on the economic situation across Vermont's medium-to-larger 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. Since that time farm operations have been changing practices and oftentimes making capital investments to maintain compliance with the new regulations. Meanwhile, these farms continue to operate in an era of market uncertainty and face several chronic structural issues that challenge the viability of dairy and livestock operations in the state. The anonymous survey was distributed to 143 MFO and LFO farm business owners through postal mail. This list included all registered farms with the Vermont Agency of Agriculture, Food and Markets (VAAFM) in these size categories at the time of the survey. Respondents received a pre-survey postcard, a hard copy survey instrument, reminder postcards and a second survey hard copy mailing over an 8-week period. Two surveys were returned due the farms' no longer being in business resulting in 141 survey recipients. Sixty-three surveys were returned and one survey was removed due to incomplete responses. Sixty-two useable surveys were analyzed resulting in a 44% response rate.

Demographics

- The majority of respondents to this survey (90%) identified their primary farming enterprise as dairy. Beef and Veal farms comprised 5% of responses. The remaining farms identified as poultry or "other".
- Survey respondents reported ownership of 54,293 acres of actively farmed land and rented an additional 31,949 acres of farmland for a total of 86,242 acres of actively farmed land. Ninety-two percent (92%) of respondents rented farmland in addition to their owned property.
- The survey collected the ages of farm owners for up to four current ownefrs or partners. The average age per farm varies based on how many owners are included in the calculation. Twenty farms (34% of those responding to this question) had three or more owners. The table below provides the average ages of farm owners.

Owners	Average Age	Minimum (Years)	Maximum (Years)
Owner/Partner #1	61	32	84
Owner/Partner #2	53	20	77
Owner/Partner #3	48	26	83
Owner/Partner #4	38	24	80

Table 1: Age of owners and partners

Owners or Employees	Average
Full Year- Full Time	10
Full Year- Part Time	2
Seasonal-Full Time	5
Seasonal- Part Time	2

Table 2: Average number of employees

- Responding farms indicated the number of employees working throughout the year. Employee data is shown in Table 2 below.
- Farms reported gross sales for the 2020 calendar year. This particular year was an abnormal year due to the global Covid-19 pandemic. Many agricultural commodity prices were disrupted through the middle of the year. However, the combination of market prices adjusting back to prior levels and federal government direct payment programs generally resulted in farms achieving their expected total receipts by the close of 2020. Respondents are distributed across several sales classes ranging from "Up to $999,999" to "$5M and Higher". The largest response rate is observed for "$1M - $1.9M". The remaining respondents are relatively evenly split between the remaining size classes (Figure 1).

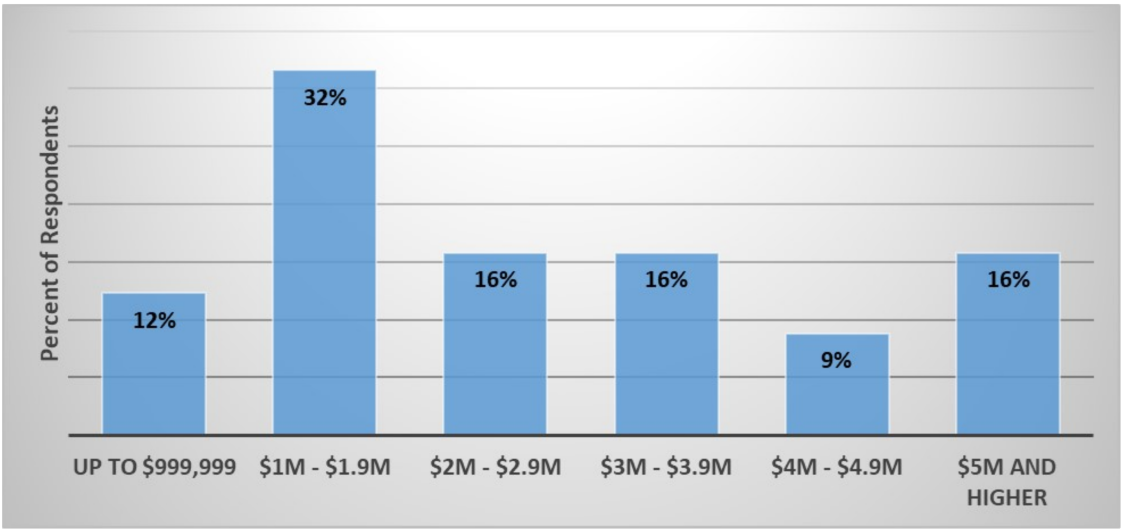

Figure 1: Gross sales in 2020

Visitations

One hundred percent (100%) of respondents had received a water quality visit or inspection in the previous two years of 2019-2020. The majority of farm visits in the most recent two years (78% of visits) were conducted by staff from the Vermont Agency of Agriculture, Food and Markets (VAAFM) and the USDA Natural Resource Conservation Service (NRCS). 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.

Compliance with Water Quality Regulations

Survey respondents provided compliance status for specific features of their farm. In cases where farms indicated that a farm feature did not apply to them, their responses were removed from the analysis in the figures below. The achievement of compliance for specific farm features ranges from the lowest of 71% of farms for "Silage-Leachate" to the highest of 98% of farms in compliance for "Milk House Waste".

For the survey question asking which farm features require changes to achieve compliance, silage and leachate (26%) is most frequently cited. Next is manure storage (12% of respondents need changes), barnyards (11%) and agronomic practices (5%).

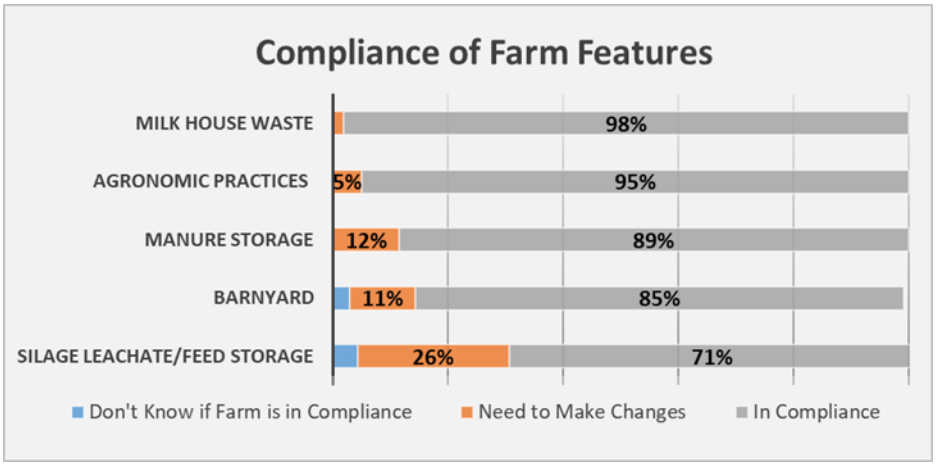

Figure 2: Compliance of farm features

Conservation Changes in Response to the Required Agricultural Practices

The survey recorded the changes that medium and large farmers have made to their conservation practices over the period of 2016-2020 in response to the RAPs. The most common practice implemented is cover cropping and reduced tillage (87%). Of the 62 farm owners responding to this question there are no respondents that did not adopt any new practices listed here. Several respondents provided comments that indicate they had previously adopted practices listed here and additional practices dating back to the early 1990's in one case. This survey is not able to accurately document the specific timing of all practice adoption for these respondents due the question structure that asks specifically about newly adopted practices from 2016-2020.

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" (44% of farms), followed by "Barnyards/Housing" (40% of farms), and "Feed Storage" (Figure 4). The lower percentage of new manure storage investments (36% of respondents) should be considered in addition to the supplemental comments offered by respondents. Respondents used the "other" option to indicate specific situations for their farm. It is estimated an additional 5% of respondents were in the planning or initial construction stages of new manure storage investments at the time of survey completion.

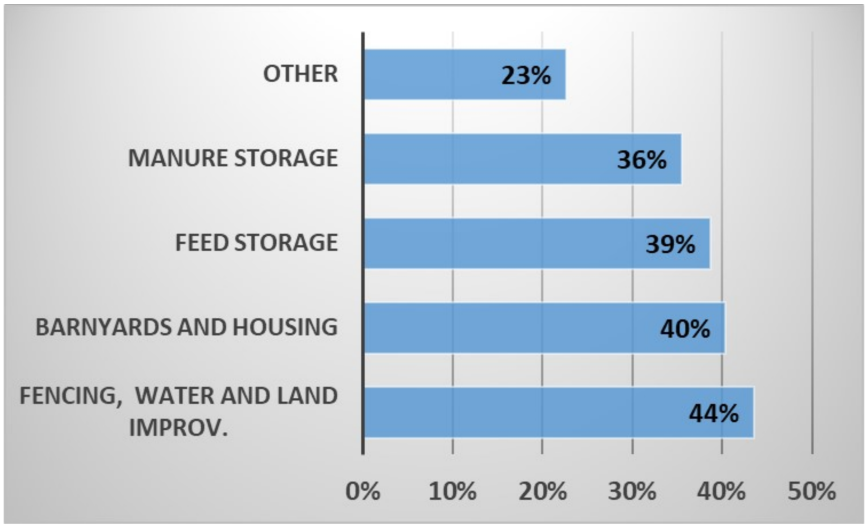

Figure 4: New investments made in response to RAPs

Familiarity with Grants and Conservation Programs

Access to conservation technical assistance and financial assistance is an important feature of the public response with the passage of new regulations. Medium and large farm owners are more familiar with conservation programs compared to small farm owners in a 2019 survey. Only three percent (3%) of MFO and LFO respondents say they are "not familiar" with these programs. The remaining 97% are either "familiar" or "very familiar" (Figure 5).

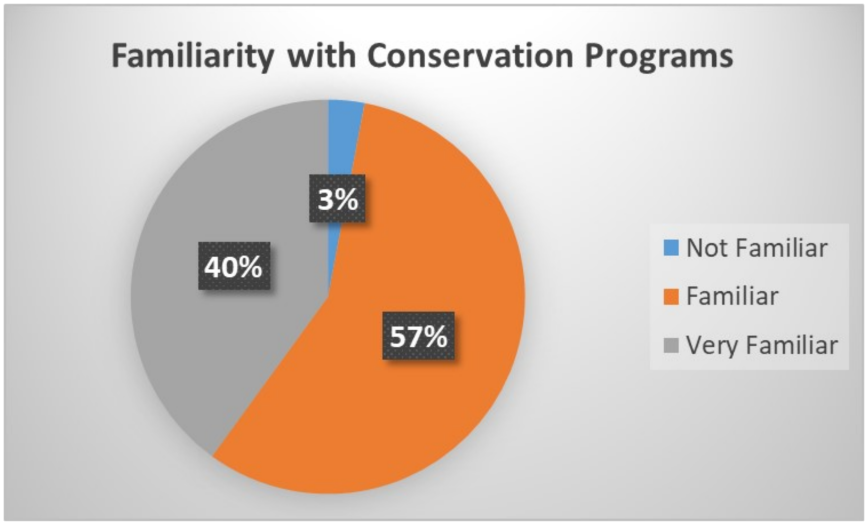

Figure 5: Familiarity with conservation programs (percent of respondents)

Seventy-seven percent (77%) of respondents said "yes" when asked about the likelihood they would apply to existing grant or contract programs to make water quality improvements. Those that are "unsure" make up 19% of respondents and 3% of respondents indicated they are not likely to apply.

Alternative Water Quality Practices

Survey respondents were given the opportunity to write in suggestions for alternative water quality practices they felt deserve more support. Twenty-nine respondents (47%) provided comments while thirty-two participants skipped the question. The open ended responses are coded into seven categories: alternative manure spreading practices, agronomic practices and tile drainage, municipal sewage-roads, other equipment-improvements, manure storage alternatives, carbon storage programs and an "other" category. The two most common responses fall into the categories of "Alternative Manure Spreading Practices" and "Agronomic Practices and Tile Drainage" (Figure 6).

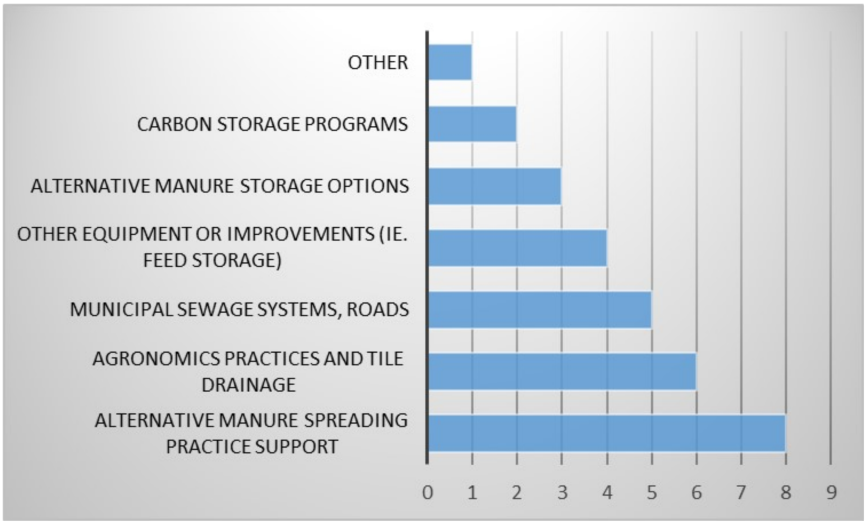

Figure 6: Alternative water quality practices deserving more support (frequency of respondents)

Business Management

Survey respondents answered three questions about business management and business planning. The majority of farm owners (92%) indicate they know the cost of production for their primary enterprise.

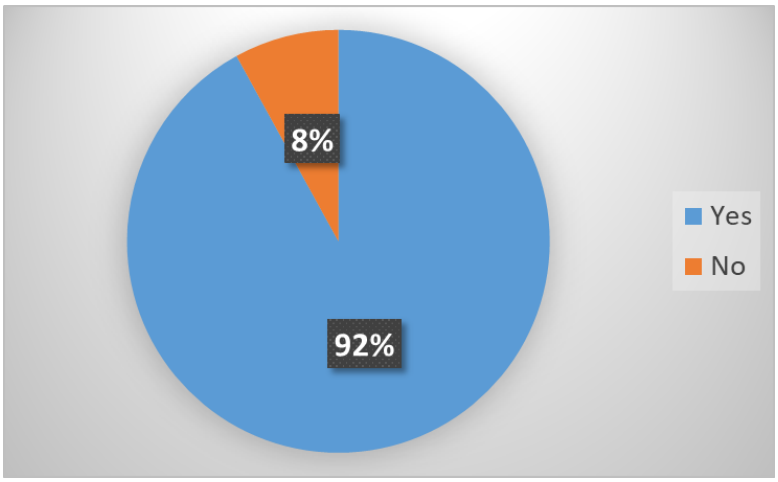

Figure 7: Farm owners know the cost of production for the primary enterprise (percent of farm respondents)

Business Management (*continued*)

Over half of farm owners completing the survey have prepared a business plan in the past four years. Preliminary analysis, however, indicates there is no significant association between the recent completion of a business plan and self-reported business viability or knowing the cost of production.

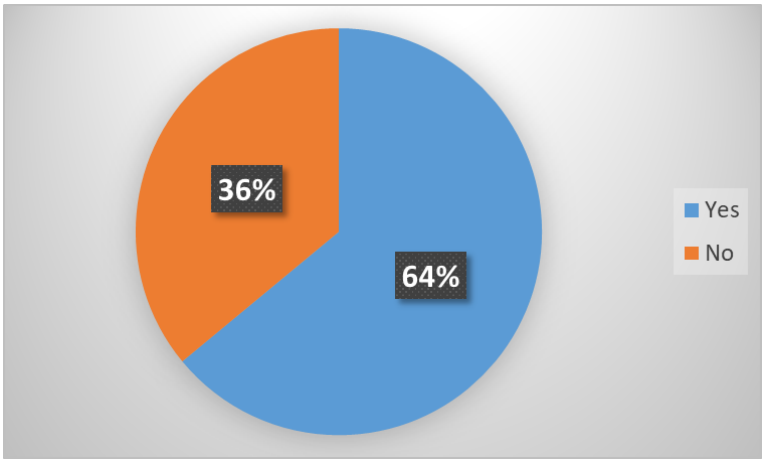

Figure 8: Farm prepared a business plan in the past four years (percent of farm respondents)

Slightly over half of farm owners (54%) have a current farm transfer-succession plan in place. This is a larger percentage of farms compared to the 2019 Certified Small Farm Survey in Vermont that showed only 31% of respondents had current farm transfer-succession plans in place at the time.

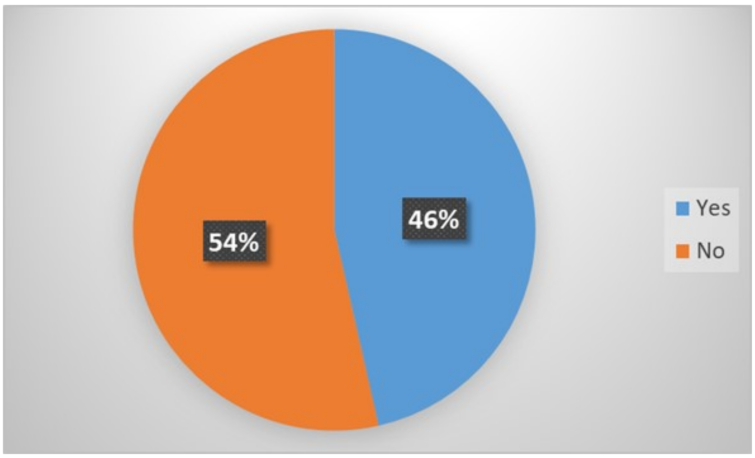

Figure 9: Farm has a current transfer-succession plan in place (percent of farm respondents)

Farm Situation and Profitability

Farm owners indicated the significance of potential challenges to their farm's viability (Figure 10). The three most cited challenges are "Short Term Profitability" (95% of respondents), "Lack of Capital for New Investments" (87% of respondents), and "Labor-Employee Concerns" (85% of respondents). This is the same ranking order for the challenges indicated by small farms completing the same survey question in 2019.

Respondents indicated their business viability by selecting from four definitions. **Economic viability** is defined 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** farms face high financial risk. These farms are defined by not being able to achieve the criteria for economic viability or sustainability.

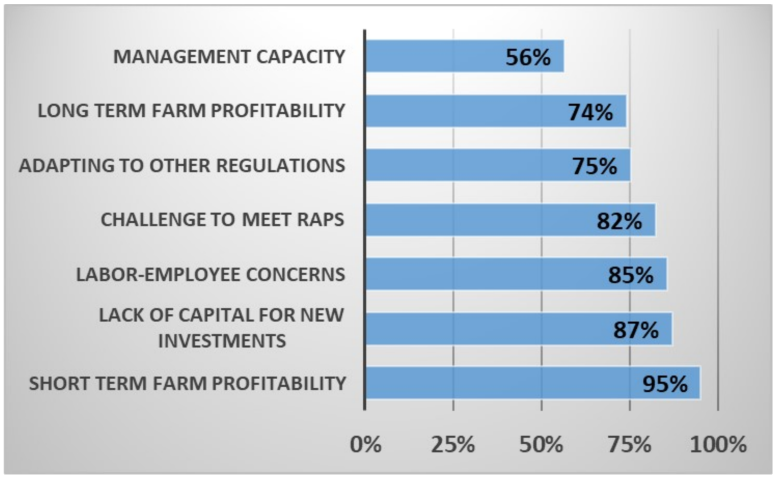

Figure 10: Significant issues that challenge farm viability (percent of farm respondents)

Twenty-five percent (25%) of respondents indicated that their farm business is economically viable while eight percent (8%) of respondents indicate that their farm is economically vulnerable. The largest number of respondents indicated their farm business was sustainable due to built-up equity (58%) (Figure 11).

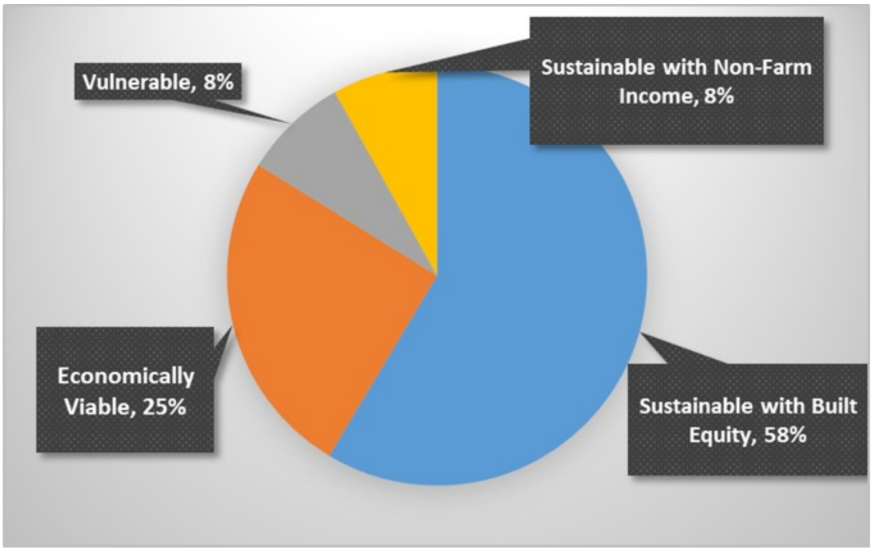

Figure 11: Business viability (percent of farm respondents)

Farm Outlook and Planning Trajectory

At the time of this survey in winter 2021 the dairy markets and government support programs were still evolving with the Covid-19 disruption that began in March 2020. By the time of this survey businesses had both experienced the immediate uncertainty of supply-demand imbalances and then later become recipients of sweeping commodity direct payments. This came after a major dairy price downturn for three previous years. Not surprisingly, the survey respondents who are primarily dairy farmers are more uncertain about the next five years for their business than they are confident (See Figure 12).

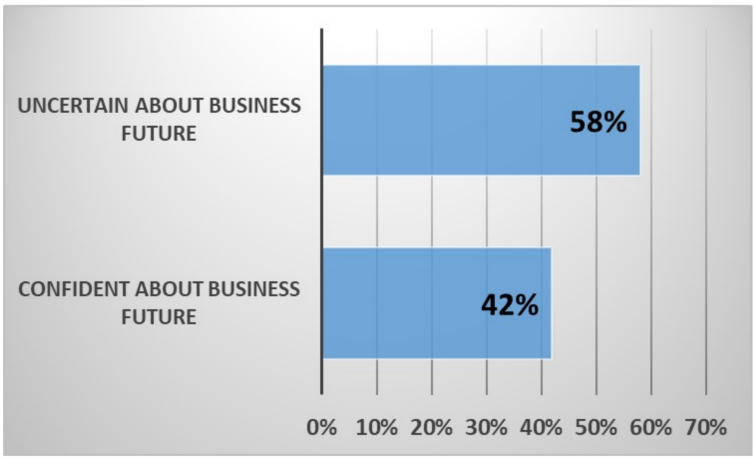

Figure 12: Farm outlook over the next five years (percent of farm respondents)

Figure 13 shows the variety of business alternatives that will be considered by farm owners moving forward. The majority of farm owners will be exploring the diversification into different farm enterprises (57%). This is the same first-ranked alternative demonstrated by Certified Small Farms in the 2019 survey. A difference emerges in the next most popular alternatives. Vermont MFO and LFO farms will also consider purchasing more farmland, renting more farmland and expanding their existing enterprise. This differs considerably from Certified Small Farm small farms in 2019 that indicated more consideration of exit, wind-down and real estate sale in the next five years.

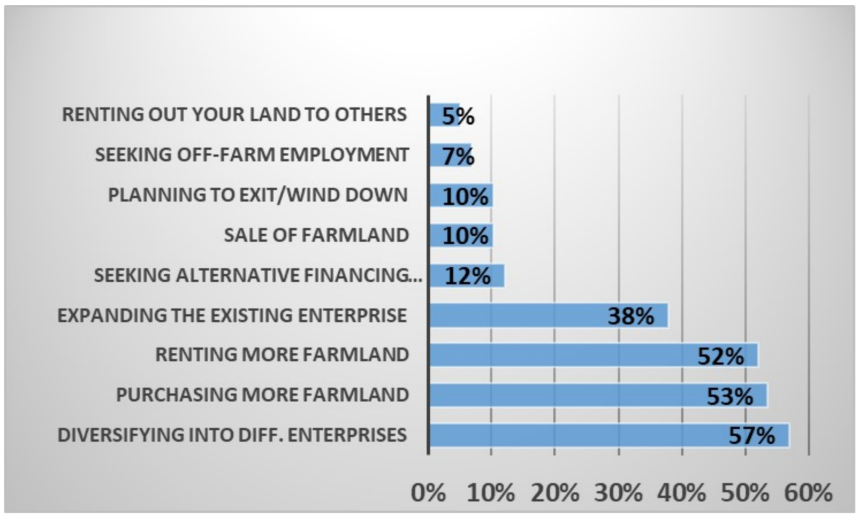

Figure 13: Business alternatives likely to be considered in the next five years

Figure 14 provides information helpful to extension programs, agricultural development organizations, and other agencies positioned to offer programs for medium and large farms. The top four responses (transfer-succession planning, feasibility planning for alternative crops, financial analysis-recordkeeping and marketing resources) are in highest demand from this group of farmers. Given the lower likelihood of planned business exits, transfer and succession plans are likely to be focused on maintaining or innovating ongoing operations and management systems. This differs from trends seen with Vermont small farms in 2019, where exiting owner estate planning, farmland sale and business wind-down was a primary focus of the planning needs.

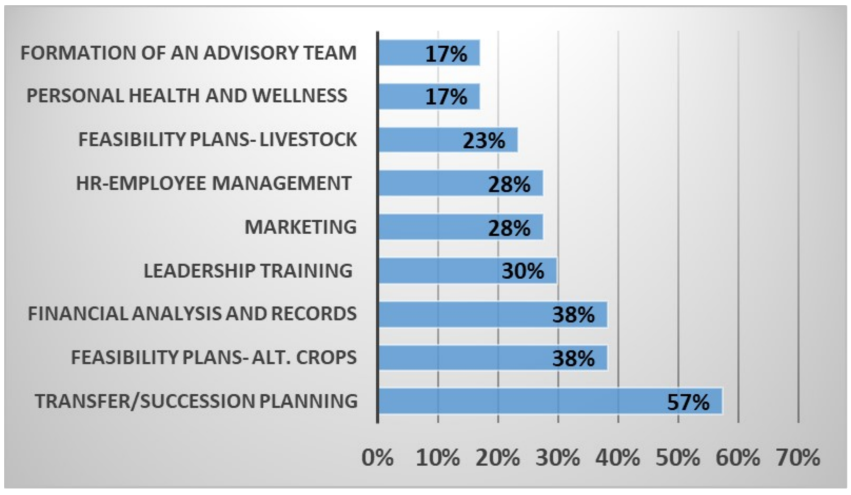

Figure 14: Service or resource to help with farm planning (percent of farm respondents)

Conclusions

Conservation practice adoption and compliance is widespread among MFOs and LFOs in Vermont. These farms have made changes and investments since the new regulations and Required Agricultural Practices were enacted five years ago. The largest compliance factor this group of farms continues to address is silage leachate and feed storage.

Familiarity with conservation programs is higher for MFOs and LFOs in 2021 compared to small farm owners in a 2019 survey. Only three percent (3%) of MFO and LFO respondents say they are "not familiar" with these programs compared to twenty-eight percent (28%) of certified small farms that were not familiar with programs. Very few MFO and LFO owners are unsure if their farm is in compliance for particular items. This is mostly likely influenced by the increasing regulatory measures that medium and large farms have already been subject to for many years prior to the RAPs. These farms have already been adopting conservation practices and implementing changes prior to the RAPs. Medium and large farms are also assumed to have had more time and capacity to integrate the managerial responsibilities of regulations into the workload of owners or managers.

Staying Power

Medium and large farms appear to have more short and mid-term staying power compared to certified small farms in Vermont. A larger percentage of MFOs and LFOs in this survey are confident about the business outlook for the farm over the next five years. Over 40% of CSFOs in 2019 were likely to consider an exit or business wind-down over the next five years compared to 10% of responding MFOs and LFOs in 2021. This survey shows that MFO-LFO farms are more likely than small farms to consider expanding their enterprise, renting additional farm land and purchasing more land in the next five years.

The medium and large farm owners demonstrate a greater awareness or preparedness for business succession compared to their small farm counterparts in 2019. Fifty-four percent (54%) of MFO and LFO farms have a succession plan in place compared to 31% of certified small farms in 2019. Medium and large farms still indicate that farm succession services and resources would help their farm planning at a higher rate. Succession planning resources and services will be helpful to the greatest number of MFO and LFO owners compared to other business programs presented in the survey. Business issues and solutions are scale-dependent. While the presence of transfer plans is a good indicator of preparedness, the desire for more programs reflects the complexity or magnitude of the business decisions that continue to need attention for medium and large farms.

Challenges to Farm Viability

Critical challenges impact the business viability of all certified small, medium and large farms in Vermont. During the course of two years of survey work research, the MFO -LFO group and the CSFO group both demonstrated the same top three challenges. These are short-term profitability, lack of capital for investment and labor-employee concerns. Within the MFO - LFO group, however, a higher percent of farms indicated the presence of each of those challenges. These demonstrates there are a fewer number of MFO-LFO farms that are not experiencing any major challenges. These larger farms are shown to experience each of these challenges at a higher rate compared to smaller farms in Vermont. Again, the conclusion is that challenges experienced at the farm are proportionate to the size and scope of the work needed to meet compliance and maintain business operations. The scale and complexity of the issues and proposed solutions are more challenging as farm size increases.

MFOs and LFOs are more reliant on built-equity to maintain farm viability when they are unable to generate annual profits. This factor both contributes to their short and mid-term staying power but also highlights a relevant risk factor.

Farms that are heavily invested in their enterprises can utilize prior earnings, leverage accrued equity and benefit if appreciation of larger owned real estate holdings manifests on the business balance sheet. These same farms, however, indicate that lack of capital is already the second most common challenge to farm viability. Capital access and sustained repayment capacity will continue to be an important feature of MFO and LFO viability in Vermont. Built-equity will always be challenged by the depth or duration of market disruptions and downturns. These disruptions are not always predictable, yet farm owners must find ways to prepare and adapt to stay in operation when they occur.

Vermont's MFO and LFO farms have a significant footprint on the Vermont working landscape and the volume of milk produced in Vermont. Many would argue they have or had potentially the most to lose when new water quality regulations went into effect in Vermont. Roughly five years later one sees a high level of compliance with the RAPs and an indication that this group of farms is prepared to continue farming in Vermont for years to come.

List of Figures and Tables