

Agri-Mark Summary Report: VCI Level 1 Results: Awareness

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Introduction & Purpose

Manomet Center for Conservation Sciences (Manomet), in collaboration with Agri-Mark/Cabot Creamery Cooperative (Agri-Mark), conceived of the **Vital Capital Index for Dairy Agriculture (VCI)** as a tool to help dairy farmers assess, benchmark, and manage the sustainability performance of their farms. Equally important, the VCI provides results that dairy farmers can use to communicate efforts of continuous improvement with a variety of stakeholders. The VCI is composed of practical, field-tested, science-based indicators developed to address a wide range of sustainability topics. This document provides a data summary for **VCI Level 1 - Awareness**. VCI Level 1 is composed of twelve (12) topic questions. The goals of this report are to summarize the results and highlight key trends.

Summary

- Agri-Mark dairy farms representing 96.5% of cooperative membership (1,158 out of 1,200) participated in the successful fielding of the Vital Capital Index for Dairy Agriculture (VCI) Level 1, which addresses Awareness.
- Participating farms were aided by Agri-Mark's 19-person field staff, using iPads wherever cellphone/Wi-Fi coverage allowed or recording responses for later data entry.
- Dairy farms completing Level 1 represent seven Northeastern states: New York, Vermont, New Hampshire, Maine, Massachusetts, Connecticut and Rhode Island.
- Across the responding farms, the average dairy herd size is 222 head, with 107 lactating cows and 115 young stock.
- Average annual milk production per farm approaches 1.5MM pounds of milk (1,499,053 lbs.).
- Farm operations averaged 547 total acres, with 357 owned acres and an additional 190 acres rented.
- High levels (> 90%) of responding farms are: enrolled in an animal well-being program; meet or exceed state and federal food safety requirements; regularly track water use and/or water impacts.
- Most surveyed farms also had: business plans or loan agreements; annual business improvements; monthly financial reviews; annual public outreach; nutrients management plans; reduced environmental impacts.
- Participating farms fared less well on: earning a comfortable living; addressing worker safety; implementing an integrated pest management plan.
- Average scores reflect a high general awareness of the key topics of dairy farm sustainability and stewardship across farms of all sizes.

Background

In 2013, Manomet, in partnership with Agri-Mark, launched version 3.0 of the online Vital Capital Index (VCI) to aid dairy farmers with benchmarking their sustainability and managing key topics of stewardship. With support from the Innovation Center for Dairy Agriculture, Manomet developed a beta VCI through discussions with dairy farmers and by reviewing dozens of leading farm sustainability frameworks, and then synthesizing those findings with review from industry experts. V. 3.0 is a confidential tool that begins with 12 questions of "Awareness" on key sustainability topics, and then will drill deeper on a topic-by-topic basis into three additional levels. The VCI's four levels together are identified as M.A.P.P.S. – for the **Manomet Awareness, Practice, Performance and Sustainability** process. *Please note: VCI Level 1, the Awareness level, is "live"; the other sections are currently in development].* The VCI uses a go-at-your-own-pace approach, including the ability to easily enter and exit the tool. Ultimately, the VCI provides a snapshot of a farm's sustainability story as well as a roadmap for a farm's stewardship opportunities. The VCI takes a triple-bottom-line approach by covering economic, social and environmental components of sustainability. It takes dairy farmers about 15 minutes to complete Level 1 of the VCI

Methods

Manomet and Agri-Mark created a survey covering a dozen key sustainability topics (see Appendix A for the questions). These topics were selected based on feedback from dairy farmers and from a review of farm sustainability indicator programs. The survey was an online survey that could be accessed by tablets used in the field. Field representatives employed by Agri-Mark worked with member farmers to add their survey responses to the online system. These results are based on data from 1158 farms or about 96% of the Agri-Mark membership.

Farm Information

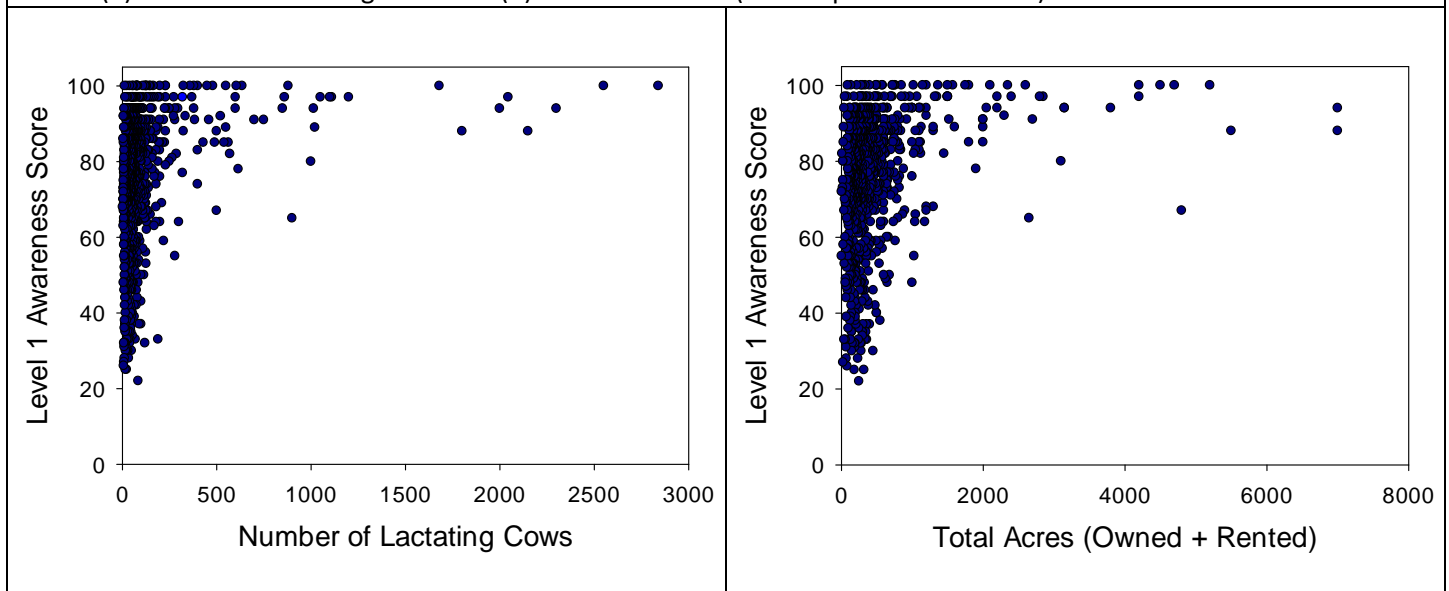
The surveyed dairy farmers cover a range of sizes and distribution across the Agri-Mark cooperative membership. Farm operations averaged nearly 550 acres, with 65.3% of the acres representing owned acres (357 acres) and the additional 35.7% representing acres rented (190 acres). The average annual milk production per farm approaches 1.5MM pounds of milk (1,499,053 lbs.). Across the responding farms, the average dairy herd size is 222 head, with 107 lactating cows and 115 young stock.

Farmers on averaged completed 97% of the VCI Level 1. Completed levels ranged from 0% (no questions answered) to 100%, with 93.7% of surveyed farmers answering all questions. Geographically, over 50% of the participating farms are in New York with about 15% in Vermont with the rest spread across the remaining New England states.

Farm Size and Level 1 Awareness Score

The Level 1 Awareness score varied with farm size (Fig. 1). Large farms, that is farms with >200 lactating cows and farms >700 total acres always had Level 1 scores >50 (out of 100). Although farms smaller than these included farms with scores <50, most farms with <200 lactating and <700 acres has Level 1 scores >50. Farms scoring >90 occurred across the range of farms in this survey. Most farms had moderate to high levels of awareness and engagement on key sustainability topics regardless of farm size.

Fig. 1. The relationship between Level 1 Awareness Score and farm size:
(1) number of lactating cows and (b) total farm acres (owned plus rented acres).





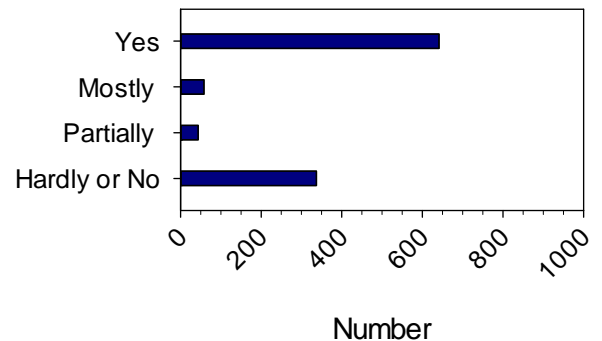
Level 1 Survey Questions and Response Summary

Topic #1 - Business Planning

Q1: In the last five years, have you completed a business plan and/or loan agreement?

A business plans and loan agreements can help farmers establish and achieve financial and personal goals. More than 60% of surveyed farmers had completed a business plan or loan agreement. About 20% of surveyed farmers have not completed a business plan or loan agreement in the last five years. Half of these farms had fewer than 40 cows where business planning documentation plays a less critical for keeping farms going.

Biz Plan or Loan Agreement

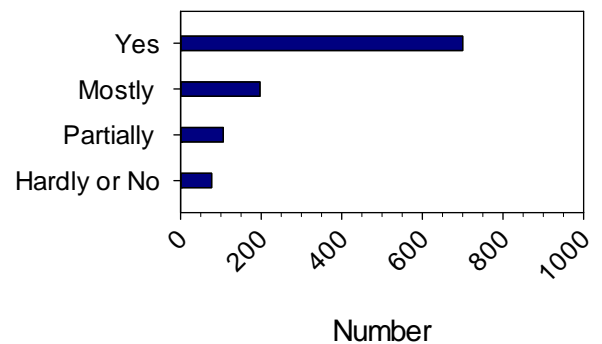


Topic #2 - Farm Management

Q2: In the last five years or as long as you have owned your farm (whichever is shorter), have you implemented practices on your farm *each year* that have significantly increased your profitability and efficiency, reduced your costs, reduced your financial risk, and/or created new product/market opportunities?

Improvements can enhance your profitability. About 65% of surveyed farmers have made business improvements to their farms every year in the last five years. Less than 8% had hardly ever or never made improvements in each of the last five years.

Biz Improvements

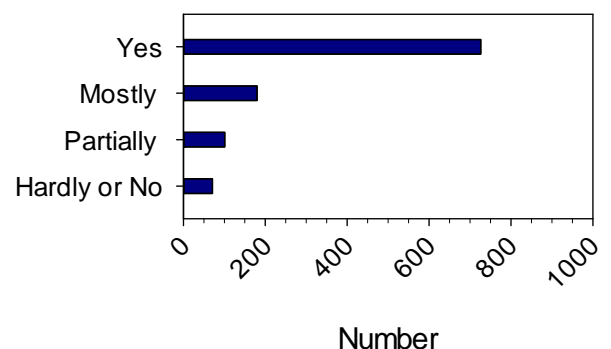


Topic #3 - Review of Farm Operations

Q3: Do you review farm costs, sales, other income, loans, and capital projects on at least a monthly basis?

A routine review of farm operations and financials can help ensure that farmers are achieving their management goals for their farm. Controlling costs by routinely reviewing expenditures and income is one way to keep a farm business on track. About 70% of surveyed farmers review their farm financials each month. Less than 8% hardly ever or never review their farm financials each month.

Financial Review



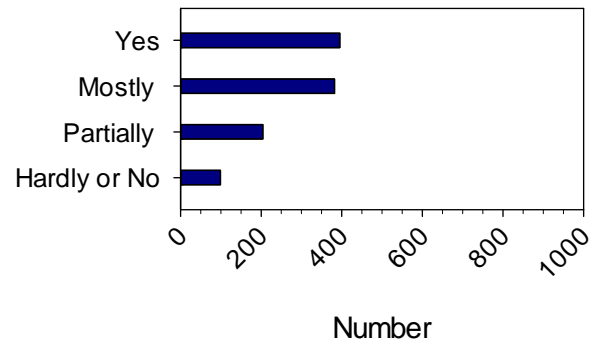


Topic #4 - Farm Family

Q4: In the last five years or as long as you have owned your farm (whichever is shorter), are you able to make a comfortable living for you and your family each year?

Making a comfortable living is essential for making a farm sustainable. About 40% of surveyed farmers made a comfortable living each of the last five years. About 10% hardly ever or never made a comfortable living each of the last five years.

Comfortable Living

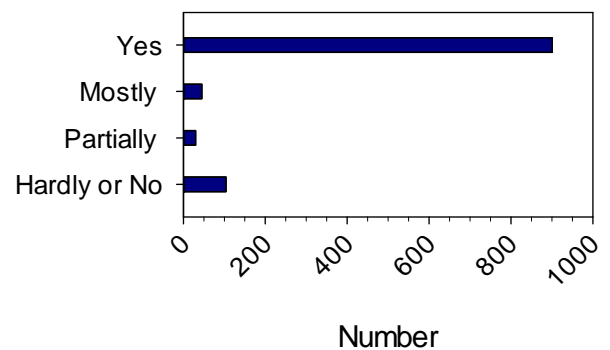


Topic #5 - Animal Well-being and Nutrition

Q5: Does your farm currently participate in a widely recognized animal well-being program?

Dairy farms rely on healthy, productive cows. Participation in animal care programs sends a clear signal to buyers, processors, and consumers about the importance of animal care. About 87% of surveyed farmers have completed requirements of a widely recognized animal well-being program.

Animal Care

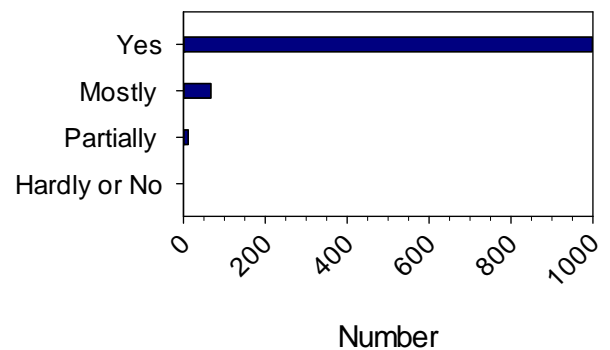


Topic #6 - Food and Food Safety

Q6: Do you currently meet or exceed state and federal requirements concerning milk quality and farm sanitation on your dairy operation?

Safe milk is one of the greatest benefits provided by dairy farmers. Farms that follow sanitation regulations have access to premium markets, are more productive, and enhance the dairy industry's reputation. About 92% of surveyed farmers always meet or exceed state and federal requirements concerning milk quality and farm sanitation on his/her dairy operation.

Food Safety



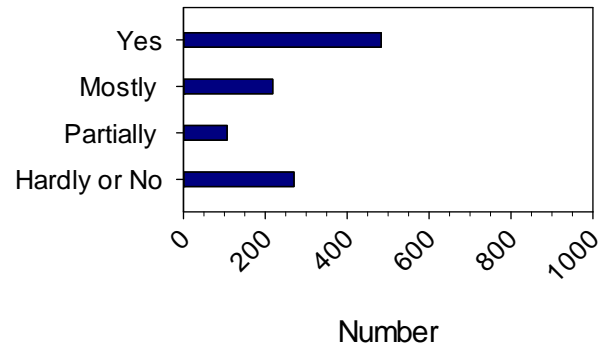


Topic #7 – Employees

Q7: Do you, employee(s), and/or a consultant review work safety and/or safety training with farm workers on about a monthly basis?

Productive workers are key to any business. It is important to discuss and learn about safe practices to foster a culture of safety. Accident prevention also saves farmers time and money. About 45% of surveyed famers address safety issues with employees about once a month. About 25% hardly ever or never address safety issues with employees.

Employee Safety

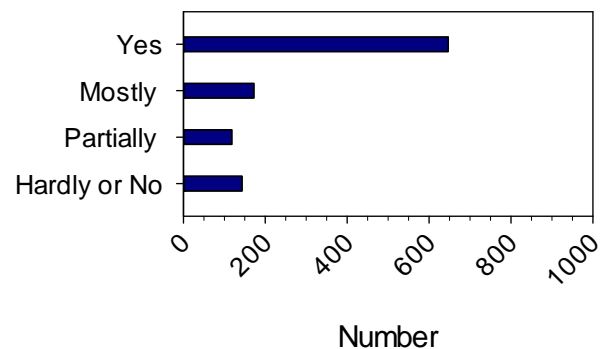


Topic #8 - Local Communities

Q8: Do you educate the public about agriculture (for example, provide field tours, talk to neighbors, etc.) or volunteer in your local community (for example, with charitable organizations or in an elected position, etc.) each year?

Dairy farmers contribute to their local community. Talking to neighbors can help them value the benefits of dairy farming. About 50% of AgriMark farmers educated the public or volunteered each year which is well above the level of 30% seen across the northeast region (CNCS 2010)

Local Outreach

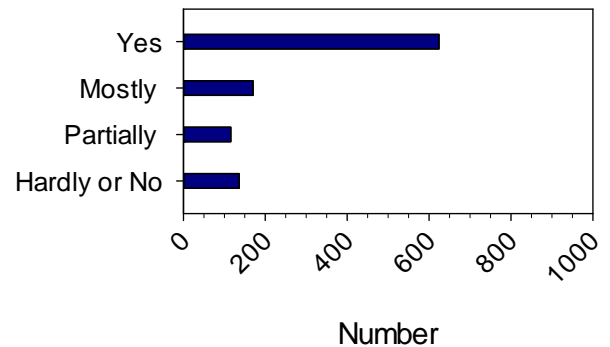


Topic #9 - Land Stewardship and Biodiversity

Q9: Does your farm currently have a nutrient management plan in place?

Land stewardship is managing land responsibility for your benefit and for the benefit of future generations. Nutrient management plans help ensure productive soils, reduce the need to purchase fertilizer, optimize manure use, protect ground and surface water, and may be required in some states. About 60% of surveyed farmers had a nutrient management plan in place. This is a level much greater than the 8.8% of U.S. corn farmers who use nutrient management plans (Lambert et al. 2007). Less than 15% hardly had or lacked a plan.

Nutrient Mgt. Plan

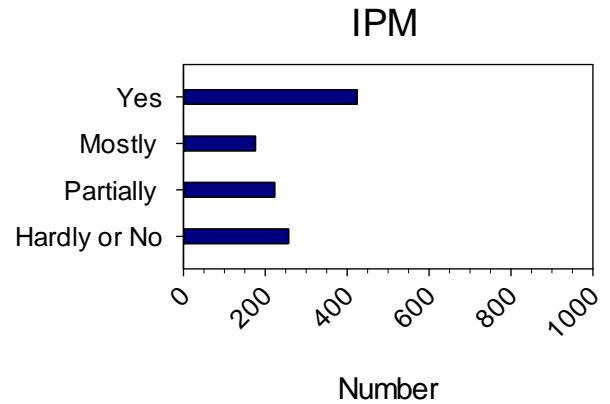




Topic #10 - Pest Management

Q10: Does your farm currently have an Integrated Pest Management plan?

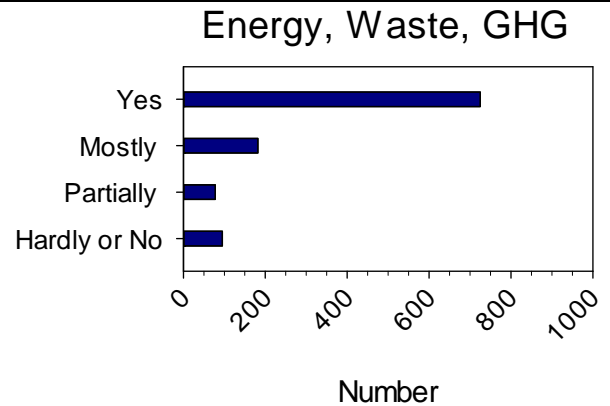
An Integrated Pest Management (IPM) plan focuses on effective control of pest outbreaks in the barn, on cropland, in forage or elsewhere to minimize damage and costs. It incorporates pest monitoring, safety, and proper application of chemicals. About 40% of surveyed farmers have IPM plans. About 25% hardly have or lack an IPM plan.



Topic #11 - Energy, Waste, and Greenhouse Gas emissions

Q11: In the last five years or as long as you have owned your farm (whichever is shorter), have you applied practices that save energy, reduce or recycle solid waste, and/or reduce your greenhouse gas emissions each year?

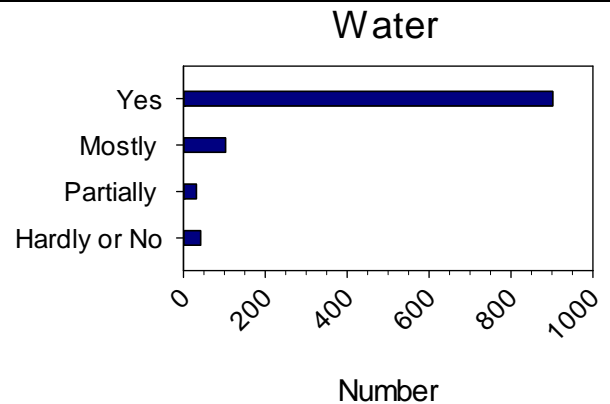
The best way to reduce waste and pollution is to avoid producing it and save money. About 70% of surveyed farmers apply practices to reduce waste, save energy, and/or reduce emissions each year over the last five years. Less than 10% hardly ever or did not reduce their waste, energy use, or emissions.



Topic #12 - Water Management

Q12: Do you check for water leaks, water usage, sufficient availability of water, and/or water quality impacts on at least a monthly basis?

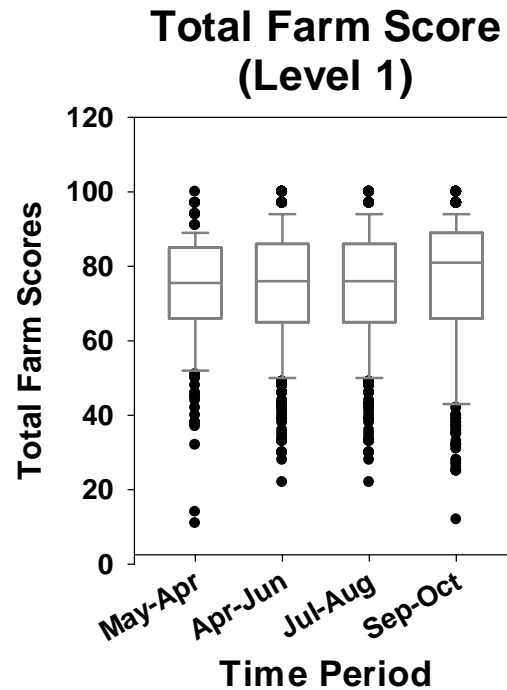
Tracking farm water use and potential impacts can help maintain clean supplies of local water. Over 90% of surveyed farmers track aspects of water use and/or water impacts on their farms.



Level 1 Awareness Score

Level 1 Awareness Scores indicated that farms responses were typically “mostly” or “yes” for all questions. Although some farms had lower scores, anecdotally, there are many indications that even these farms have strong awareness about key sustainability and are very engaged in managing key sustainability topics on their farms.

Level 1 scores were indistinguishable in the different sampling periods. Scores from farms sampled up until April 2014 were similar to the scores from all farms sampled up until June 2014. The farms sampled from April until June 2014 also had scores indistinguishable from those sampled until April 2014. Participants from the September to October interval averaged slightly higher scores than participants form previous time intervals.



Summary

Most Agri-Mark farmers show a high level of awareness and engagement on key sustainability topics. Over 90% of surveyed farmers were enrolled in animal well-being programs, met or exceeded state and federal food safety requirements, and tracked water use and/or water impacts. Most surveyed farmers also had business plans or loan agreements, made business improvements, conducted monthly financial reviews, participated in public outreach, had nutrients management plans, and reduced energy, waste, and emissions. Farmers fared less well in being able to make a comfortable living, addressing employee safety, and having an IPM plan. Most farms were typically scoring high on these basic questions addressing awareness and engagement on farm sustainability.

Reference

Corporation for National and Community Service (CNCS). 2010. Research Brief: Volunteering in America Research Highlights. Corporation for National and Community Service, Washington, DC.
<http://www.volunteeringinamerica.gov/MA> (accessed 7/2/14).

Lambert, D., P. Sullivan, R. Claassen, and L. Foreman. 2007. Profiles of US farm households adopting conservation-compatible practices. *Land Use Policy* 24: 72-88.