AGRICULTURAL GROWTH, RESEARCH, AND INNOVATION (AGRI) PROGRAM ASSESSMENT (2015 – 2019)

A Comprehensive Assessment of Five Programs

Prepared for MDA AGRI by
Transform LLC
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Executive Summary

The Minnesota Legislature established the Agricultural Growth, Research, and Innovation (AGRI) Program (MINN.STAT. 41A.12) in 2009 to promote the advancement of the state's agricultural and renewable energy industries. The statute authorizes the Commissioner of Agriculture to issue grants, loans, and other types of financial assistance for activities including, but not limited to grants to livestock producers under the Livestock Investment Grant Program (MINN. STAT. 17.118); bioenergy awards made by the NextGen Energy Board (MINN.STAT. 41A.105); grants for the installation of biofuel blender pumps; and financial assistance to support other rural economic infrastructure activities. The annual AGRI appropriation subsequently grew to $10.235 million for the years between FY14 and FY17. In FY18 it was funded at $13.256 million, and in FY19 at $13.311 million. The FY20 appropriation was $14.353 million, and the FY21 appropriation was $14.354 million.

This report provides a comprehensive, third-party assessment of five AGRI programs (Crop Research Grants, Livestock Investment Grants, New Market Cost-Share, Sustainable Agriculture Demonstration Grants and Value-Added Grants) covering program years 2015 – 2019. During this period 1,392 awards were made to 900 different organizations/individuals. The assessment uses a mixed methods approach gathering input from six Minnesota Department of Agriculture (MDA) staff interviews, sectoral research, a review of the program database, interviews with 14 program stakeholders, survey responses from 288 grantees or cost-share recipients, and follow-up conversations with 26 of the survey respondents.

The goals of recipients are fairly well understood by program staff as applicants enumerate their goals in the application process. Outcomes and impacts of the program are not understood as well as program managers spend their time managing current contracts and preparing for the next round of funding. This assessment provides a deep dive into the outcomes and impacts reported directly from grantees, and as witnessed by stakeholders.

The AGRI program staff are respected and provide exceptional service to grantees. The program is making a difference in the lives of Minnesota farmers, food producers, and processors. Overall, 95% said the program met or exceeded their expectations. The most cited outcomes achieved by more than half of the grantees included: increased long-term profitability, increased personal knowledge, increased efficiency of the operation, and increased awareness of their products/services or processes. Whatever their goals or outcomes achieved, 99% reported that the grant or cost-share positively impacted their organization, and 90% believe that it positively impacted the wider community or business ecosystem.

Although the AGRI program is highly regarded overall, there are suggestions for additional funding and/or adjustments to programs to address emerging needs. One program appears ready for a more thorough rethink, however, the Sustainable Agriculture Demonstration Grants. Given the scale of the climate crisis and its impact on Minnesota's traditional crops of corn and soybeans, several stakeholders and some grantees thought this program, or rather the underlying concepts of regenerative agriculture and land-based solutions could inform the entire portfolio of programs and transform Minnesota's farms and food system in the years ahead.

Introduction

Project Launch

The assessment began with a virtual launch meeting October 27, 2000, facilitated by Carmen Barker Lemay, and attended by two additional members of the Transform assessment team, Jan Kihm and Karen Schultz, as well as four staff members of the MDA, Ashley Bress, Paul Hugunin, Emily Mehr, and Courtney VanderMey. Staff members provided an overview of the department and its programs, as well as more detail about the programs to be assessed: Crop Research Grants, Livestock Investment Grants, New Market Cost-Share, Sustainable Agriculture Demonstration Grants, and Value-Added Grants. MDA staff explained their assessment objectives including wanting to understand the return on monies invested, both quantitatively and qualitatively. For example:

Understanding program outcomes: Did the grant dollars result in increased purchases from Minnesota farmers? What percentage of grantees adopted new practices?

Understanding Impacts: How many grantees have increased income, profitability, and/or reduced debt? How many better comply with food safety standards? How many have improved soil health? How many are more optimistic about their operation's future?

Program Specific Questions: For Livestock Investment Grants: how many grantees expanded the size of their herd, flock, or team? Or improved the operation? Or increased the lifespan of their buildings or infrastructure? As this grant covers 10% of project costs, was this enough or are grantees looking for additional funding? For New Market Cost-Share: how is the growing ecosystem of entrepreneurs showcased? What is the perceived value of gathering at trade shows?

Staff Discussion and Material Review

Over the week that followed, in-depth conversations were conducted with Ashley, Paul and Courtney as well as with Brian Erickson, Ann Kuzj, and Deputy Commissioner Andrea Vaubel. Program applications, marketing materials, surveys, and annual legislative reports were provided to the assessment team for review. The discussion guide is provided in the report Appendix.

Sectoral Research

In preparing to design the survey, in addition to the staff discussions and material review, the assessment team researched agriculture, food processing, and bioenergy literature to understand the forces affecting these sectors and issues which may arise in program implementation. This knowledge contributed to the design of the grantee/participant and stakeholder conversation guides as well as the grantee quantitative online survey.

Stakeholder Conversations

Over the course of several weeks during December 2020 and January 2021, project team member Carmen Barker Lemay conducted telephone conversations with 14 AGRI program stakeholders representing 13 organizations. This list of these program collaborators was provided by the MDA and can be found in the Appendix. The conversations covered stakeholders' perspectives on what is working well and any perceived challenges with the five programs being assessed. Each was asked to provide their opinions on the economic and community development aspects of the program, and specifically what impacts they saw on their constituency or members. Finally, they were given the opportunity to mention anything else that AGRI might do to further Minnesota agriculture, food processing or bioenergy.

Database Analysis

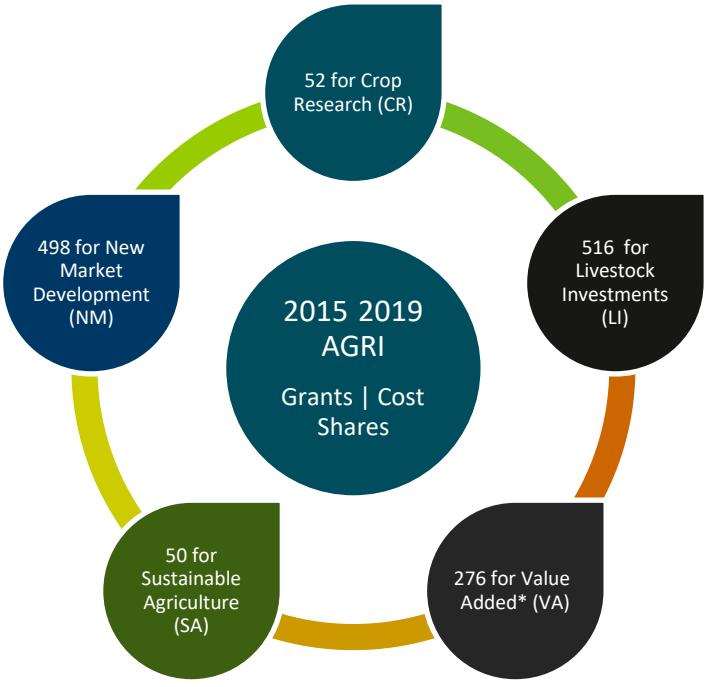
A starting point for the quantitative assessment was a review of the internal AGRI contact database. In 2015 through 2019, AGRI awarded 1,392 grants or cost-share funds, distributed as shown in the diagram below. There were roughly 275 grants or cost-shares awarded per year and the average value was close to $25,000 per organization.

The **number of grants or cost-shares awarded** was fairly consistent per year:

- 291 in 2015
- 277 in 2016
- 282 in 2017
- 258 in 2018
- 284 in 2019

The **number of grants or cost-shares awarded per <u>organization/business</u>** was typically one:

- 1,186 received one
- 129 got two
- 37 got three
- 28 got four
- 12 got five+



The **award amount** varied widely:

- Low: $22
- High: $1,000,000
- Average: $25,721
- Median $10,000
- Mode: $25,000

The **average award amount by program** was:

- CR: $202,200
- LI: $19,462
- SA: $19,138
- VA-E: $51,842
- VA-F: $16,086
- NM: $2,111

*246 focused on equipment investments (VA-E) and 30 focused on feasibility assessments (VA-F).

Quantitative Online Survey

An online survey was designed to evaluate the AGRI program and its impact. The population included individuals who had received an AGRI grant or cost-share in 2015 through 2019. The survey invitation was sent to 904 individuals; 288 completed the survey resulting in an overall response rate of 32%. The sample included participants from 84% of the legislative districts. The distribution of completed surveys by program and year is shown below.

Number of Completed Surveys (n)		Program Type						Total
		Crop Research	Livestock Investment	Sustainable Agriculture	New Market Development	Value-Added (Equipment)	Value-Added (Feasibility)	
Year	2015	4	16	3	5	6	0	34
	2016	1	25	5	2	11	0	44
	2017	3	21	1	3	12	2	42
	2018	5	28	2	11	20	1	67
	2019	9	40	4	28	19	1	101
Completes:		22	130	15	49	68	4	288
Invitations Sent:		*36*	*431*	*32*	*199*	*184*	*22*	*904*

NOTE: The size of the grant or cost-share awarded among survey participants was fairly close to the average for each program in the population. The average award value among survey respondents for each program was $213,125 for CR, $18,674 for LI, $18,561 for SA, $65,366 for VA-E, $13,600 for VA-F and $1,802 for NM.

Process: A multi-step process was used to generate the sample.

- The initial contact file provided included 1,392 AGRI grant or cost-share recipients.
- This file was analyzed to understand the level of duplication across organizations and years and to summarize other database variables by program and over time.
- An updated contact file was produced which identified one grant or cost-share per individual (defined by a unique email address).
- A handful of larger organizations still had multiple records included, as long as the contact person was unique (e.g., University of Minnesota).
- For individuals aligned with more than one grant or cost-share, the most recent grant or cost-share was chosen unless it was atypical for the program or their organization. After removing duplicates, 987 unique individuals were identified.
- Those assignments were reviewed by the internal AGRI team and missing or outdated emails were corrected whenever possible.
- The final sample file contained 904 complete records.

Schedule: The communication with grantees began in December 2020.

- In early December 2020, an introductory email was sent from each AGRI program manager to the updated list informing them about the opportunity to provide feedback.
- Individuals who indicated they were not the right contact or no longer associated with the organization or not interested in being invited were removed or replaced, when possible.

- The initial invitations were sent to the 904 recipients the week of December 15, 2020.
- Two reminders were sent after the initial invite and the survey was closed on January 7th. Upticks in response corresponded with the reminder emails.
- The survey was customized by program type and took approximately 20 minutes to complete.
- An incentive of ten $25 Visa Gift Cards was used to bolster participation. Winners were randomly chosen from those who completed the survey by the cut-off date and indicated they wanted to be included in the drawing.

In the analysis that follows, any comparisons noted across segments or over time are statistically significant at the 90% confidence level. In some tables/charts, percentages may sum to slightly more or less than 100% due to rounding.

Grantee/Participant Conversations

Survey respondents were asked their level of interest in a telephone follow-up to share the story of their grant or cost-share. Of those who said they were *very or somewhat interested* a handful were selected across the programs and twenty-six (26) telephone conversations ensued.

Research Results

Characteristics of Grantees/Participants

1. Individuals: The demographic characteristics of the owners, managers, or principals at each organization are summarized for the sample in the table below:

- Overall, there was a higher proportion of men than women. About three in ten are women-owned businesses overall.
- About one-third of grantees/participants are the first generation in their family to operate/own a farm/organization.

Demographics of Owner, Manager, or Principal Operator/Researcher* **89% of the time this was the survey respondent*	**Total**
Gender: (n=272)	
Male	65%
Female	35%
Age: (n=272)	
20-39	41%
40-49	25%
50-59	17%
60+	18%
Key Segments: (n=257)	
First-generation farmer, researcher or owner	35%
Women business owner	30%
Military veteran	6%
LGBTQ	4%
Individual with disability	2%
BIPOC	1%
Race/Ethnicity: (n=263)	
White	97%
Asian	2%
Hispanic	1%
American Indian	0.4%
Black	0%

NOTE: For some characteristics above, the percentages sum to slightly more or less than 100% due to rounding. Tables showing all of characteristics by program are shown in the Appendix.

2. Organizations: A variety of organizations are represented in the AGRI program.

- More than half have been in business less than 10 years and there are a mix of relatively new to established organizations.
- Most have fewer than 50 employees.

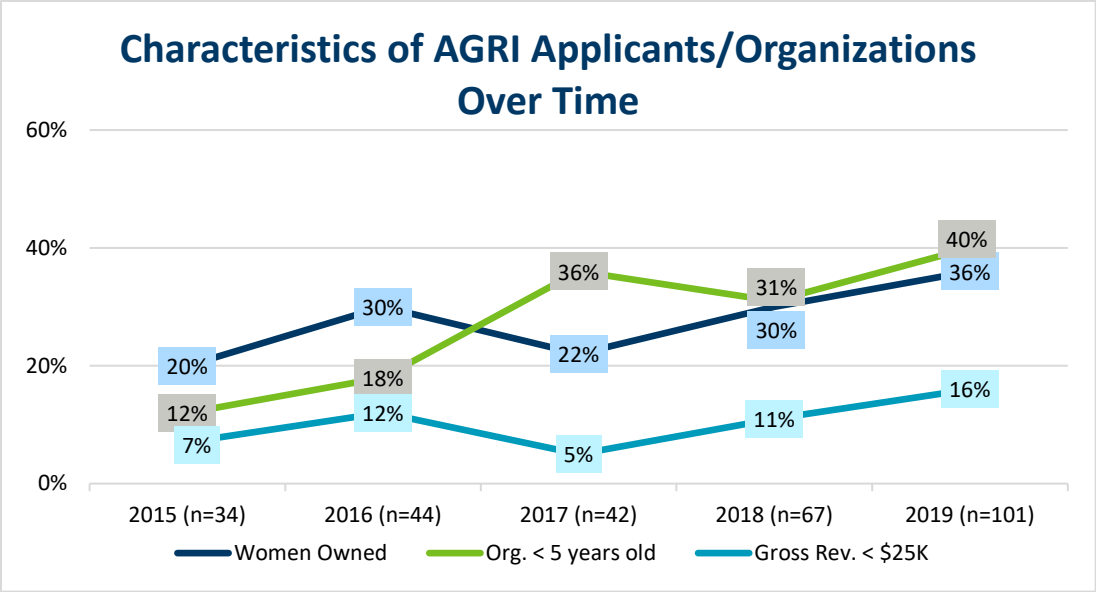
Characteristics of Organization, Farm or Institution *Number of employees and revenue not asked of non profits or academic institutions*	**Total**
Years in business: (n=288)	
<=5 years	31%
6-10	26%
11+	41%
Other	3%
Average Number of Employees in 2019: (n=263)	
Full-time (mean)	3.8
Part-time (mean)	3.3
Seasonal Full-time (mean)	0.4
Seasonal Part-time (mean)	1.1
Organizational Revenue in 2019: (n=263)	
Less than $25,000	12%
$25,000-$99,999	19%
$100,000-$499,999	31%
$500,000-$999,999	10%
$1,000,000-$9,999,999	16%
$10,000,000+	13%
99% are still in business.	

NOTE: For some characteristics above, the percentages sum to slightly more or less than 100% due to rounding. Tables showing organizational characteristics by program are shown in the Appendix.

Changes: The characteristics of the participants and the organizations were fairly consistent over time, with the exception of:

- An increase in the proportion of women-owned business owners involved with the AGRI grants and cost-shares between 2015 and 2019.
- An increase in the proportion of newer organizations applying.
- A subtle increase in smaller organizations based on revenues less than $25,000 from 2015 to 2019 (with some fluctuation in between).

The percentages of women-owned business owners, newer organizations, and organizations with revenues less than $25,000 are shown by year below.



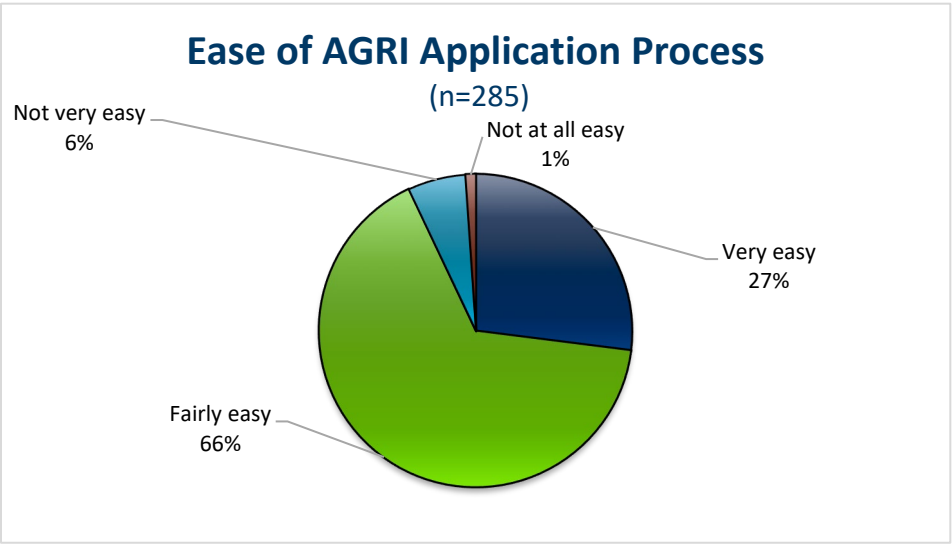
NOTE: Tables showing all of characteristics by year of participation are shown in the Appendix.

The Process

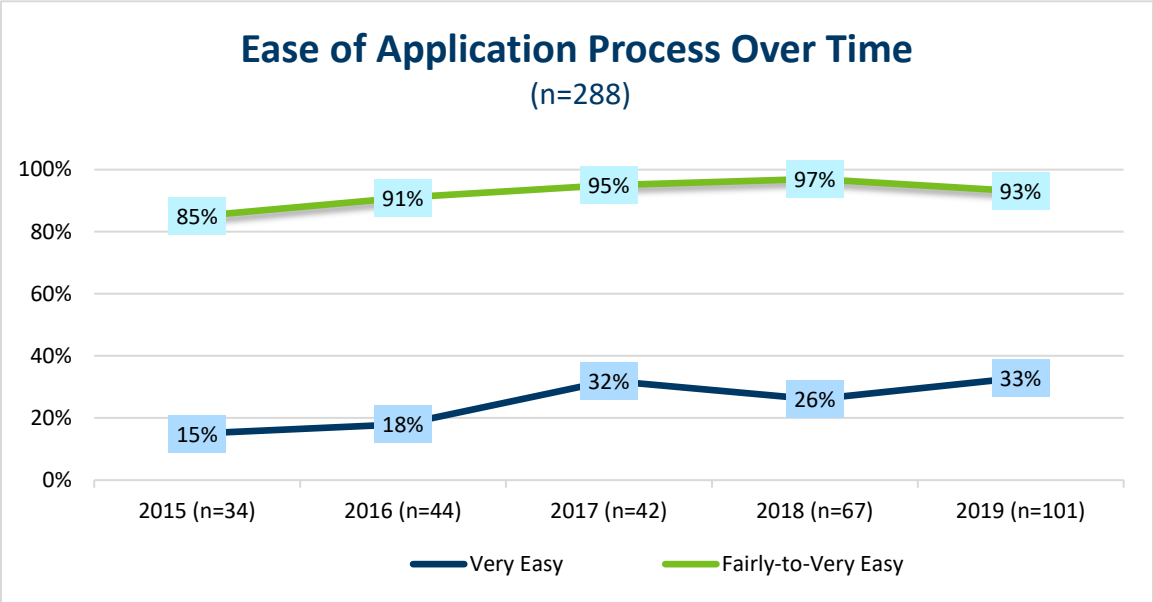
This evaluation focused primarily on goals and outcomes, but also assessed the front-end application and any back-end reporting requirements. Most (99%) were involved in the application as either the sole applicant (67%) or as part of a joint effort (32%).

1. The Application: Those involved with the AGRI application were asked to rate the ease of the application process.

- Over 90% said the application process was either very easy or fairly easy.



- The process has gotten somewhat easier over the years, with the proportion classifying it as "very easy" increasing from 15% to 33% between 2015 and 2019.



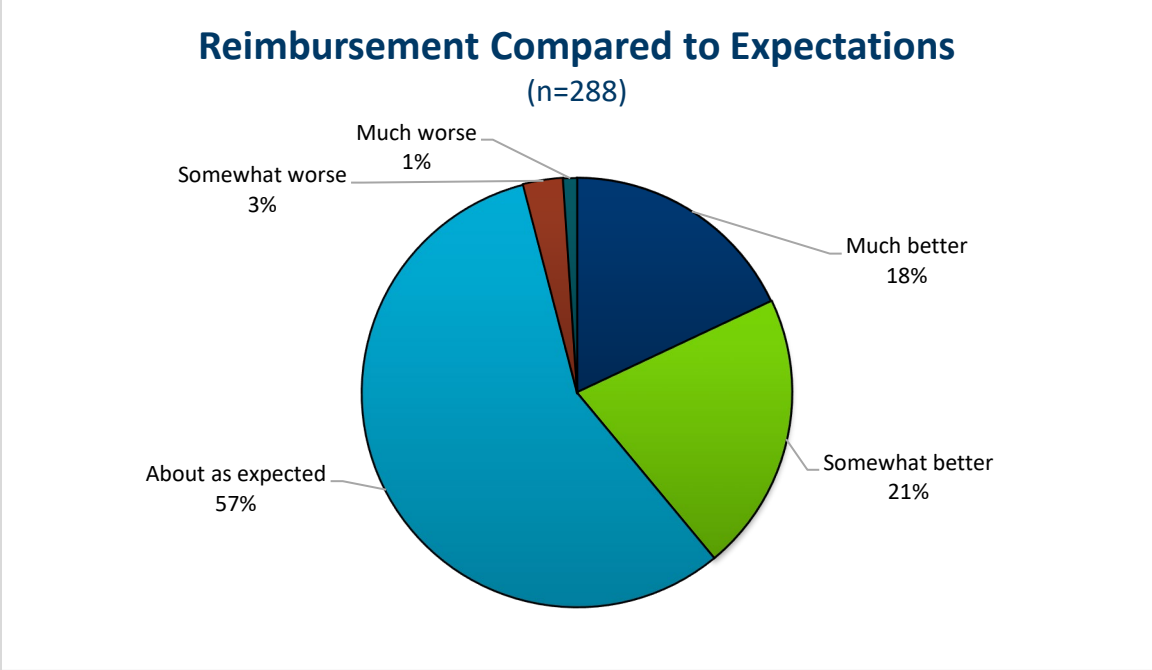
Those who felt the process was not easy, felt the process could be streamlined, or instructions could be clearer (although they acknowledge that can be challenging with a wide array of applicants). Some noted that the process is difficult because it is a grant proposal and those are typically challenging.

Some responses included:

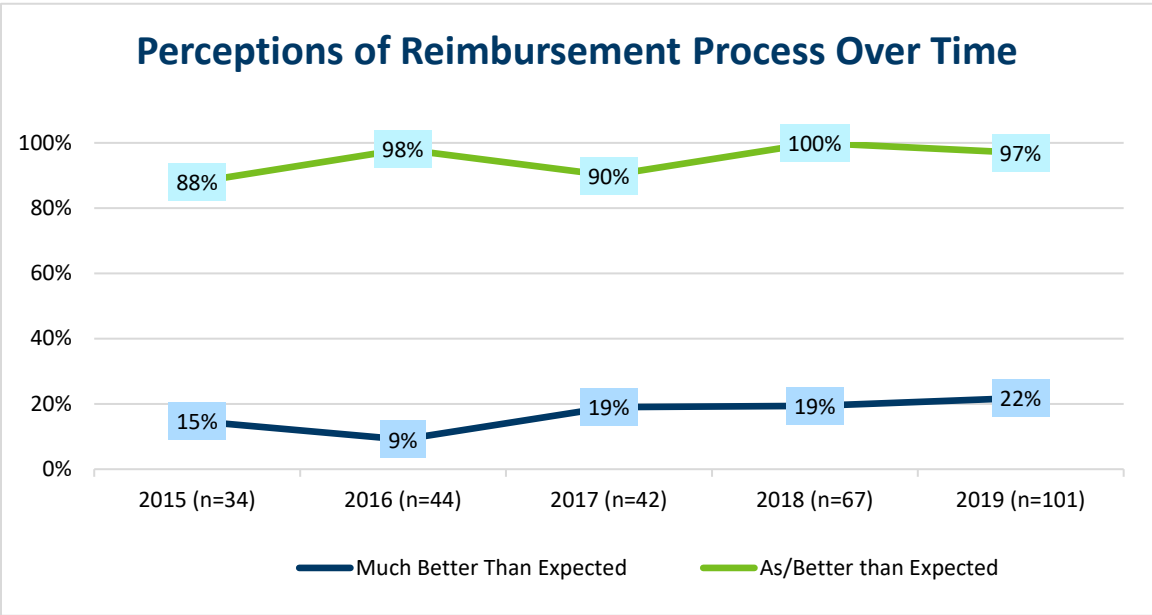
- *Because many different types and scales of businesses and farms are applying, some of the language in the application was confusing. Clarification about what constitutes a value-added product for a fresh produce farm would be helpful*. Laura Frerichs, Loon Organics
- *One thing that made it difficult was that all of the documentation had to be re-configured and entered on the application form. This required quite a bit of extra work versus if the information could be taken from the existing business plan or financial documents.* Paul Schmidgall, Fresha, LLC
- *We had to hire an outside consultant to complete the paperwork. We had little experience in applying for a grant and the application required us to break out costs in a different way than we otherwise looked at it.* Stephen Hance, Number 12 Cider

2. Reimbursement: The AGRI grant and cost-share programs examined in this report use a reimbursement model for the programs examined in this report, except the Sustainable Agriculture Demonstration Grant.

- When asked to compare the reimbursement process to their upfront expectations, virtually all felt it worked as well as expected or better.



- The reimbursement process met or exceeded expectations for most and the proportion who said the process was much better than expected increased somewhat over time. One issue raised was the frequency of reimbursement, especially for small businesses, who preferred it more frequently than quarterly (although it should be noted that there are generally no stipulations on frequency).



Those who felt the reimbursement process exceeded their expectations mentioned that it was efficient and well supported by AGRI staff:

- *The reporting requirements were very reasonable and easy to understand and follow. Everyone we worked with was extremely helpful from the start of the process through the final reimbursement and report phase.* Deborah Torgersen, Torg Brewery
- *We had to secure a personal loan to pay expenses related to this feasibility study, but then the reimbursement process went smoothly to pay back the local lender.* Mark Lange, Little Creek Creamery

> *It was so easy I almost forgot I was dealing with a clumsy government bureaucracy. I was pleasantly surprised. Almost giddy.* Andrew Cartwright, Cartwright Farm

> *This program is by far the simplest, most efficient and person-centered program I have ever been involved in. There is access to real people with emails. Runs beautifully!* Alisa Dale, Planet Princess Foods

Those who said the process fell short indicated they had not been reimbursed yet or it did not arrive soon enough.

- *I expected to see the funds quicker. I thought it took much longer than I thought it would.* Aaron Brand, Brand Farms

Goals

A series of questions were asked about goals grantees had at the time of applying, regardless of how they ended up using the funds. The top goals per category are shown below.

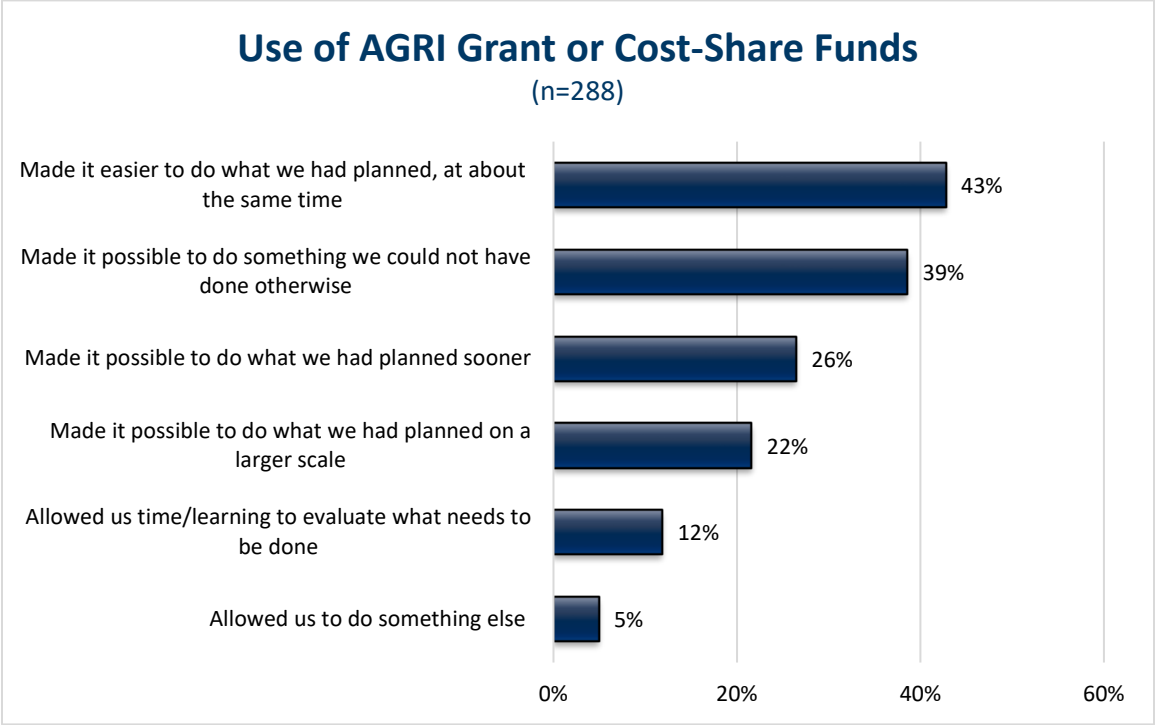
- For organizations not using the grant for research purposes, increased profitability was the number one goal, followed by increased efficiency of the operation and expansion into new markets.
- For those involved in research or demonstration the top goals were sharing knowledge with the wider community in the hopes of increasing the adoption of better processes/practices.

Top Goals by Category (across programs)	(n 288)
Product/Process Improvements Goals: *(asked of all but CR (n=266))*	
Increase the efficiency of the operation	52%
Grow/produce more or meet more demand*	46%
Invest in innovation	46%
Financial Goals: *(asked of all but CR (n=266))*	
Increase long-term profitability	65%
Increase sales*	37%
Decrease debt	34%
Environmental Goals: *(asked of all but CR (n=266))*	
Move toward a more sustainable practice	34%
Reduce energy use	23%
Make products/processes environmentally friendly	22%
Awareness/Networking Goals: *(asked of all but LI and CR (n=136))*	
Expand into new markets*	52%
Increase awareness of our products/services	49%
Increase the use of Minnesota grown/raised products	48%
Research Goals: *(asked of CR only (n=22))*	
Share knowledge with the community/world	77%
Increase the adoption of new/better processes	73%
Secure funding for the university/organization | Evaluate processes or technologies	59%
Other Goals: *(asked of all (n=288))*	
Have a positive impact on the community	41%
Increase optimism about the future*	36%
Increase personal knowledge	34%
**These goals became increasingly more important to grantees and participants, increasing by approximately 20-percentage points over the years assessed.*	

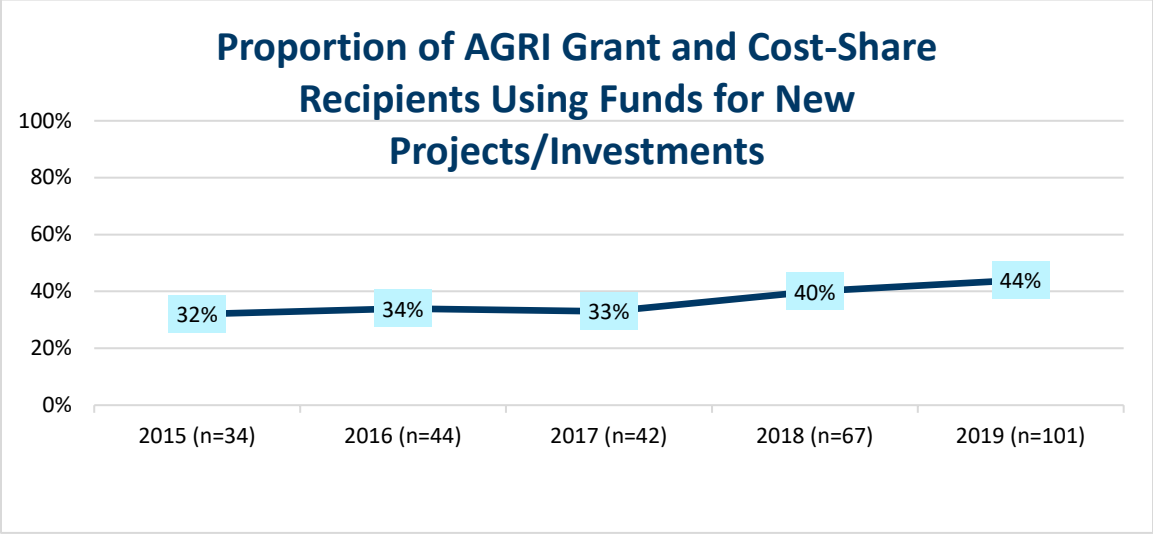
NOTE: The goals and outcomes for each program are shown in their own section of the report. The goals only asked of some grantees or cost-share recipients were driven by AGRI program manager input based upon the purpose of each program.

Overall Use of Funds

The AGRI participants used these funds for a variety of reasons. The two most common were to make it easier to do something that was already in the plans and to do something that would not have happened without the grant. Others used it to improve the schedule or scope to better meet their needs or to evaluate what needs to be done.



The proportion who credited the AGRI grant with enabling them to make an investment or change they could not have performed otherwise increased from about one-third in 2015 to just under half in 2019. The proportion using the funds in other ways, were more consistent over time.



Key Outcomes/Benefits

Regardless of the upfront goals, participants were asked about what outcomes/benefits they experienced and which ones were sustained. The top outcomes show how robust the uses are for the funds AGRI provides. The top outcomes align with goals and most of those who achieved a goal were able to sustain it.

- For those awarded Crop Research (who had very unique goals), the top outcomes were:
    - Sharing knowledge with the community/world
    - Increasing the scope of learning
    - Securing additional funding for university research
- For all other programs, the top outcomes were:
    - An increase in the efficiency of the operation
    - An increase in profitability
    - An increase in awareness of products, services, processes, or research
    - An increase in personal knowledge

Top Outcomes/Benefits by Category	Experienced	Sustained
Product/Process Improvements Outcomes/Benefits: (asked of all but CR (n=266))		
Increased the efficiency of the operation*	53%	48%
Grew or produced more and/or met more demand*	43%	38%
Invested in innovation*	40%	33%
Improved the quality of products/services	40%	33%
Financial Outcomes/Benefits: (asked of all but CR (n=266))		
Increased profitability of the business/farm*	56%	47%
Increased sales	43%	36%
Decreased debt	43%	32%
Environmental Outcomes/Benefits: (asked of all but CR (n=266))		
Made our practice/process more sustainable	32%	29%
Reduced energy use	25%	22%
Complied better with environmental requirements or recommendations	23%	20%
Awareness/Networking Outcomes/Benefits: (asked of all but LI and CR (n=136))		
Increased awareness of our products/services/processes/research*	57%	51%
Expanded into new markets (e-commerce, different processers, etc.) *	43%	40%
Created more business partnerships	41%	35%
Research Outcomes/Benefits: (asked of only CR (n=22))		
Shared knowledge with the community/world*	95%	91%
Increased the scope of learning*	82%	73%
Secured funding for the university/organization*	73%	64%
Other Outcomes/Benefits: (asked of all (n=288))		
Increased personal knowledge*	56%	48%
Increased optimism about the future of the operation*	48%	42%
Improved personal satisfaction/mental health	40%	35%
** Outcomes classified as a substantial improvement by 20% or more of the total.*		

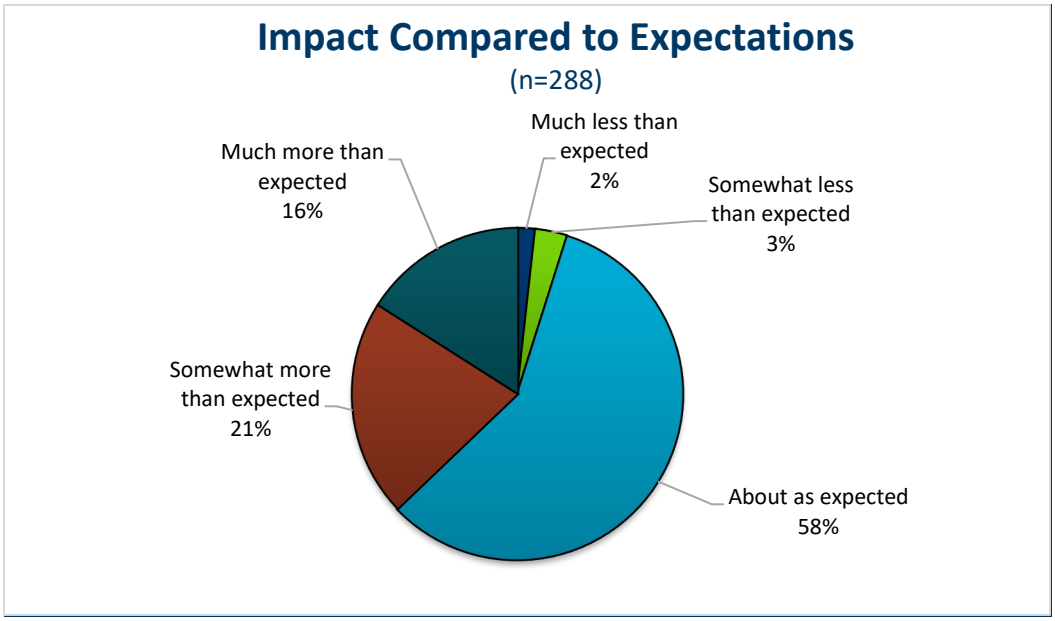
NOTE: A complete list of the outcomes by program are included in the Appendix.

Increasing Number of Employees: Overall, 42% of these grantees/participants increased the number of people employed as a result of their AGRI grant or cost-share (either full-time or part-time, seasonally or permanently). Among those who increased employees, the average increase was 4-5 people (with 3 being permanent and 1-2 being seasonal).

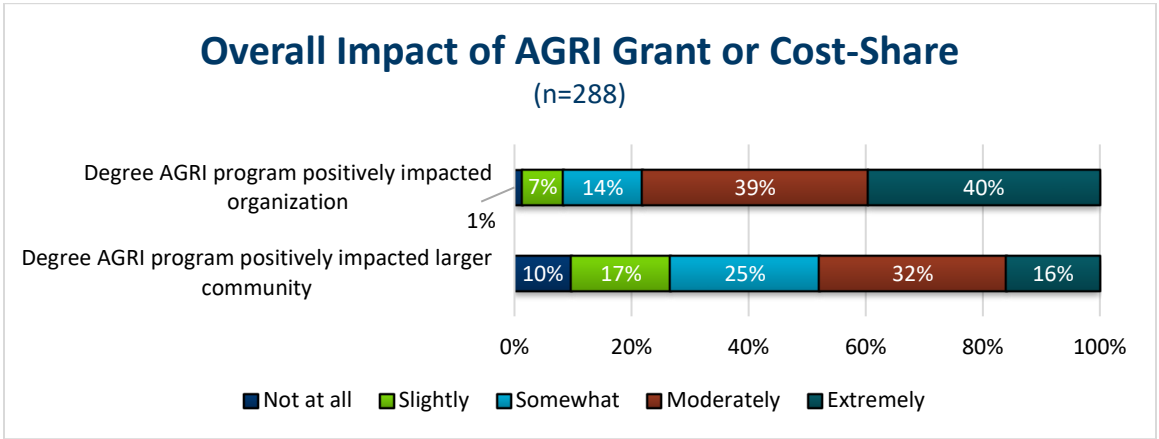
Overall Impact Measures

1. Impact Compared to Expectations: When asked to compare the impact of their grant or cost-share to what they might have expected upfront, most were pleasantly surprised, if not thrilled.

- 95% said the impact was about as they expected or more than they had expected.
- Over one-third (37%) felt the impact was somewhat or much more than they had expected.

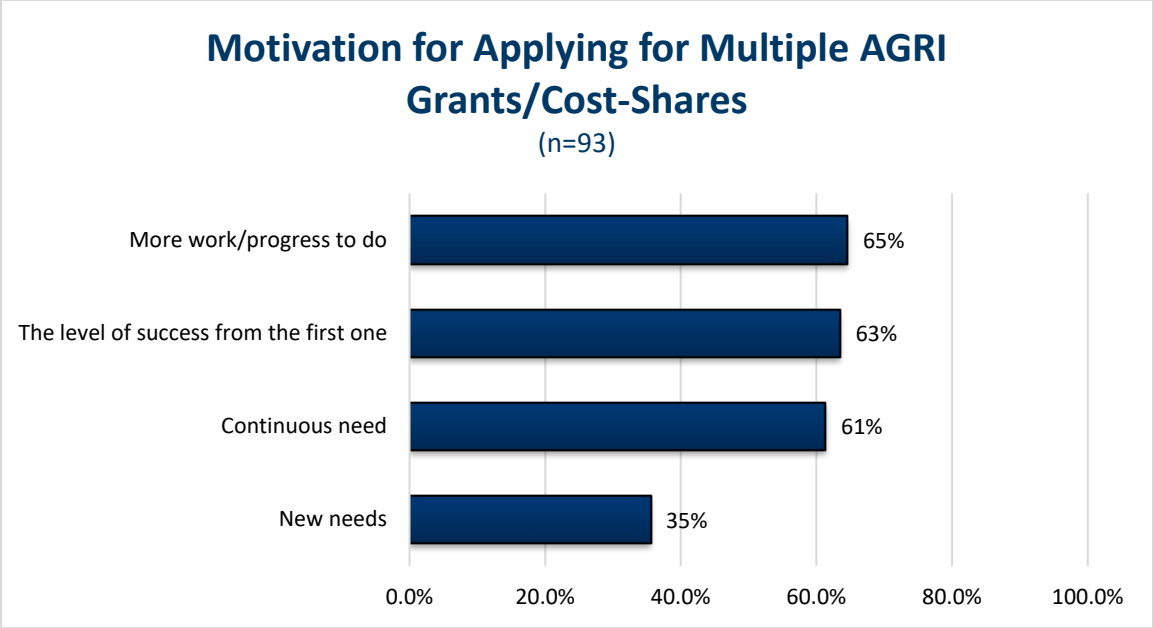


2. Degree of Perceived Impact: When asked to rate the degree of positive impact, virtually all (99%) felt their AGRI grant or cost-share positively impacted their organization and 90% believe it positively impacted the wider community.



About one-third (32%) of the online survey participants were awarded more than one AGRI grant or cost-share during the 2015 – 2019 timeframe. Among these respondents, this percentage increased from 3% in 2015 to 44% in 2019.

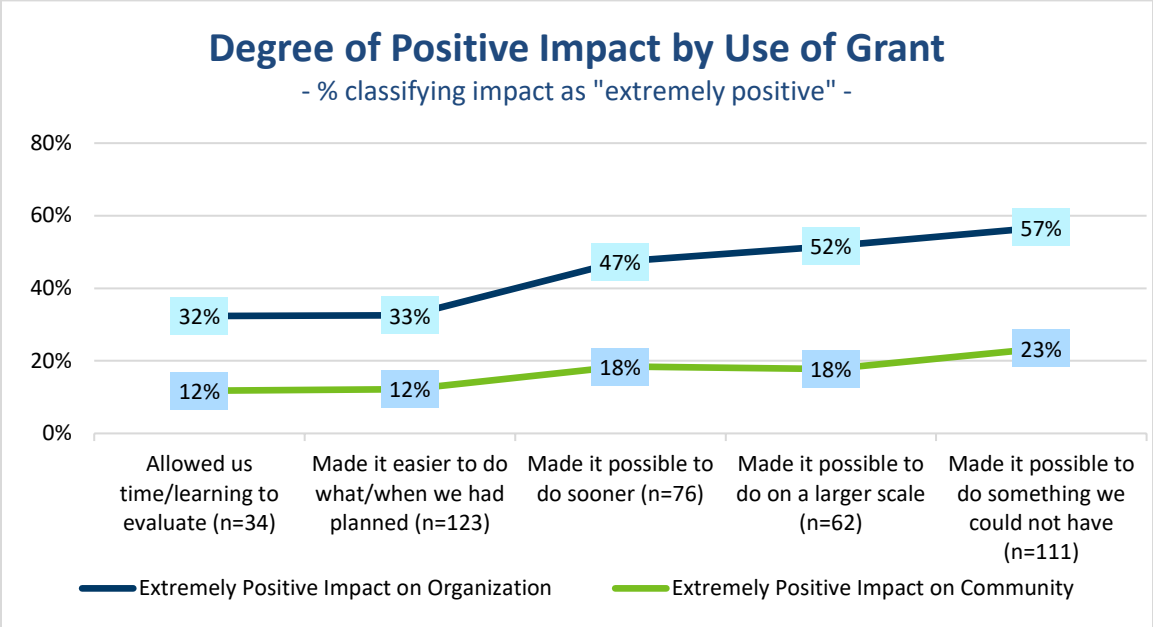
- Applying for an AGRI grant and/or cost-share multiple times was driven by a desire to make continuous improvements and build on the success achieved with the first grant or cost-share.
- One-third also identified new uses or projects that would benefit from a grant or cost-share.



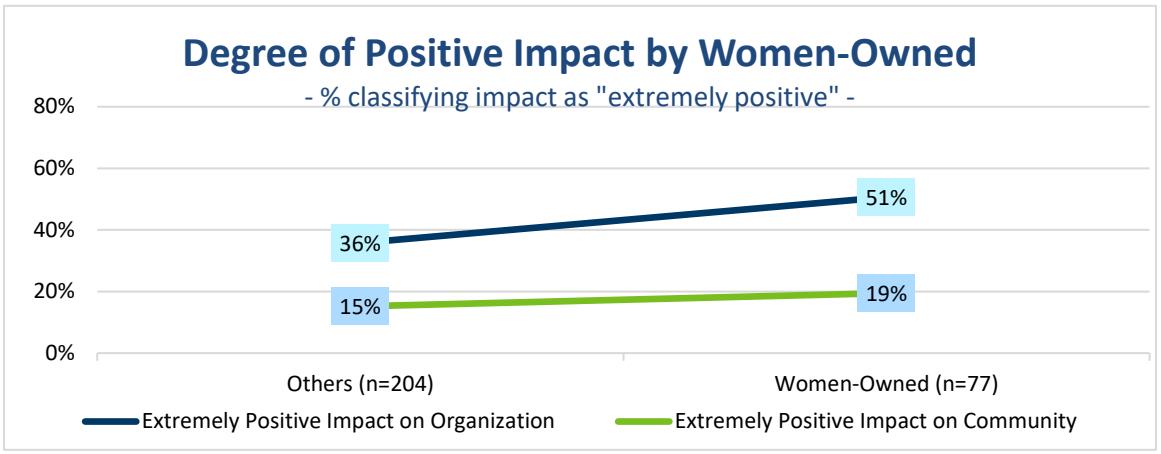
Differences in Perceived Impact

1. By Overall Use of Funds: When looking at the use of grants by perceived impact on the organization and the larger community, most of the grantees noted some degree of positive impact.

- Those who used the grants for a new effort which they could not have taken on otherwise were the most likely to say the grant was extremely impactful – for their organization and the community. As shown below, this proportion is almost twice as high for this group compared to those who used the money to execute an already planned project.
- Those who used the funds to increase the scale of the project or make their project happen sooner were also more positive than grantees overall.



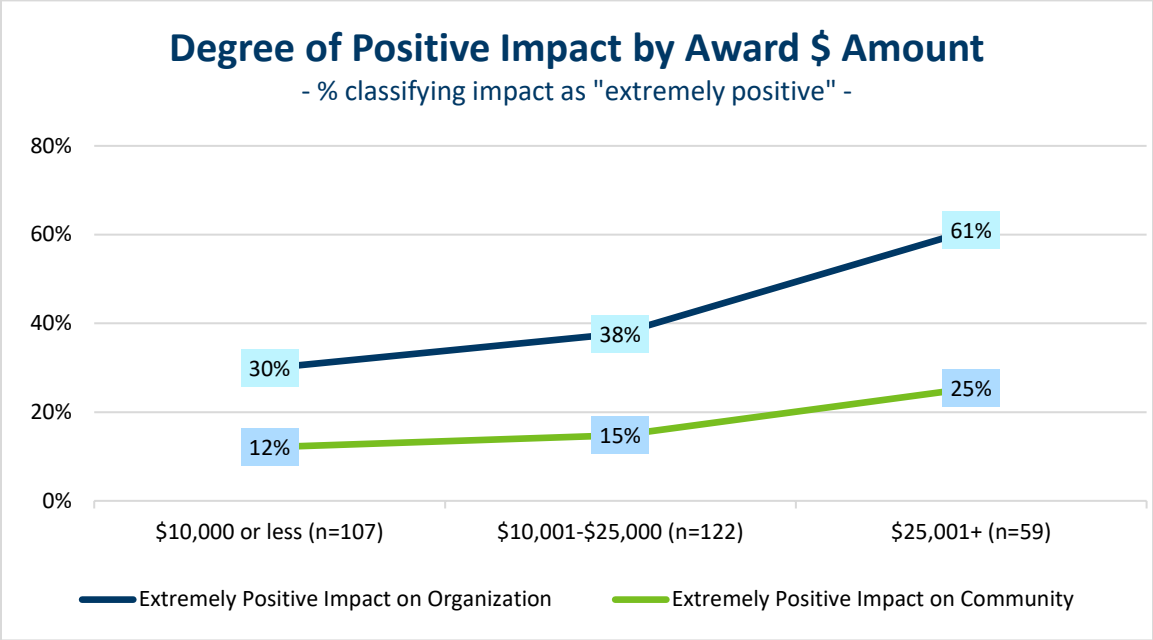
- Women business owners were also more positive about the impact the AGRI grant or cost-share had for their organizations.



2. By Amount of Funds Awarded: There is also relationship between the perceived impact of the grant or cost-share and the dollar value received. The average AGRI award is approximately $25,000 and the median value is about $10,000.

- Those organizations that received more than $25,000 from their AGRI grant were more likely to say the grant was extremely impactful – for their organization and the community.
- The majority of those who received smaller grant or cost-share amounts still classified the impact as moderately-to-extremely impactful.

NOTE: It is important to call out that the average value of the Crop Research Grants is much larger and that all Crop Research respondents fall in the highest category. When this relationship is evaluated without the Crop Research participants in this category, the relationship still holds, but it is a little more subtle. The percentages rating the impact as "extreme" is 49% instead of 61%. There is very little influence from the Crop Research segment on this rating. When this program is removed from the high-end group, the percentage rating the impact as "extreme" is 24% instead of 25% and as moderate is 41% instead of 42%.

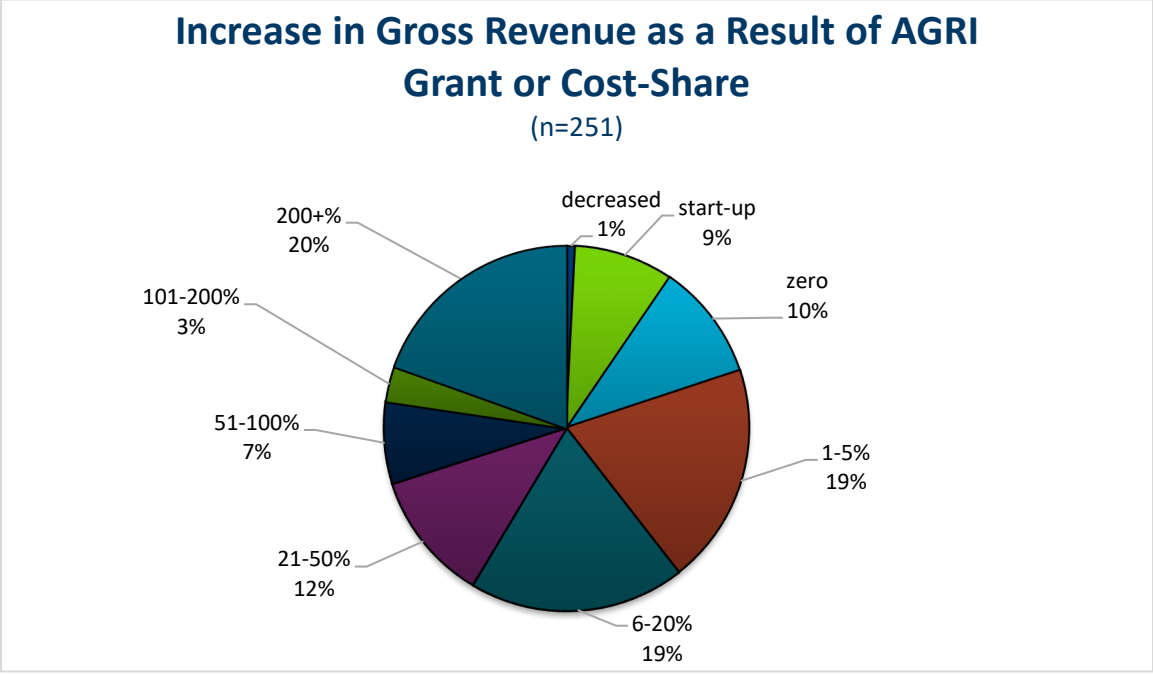


NOTE: Differences in the perceived impact were evaluated across a couple of other variables (e.g., age, first-generation farmers/owners, age of organization, 2019 revenue, and multi-award versus one) and there were no significant differences or consistent patterns.

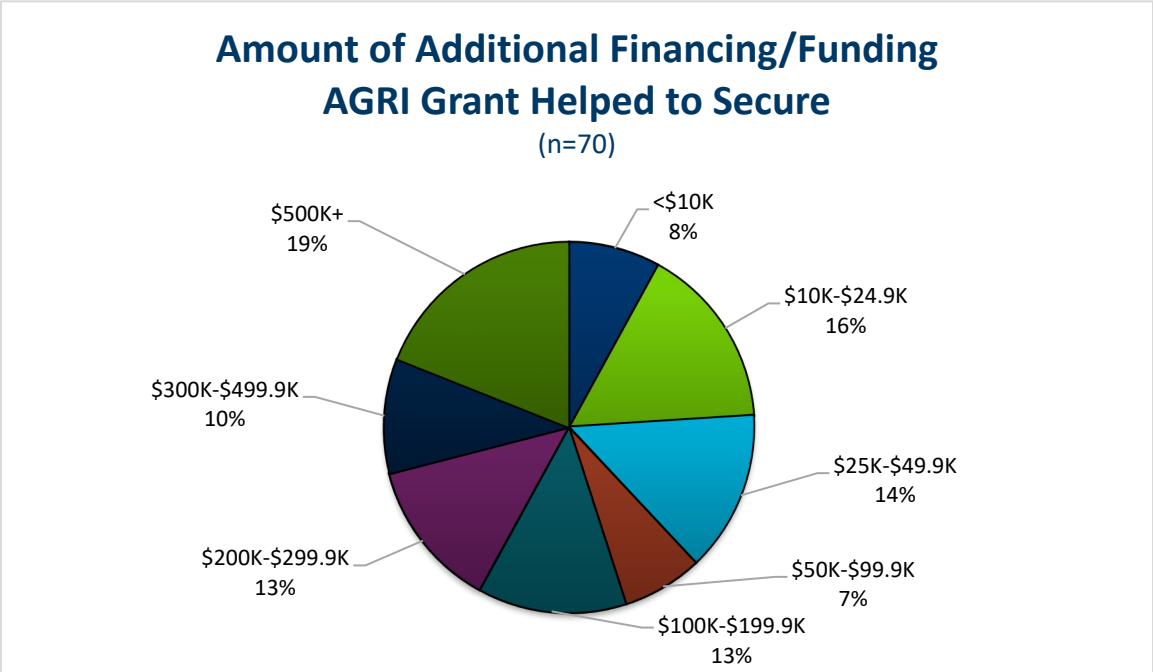
Financial Gains

There were concrete financial benefits that were a direct result of the AGRI grant for many of the grantees.

- Almost one-quarter of the farms and organizations saw an increase in gross revenue of 100% or more because of the grant or cost-share; and over four in ten saw an increase of more than 20%.



- Among those who indicated that their AGRI grant helped them secure additional funding, over half were able to secure an additional $100,000 or more.



BY PROGRAM RESULTS

Crop Research Grants

Background: AGRI Crop Research Grants are intended to generate applied crop research that will improve agricultural product quality, quantity, or value. Applied research utilizes existing scientific knowledge to develop practical applications, like technology, techniques, or inventions. Research projects must:

- Provide near-term benefits for Minnesota agriculture.
- Include a robust outreach component to transfer results and technology to farmers.

This program differs from other funding sources, such as federal grants, by supporting research that can focus on emerging or chronic crop production issues that are specific to Minnesota. Each project can be awarded up to $250,000 for a period of up to three years and can cover salary and tuition for both graduate and undergraduate students on the research team.

Characteristics of Grantees: In 2015 – 2019 the AGRI program provided approximately 50 Crop Research grants to roughly 36 organizations/individuals. Twenty-two (n=22) of these grantees completed an online survey for this assessment. This small sample represents a substantial proportion of the total grantee organizations, but caution should still be used when generalizing. Most of the principal investigators involved with these projects work in a university setting (77%) or for a non-profit organization (18%). Roughly half are men (55%), and half are women (45%).

Photo courtesy of the University of Minnesota College of Food, Agricultural and Natural Resource Sciences.

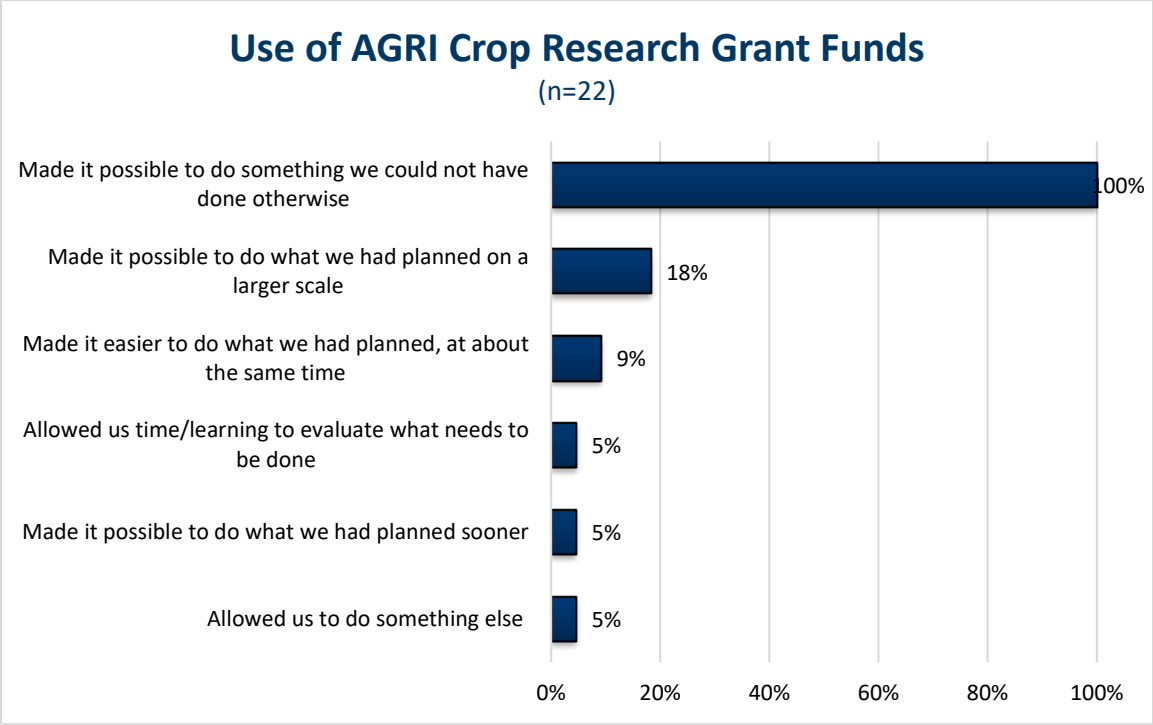
Projects: A wide range of valuable research is being conducted with the help of AGRI Crop Research grants. Some examples include: addressing trade-offs between weed control and cover crops using a systems approach; an evaluation of process and storage stability of intermediate wheatgrass for food applications; new regionally-adapted heirloom dry beans for organic production and utilizing structural engineering principles to develop lodging resistant oats.

Upfront Goals: The goals of the 22 Crop Research grantees included increasing knowledge and more actionable items, with half or more mentioning the following goals:

- To share knowledge with the community/world (publish, webinars, seminars, etc.)
- To have a positive impact on the community
- To increase the adoption of new/better processes and technologies by/for farmers, food processors or bioenergy
- To increase personal knowledge
- To secure funding for the university/organization (to further its stated goals and plans)

- To evaluate processes or technologies (to determine if they are beneficial, harmful and/or worthy of investment/adoption
- To make agricultural products/processes more environmentally friendly
- To increase the scope of learning (able to explore new unfunded areas, generate research spin-offs, etc.)

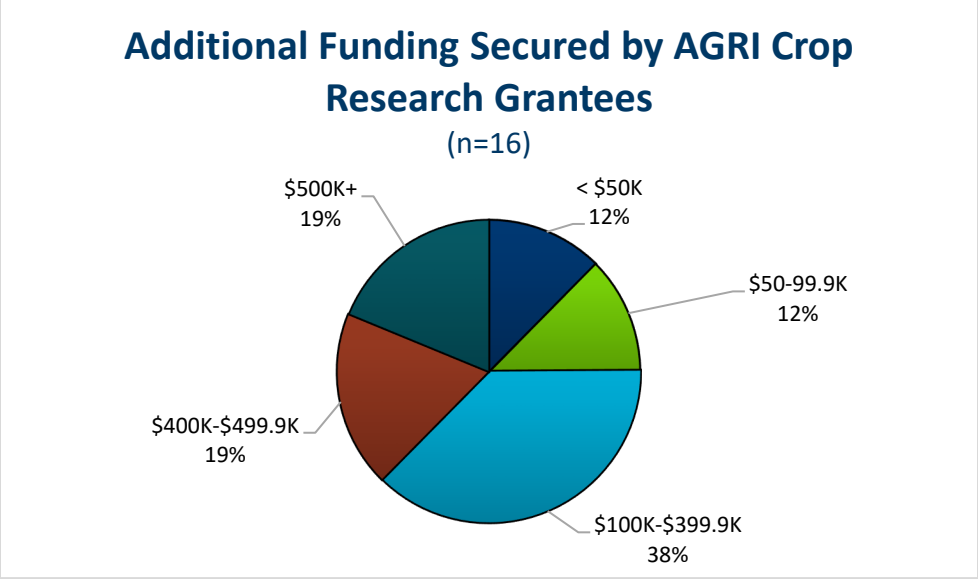
Use of Funds: All of the Crop Research grantees (100%) indicated that their grant made it possible to do something they could not have done otherwise. On top of this, about one in five (18%) said it allowed them to increase the scale and another one in ten (9%) said it made it easier to execute their plans.



Key Outcomes/Benefits: Regardless of the upfront goals, grantees were asked about what outcomes/benefits they experienced and which ones were sustained. For the top goals listed earlier, half or more were able to achieve and sustain them. And, in many cases more achieved the top goals than had set out to achieve them, especially when it came to increasing the scope of learning and increasing personal knowledge.

Crop Research Grantees		
Top Outcomes by Category (40% or higher)	Experienced	Sustained
Research Outcomes/Benefits:		
Share knowledge with the community/world*	95%	91%
Increased the adoption of new/better processes and technologies*	55%	41%
Secured funding for the university/organization*	73%	64%
Evaluated processes or technologies*	64%	55%
Made agricultural products/processes more environmentally friendly *	55%	41%
Increased the scope of learning*	82%	73%
Increased the understanding of new/alternative processes, production and bioenergy*	68%	50%
Established or enhanced the credentials of the university/organization*	55%	55%
Other Goals		
Increased personal knowledge*	100%	86%
Had a positive impact on the community*	86%	68%
Learned new skills*	50%	41%
** Outcomes classified as a substantial improvement by 20% or more of the total.*		

Secured Additional Funding: Among those who indicated that the AGRI Crop Research grant helped them secure additional funding for the university/organization, all secured at least $25K, and three-quarters (75%) got $100K or more.

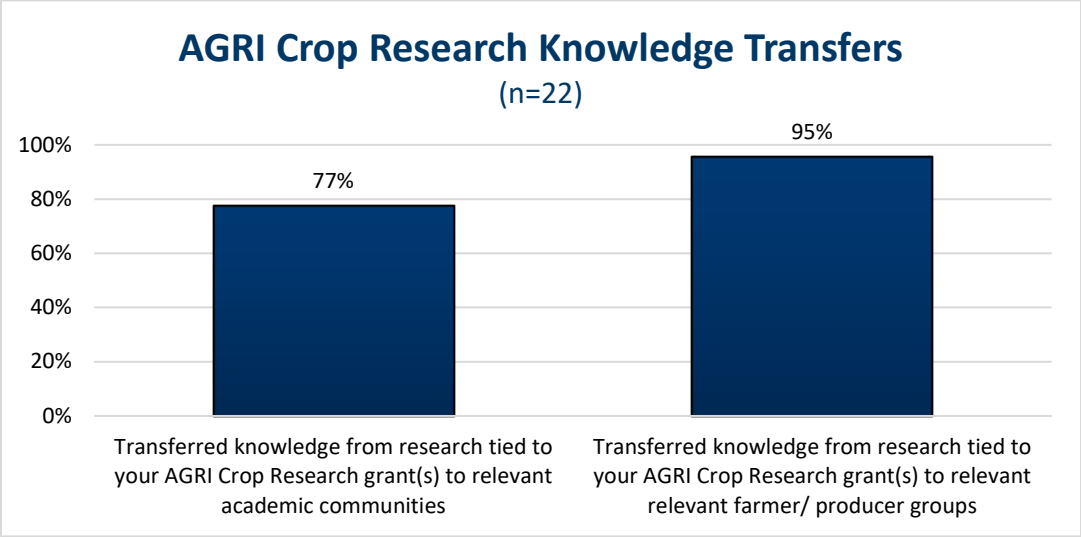


Increased Adoption of New/Better Processes: Among those who indicated that the AGRI Crop Research grant helped to increase the adoption of new/better processes and technologies by/for farmers, food processors or bioenergy there was a mix of new crops and enhanced techniques or protocols. Some of the new crops being investigated included four new dry bean breeding lines, a new promising potato cultivar to increase the competitiveness of Midwest production, a new species of grass seed, and cover crops. Some of the enhanced techniques/protocols included:

- *Some of the farmers have cited this research as some of the best research we've had in the last two decades. Implementing the results have saved thousands of dollars, increased yields and reduced the amount of pesticides applied annually.* Beth Nelson, Minnesota Wild Rice
- *Growing techniques for individual varieties of rye, processing techniques for the fermenting and distilling of rye.* Mike Swanson, Far North Spirits
- *Lower wheat seeding rates for more profitable wheat production.* Melissa Carlson, Minnesota Wheat
- *Fermentation techniques and how varieties respond to that technology; and the identification of genetic markers in wheat (FODMAPs and ATIs) for future breeding purposes.* Becky Philipp, AURI
- *Best management practices for annual crops such as canola.* Nancy Ehlke, University of Minnesota

Increasing Number of Employees: Most of those conducting crop research (86%) added an employee/researcher to assist with the project. Among those who did, the average increase was 3-4 people with roughly 2 being permanent full time or part time.

Transferring Knowledge: Most of the Crop Research Grantees are readily sharing what they have learned with other relevant academic communities (77%) and farmer/producer groups (95%). The number of transfers varied, with most between 1 and 10 for both categories.



Some of the academic transfers mentioned included large professional society meetings, academic journals, Extension bulletins, and groups of colleagues applying for additional funding. In their own words:

- *The research was directly presented to a community of > 4400 crop scientists during the last Crop Science Society of America Meeting (Nov 2020). One of our papers was published in Trends in Plant Science a high-profile journal with a large global readership.* Walid Sadok, University of Minnesota
- *AGRI Crop Research grant provided us the opportunity to understand the physiological and biochemical changes. That knowledge led us to write a bigger USDA National Institute of Food and Agriculture project to investigate further and now we are close to release a new cultivar for the community.* Sanjay Gupta, University of Minnesota

- *I have one scientific paper in the pipeline, and several Extension bulletins. I have given presentations and share results informally with academic colleagues.* Lois Braun, University of Minnesota
- *The knowledge (has been) shared with other outside collaborators from other grant projects; use knowledge gained to apply for NSF grant with colleagues from other institutions*. Matthew Clark, University of Minnesota

Farmer/producer groups where knowledge transfer was happening included the National Craft Distilling Association, Upper Midwest Hazelnut Development Initiative, Minnesota Canola Council, National Potato Growers Association, growers' meetings including those of small grain growers and Minnesota cultivated wild rice, field days, and Extension bulletins.

Research Insights: The research funded through AGRI Crop Research Grants has been very productive, with most indicating their work has been published, cited and/or spawned more research.

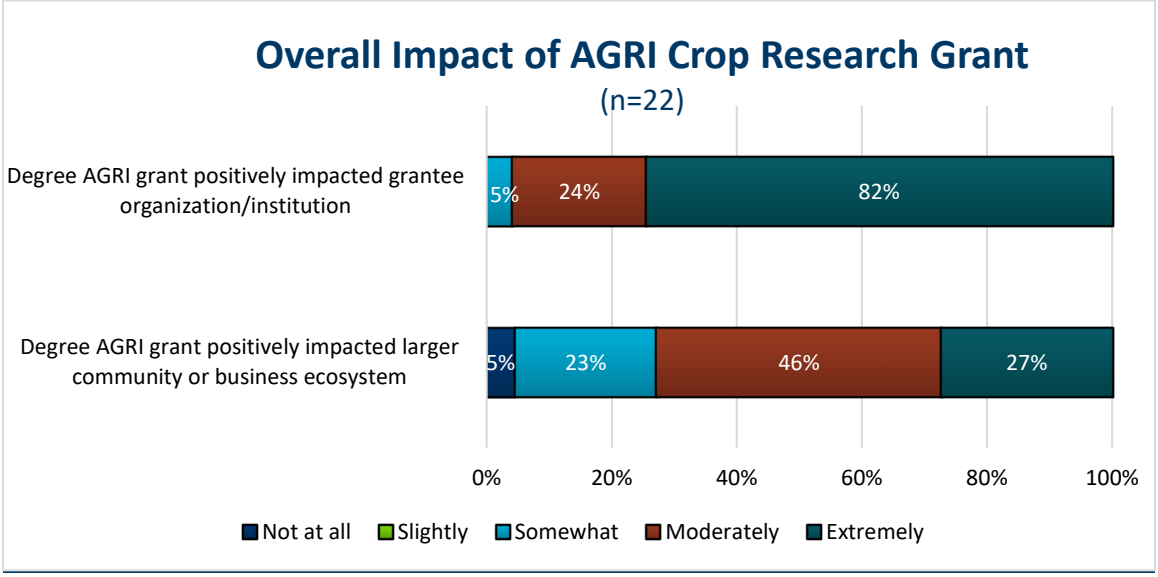
- 95% reported current/pending publications resulting from their grant.
- 91% reported that their work has been cited or is in process.
- 73% noted research spinoffs occurring or in discussions.

Number of Times	Insights from AGRI Crop Research Leveraged		
	Published	Cited	Spawned Verifiable Research Spin-offs
None-to-date	5%	9%	27%
Some in discussion or in process	23%	23%	18%
One	9%	5%	9%
Two-to-Four	27%	9%	27%
Five-to-Ten	23%	9%	0%
Eleven+	14%	45%	18%

Perceived Impact Compared with Expectations: Almost all (95%) of the AGRI Crop Research grantees felt that the impact of the grant met or exceeded their expectations.

Degree of Perceived Impact: And as shown in the chart below, when asked to rate impact on their institution and the wider community:

- All felt it had a positive impact on their institution/organization and eight in ten classified the impact as extremely positive.
- Over nine in ten felt it had a positive impact on their community/business ecosystem, with over one-quarter classifying this wider impact as extremely positive.



The comments below from some of the 18 grantees who said their crop research grant extremely positively impacted their institution/organization, showcase specific benefits gained.

- *I received this grant as an early-career researcher so the impacts of this funding at this particular time in my development as a researcher had large impacts, in that it allowed me to build a lab team, build connections with research partnerships and the grower community. It also helped form a large part of my research program and contributed substantially to my tenure and promotion.* Mary Rogers, University of Minnesota
- *Our work focuses on a new crop (hemp) with few other available funding sources at this time owing both to novelty and previous regulatory restriction that limited access to funding*. Jonathan Wenger, University of Minnesota
- *We would not have been able to carry on our hazelnut development project without the AGRI grant.* Lois Braun, University of Minnesota

From the eight grantees who reported that the grant extremely positively impacted their community, the comments below express specific reasons behind their rating.

- *For ag producers, benefits from the AGRI grant are new channels and ways to market grain.* Mike Swanson, Far North Spirits
- *The interest in the research community (and amongst breeding companies) in these results is driven by our discovery of potential traits to keep plants 'cool' and minimize negative heat stress events in Minnesota.* Walid Sadok, University of Minnesota
- *The development of new cultivar with desirable traits for area production and which does not require chemicals for storage is a huge benefit to our industry and sustainable agriculture.* Sanjay Gupta, University of Minnesota

Program Improvements: Grantees were given the opportunity to suggest program improvements. Six offered suggestions including two references to reporting requirements. Others reported being satisfied, particularly with the online application and the responsiveness of AGRI staff. Here are a handful in their own words:

- *Annual reporting would probably be sufficient.* Eric Watkins, University of Minnesota
- *The need for very frequent reports was not helpful for us and increased the time required to manage the project.* Jerry Cohen, University of Minnesota
- *No-cost extension of the funding so that funds not yet spent can be spent up to one year after the official term of the grant*. Thomas Michaels, University of Minnesota

> *Even if a proposal is accepted, reviewer recommendations would be in fact useful. That said, this is an excellent program, which, in my experience is one of the best I work with.* Walid Sadok, University of Minnesota

Other Things MDA Might Fund: When asked about additional funding MDA could offer nine ideas surfaced including three for programs/sub-programs and four related to training students:

- *I would propose a post-harvest physiology program. Most of the programs are focused on breeding. After the development of a new cultivar, post-harvest evaluation is the key to success.* Sanjay Gupta, University of Minnesota
- *I would suggest a program/sub-program focusing on the physiology of agricultural plants. It is predicted that locations such as Minnesota will experience the most extreme variation in climate compared to most U.S. regions (excessive or deficit precipitation, excessive heat, more severe freezing/cold stress, etc.). This is a major threat that can be addressed by practical physiology research that tries to identify new tolerance traits (to support breeding) and new ways to manage crops under such stresses (to support agronomics).* Walid Sadok, University of Minnesota
- *More emphasis on translational research, fundamental to applied transitions might advance the use of new science ideas into practical uses faster for societal benefits.* Jerry Cohen, University of Minnesota
- *Direct graduate student training grants in this area to work directly with farmers. Something like the SARE partnership grant*. Matthew Clark, University of Minnesota

> *Fellowships to support/train graduate students with interest in working in a government agency. This could be coupled with mentoring from (interaction with) agency scientists.* Robert Koch, University of Minnesota

Stakeholder Perspectives: The Crop Research Grant has supported high quality, widely respected applied research specific to Minnesota growing conditions and has been pivotal in introducing new species which better tolerate Minnesota's changing climate.

- *With the assistance of AGRI grants we've kept our research going at Magnuson which has developed new varieties, better winter tolerant varieties, and helped us with projects when it comes to fertilization. We've tried different rates (of fertilization) and have come up with a better management program. It's a complete program working with fertilizer and herbicide rates and growth regulator rates. We've been able to increase production of turf seed-- 800 – 1200 lbs. per acre at 65 cents a pound. It wouldn't have happened without AGRI. We like it because it's a 1-year program with a 3-year grant and you don't have to work through the U of M to get your proposal through. The 1-year funding cycle is a great thing for the smaller commodities.* Marv Zutz, Minnesota Turf Seed

Livestock Investment Grant

Background: The AGRI Livestock Investment Grant encourages modernization of livestock operations with investment in infrastructure, equipment, and processes. This grant program reimburses 10% of first $250,000 of an eligible investment. For each project, the maximum grant amount available per year is $25,000 with a lifetime maximum per entity or individual of $50,000. Investments can include:

- Buildings or facilities for livestock production or livestock products.
- Development of pasture for use by livestock including, but not limited to, lanes, watering systems, and fences.
- Equipment for livestock housing, confinement, feeding, and waste management.

Characteristics of Grantees: In 2015 – 2019 the AGRI program awarded 516 Livestock Investment grants to over 400 organizations. The average grant was $19,462. One-hundred and thirty (n=130) of these grantees completed an online survey for this assessment.

- About four in ten (42%) of these organizations had been in business for less than 5 years.
- Approximately two-thirds of the owners/managers are less than 40 years of age (65%) and the vast majority (85%) are men.
- About one-quarter (27%) are first-generation farmers/owners.

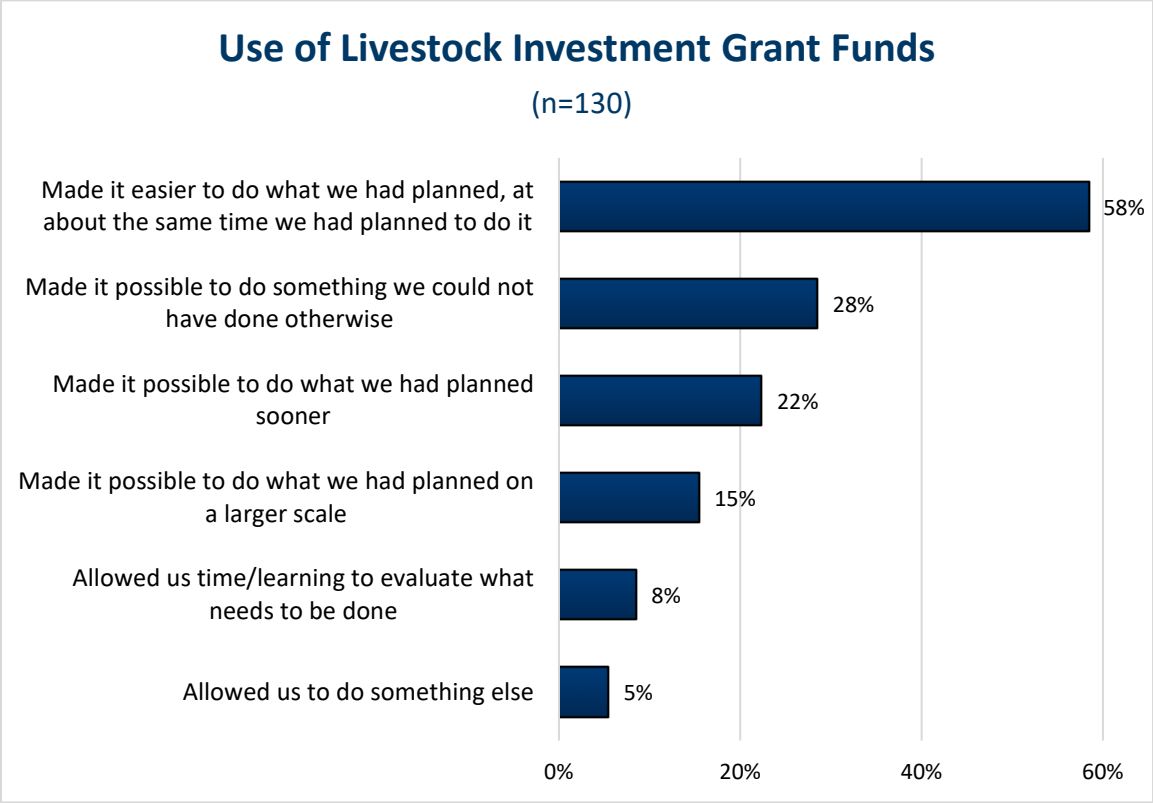
Note: A more detailed summary of the characteristics of the assessment participants and their organizations are covered in the Appendix.

Species Raised by Grantees: The Livestock Investment grantees primarily raise hogs, beef, and dairy. Thus, these types of animals were most often the beneficiaries of the upgrades and changes made with the grant funds including swine (39%), dairy (30%), beef (22%) and poultry (7%). In addition, about one in twenty grantees used their monies to start raising a species that they had not previously.

Upfront Goals: The goals of the 130 Livestock Investment grantees were wide-ranging, including enhancements to their operation, improvements for their animals, a better bottom line, and even transition plans. Half or more mentioned the following goals for their grant:

- Increase profitability
- Increase efficiency
- Raise healthier animals/crops
- Improve animal welfare
- Increase ability to bring in a new generation of farmers/operators
- Decrease debt

Use of Funds: Well over half of the Livestock Investment grantees indicated that their grant made it easier to move forward with an improvement that was already on their list, to do it sooner or on a larger scale than they had originally planned. However, for almost three in ten the Livestock Investment grant made it possible to do something new – something they could not have done otherwise.



- *The investment grant expedited things that we should have been doing, especially safety. The grant was the initiative for us to get things done. We needed to do a lot of research about equipment and methods. (Our) timeline would have been pushed out from 1 - 10 years. It's far too easy to let something like that slide.* Judy Worm, Clayhill Farm and Forest
- *The stuff we did was what we had planned on doing, but in 18 months wouldn't have been able to do.* Eric Hoese, Hoese Dairy

Key Outcomes/Benefits: Regardless of the upfront goals, grantees were asked about what outcomes/benefits they experienced and which ones were sustained. The top outcomes aligned well with the goals they reported for the grant. Notably, most who achieved a goal were able to sustain it.

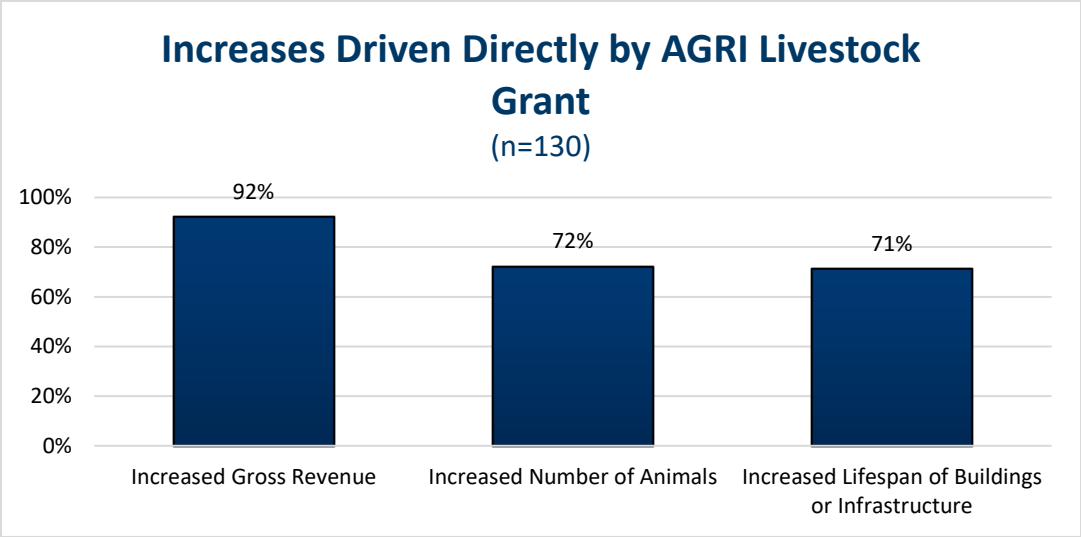
Livestock Investment Grantees		
Top Outcomes by Category (40% or higher)	Experienced	Sustained
Product/Process Improvements Outcomes/Benefits:		
Improved animal welfare*	66%	58%
Increased the efficiency of the operation*	65%	59%
Raised healthier animals/crops*	58%	52%
Invested in innovation	42%	34%
Financial Outcomes/Benefits:		
Increased profitability of the business/farm*	62%	54%
Decreased debt	60%	45%
Improved the balance sheet with new equipment, vehicles and/or buildings	44%	39%
Environmental Outcomes/Benefits:		
Made our practice/process more sustainable	45%	41%
Other Outcomes/Benefits:		
Increased optimism about the future of the operation*	56%	49%
Increased personal knowledge	53%	46%
Improved personal satisfaction/mental health*	50%	47%
Increased ability to bring in a new generation of owners/operators*	46%	42%
** Outcomes classified as a substantial improvement by 20% or more of the total.*		

Increasing Number of Employees: Just over one-third (37%) of the Livestock Investment grantees increased the number of people employed as a result of their AGRI grant (either full-time or part-time, seasonal or permanent). Among those who did, the average increase was two to three people with approximately two being permanent.

- *Before receiving this grant, I worked part-time on the family farm and had a full-time off farm job. This grant helped me to expand the farm to the point that I could come home to farm full-time alongside my dad and help with the transition of our family hog farm.* Jason Fischer, Fischer Farms It's going to make life so much easier hopefully. That's my anticipation, anyway – to be able to focus on other things. *BettyJo Juetten, Juetten's Oakwood Angus*
- *Our farm transition process was not an easy one and the farm hadn't had updates in many years and was in need of many updates/repairs. As young producers working through tough economic times in the dairy industry, these grants/programs helped us get funding to make many new repairs and updates to the farm.* Jaren Howe, Howe Holsteins

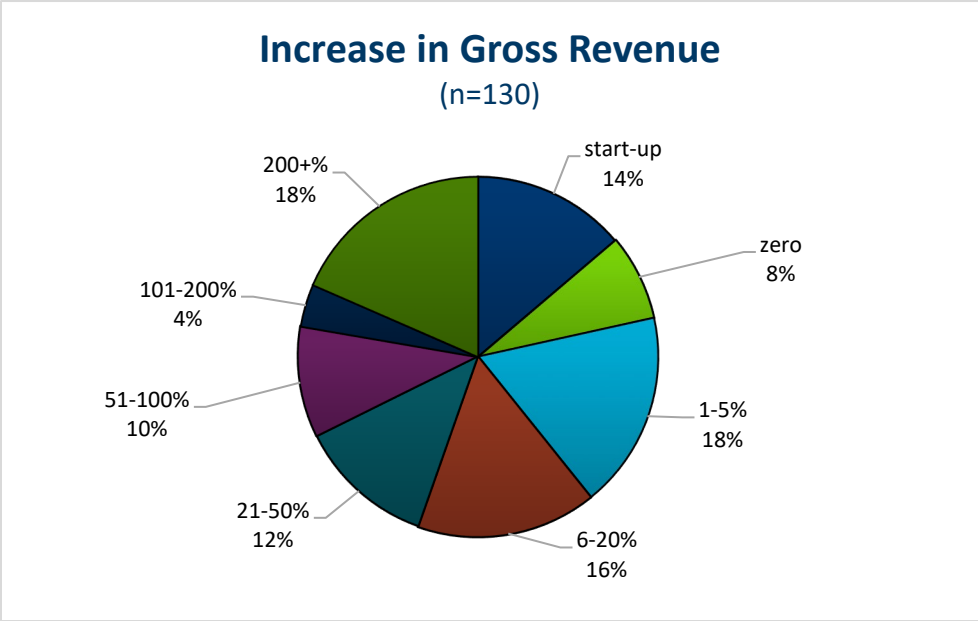
My parents were looking to retire after 40 years of farming. With the AGRI grant program I was able to construct a swine finishing facility and move to the farm allowing my parents to retire in town. I am now able to raise my family on the farm. Justin Prins, Battle Rock Farms

Positive Increases: Most Livestock Investment grantees increased their gross revenue, increased the number of animals, and/or improved infrastructure.



1. Increased Gross Revenue: The amount of increased revenue varied widely across grantees, but almost half saw an increase of more than 20%.

- *It's hard to spend money first and then get reimbursed, but it's worth it. We are now more efficient (time and energy,) saving $10-20 a day. We have increased production and reduced feed time. The Department of Agriculture grants helped us get additional funding and the value of farm went up.* Eric Hoese, Hoese Dairy



2. Increased Number of Animals Raised: The size and scope of the increase in the number of animals raised varied by type of animal:

- Among those currently raising swine, about one in five started raising this animal as a direct result of the Livestock Investment grant and nine in ten increased the size of their herd at least somewhat.
- Not many began raising cattle beef or dairy because of the grant, but over half increased the size of their herds substantially.
- Poultry growers were not as common, but among those who received the Livestock Investment grant the majority increased the size of their flocks, and on average more than doubled them as a direct result of the grant.

Animal of Focus for AGRI Livestock Investment Grant	**Changes Due to AGRI Livestock Investment Grant**				
	% Who Started Raising Because of Grant	% Who Increased Number	Average Number Before Grant	Average Number Added	Average Increase in Number
Dairy (n=39)	1%	51%	198	82	41%
Beef (n=28)	1%	79%	128	189	148%
Swine (n=51)	21%	90%	2941	6572	223%
Poultry (n=9)	5%	83%	34456	9,420	27%
Other animals raised include farmed cervidae (1), sheep/goats (7), bison (1) and/or horses (4), ducks (1), llamas/donkeys (1). Among these other animals, 5 started raising a new animal and 2 increased the number (1 added bison and 1 added cervidae)					

I was very glad that horse operations were included in this program. Horse operations often fall into a black hole when looking for resources since they are not generally considered "meat" producers but are a very important part of the agricultural industry.
Dawn Lanning, HHH Ranch

3. Improved Infrastructure: Grantees built new barns, milking parlors, and pole sheds, and erected fences. They share their excitement in the following quotes:

- *Grants have helped us sustain (keep wolves from getting our animals), and to scale*. Judy Worm, Clayhill Farm and Forest
- *One of the guys who helped me get the (bank) loan, asked why I'm building the barn. It's not for the money – it's for my kids. I want to show them you can get things accomplished.* Juan Solorzano, KBQ
- *Our son took a picture of the barn one of the first nights the cows were in it. He entered the photo in the Associated Milk Producers Inc. (AMPI) 2021 calendar contest and took first place for the fall entry.* Robert Ellenz
- *We did a steer setup for finishing cattle. Using the grant helped do the project right the first time instead of trying to cut corners.* Travis Lehnertz

Perceived Impact Compared with Expectations: Almost all (97%) of the Livestock Investment grantees felt that the impact of the grant met or exceeded their expectations.

Having the grant literally changed our lives. Before the grant, our farm was barely hanging on. The impact of the grant exceeded my expectations because it totally turned around our farm and made it profitable. The process to apply and be accepted was pretty painless.

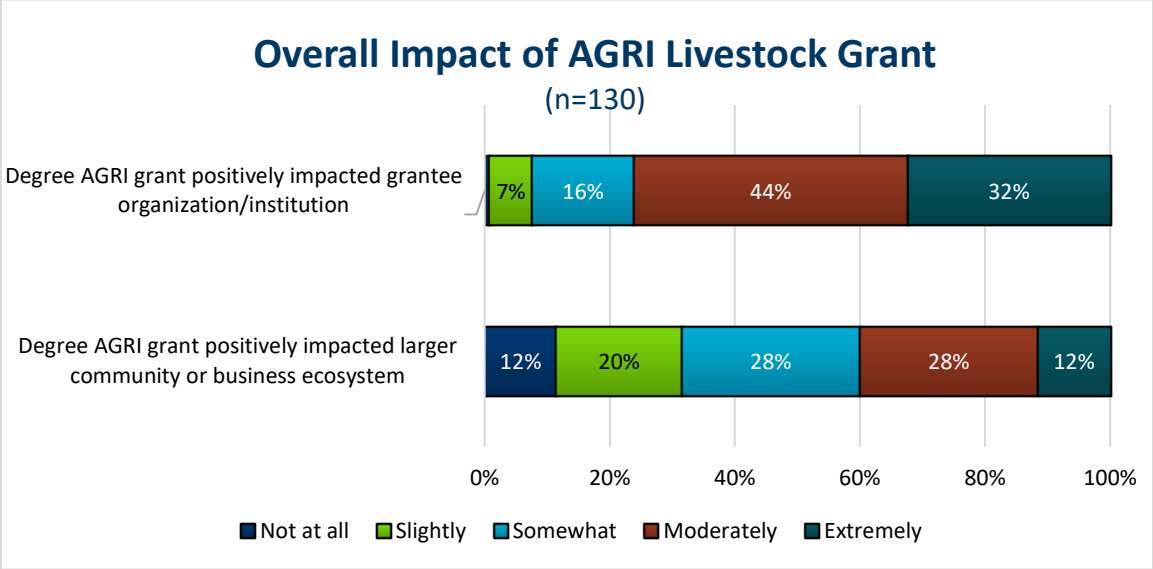
We were so impressed with the whole process. Any questions we had were handled in such a professional way. We are so blessed to have received this grant to help us as we started a new breeder barn. It helped us cut down on costs while allowing us to add an essential piece of equipment to our farm. Colleen Kasella, Kasella Farms

The comments below from two of the 17 grantees who said the impact was much greater than expected, shows how it benefited their farm.

Degree of Perceived Impact: As shown in the chart below, when asked to rate impact on their organization and the wider community:

- Virtually all felt it had a positive impact on their organization and one-third classified the impact as extremely positive.

- Approximately nine in ten felt it had a positive impact on their community/business ecosystem, with over one in ten classified this wider impact as extremely positive.



For the 42 grantees who said the grant extremely positively impacted their organization, the comments below express that sentiment.

- *Enhanced scale, environmental impact, generation transition and profit increase are all outcomes.* Elizabeth Miller, Valley Angus Farm
- *Installed new fencing that keep the cattle contained and have a buffer zone between the pasture and lake. The pole shed not only helps keep cattle out of the elements but has room to store hay that is fed all winter inside. The quality of the hay being fed is good and the overall health of the cattle is good as well.* Kristine Fuller, Fuller Farm

For the 15 grantees who reported that the grant extremely positively impacted their community or business ecosystem, the comments below express that sentiment.

- *I made a point to hire local contractors and my project continues to provide part-time and full-time employment for all skill levels. It has also provided my township with increased tax revenue, much to my chagrin. Other local farmers save money on crop inputs by using fertilizer produced by my project.* Andrew Cartwright, Cartwright Farm
- *As we documented the process on social media, people responded great and (it) has opened up doors for tours and educational events. We had many planned for 2020 but of course had to cancel due to COVID. It has also gotten us thinking towards opening an ice cream processing center and doing value-added (processing).* Eric Sonnek, Sonnek Farms

Differences in Perceived Impact: Perceived impact was evaluated across segments with different levels of 2019 gross revenue and by the value of the grant awarded. There were no significant differences across the revenue segments.

- Those who received larger grants (>$24,000 (n=76)) were more likely than those who got smaller grants ($24,000 or less (n=54)) to classify the impact of the grant on the community as "moderately to extremely" positive (47% vs. 30%).

Program Improvements: Grantees were given the opportunity to suggest program improvements to the Livestock Investment grants. Thirty-four people offered comments with 65% of them relating to funding (limits, structure, requirements, etc.) and ten (29%) relating to timing (deadlines, processing, etc.). Others reported being satisfied. Here are a handful in their own words:

- *When there's change in regulations and we need to comply, we need help. Playing the game and the rules change in the middle of the game is hard when you're not anticipating it. If regulated to do certain things, more grants are needed. (Regulatory) timelines to change make it difficult.* Carey Tweten, Valley Acres Dairy, LLC
- *Distribute the funds quickly. I was not able to use the grant because my plans had to change because the process was so slow for the small size of my grant even though it would have been a nice help for me.* Jacob Hemmesch, Crane Creek Dairy
- Cost-share a larger portion of the project. Tim Zweber, Zweber Farms

Other Things MDA Might Fund: When asked about funding that MDA could potentially offer to sustain or enhance their organization or the community, 33 individuals offered ideas, including:

- 14 referencing funding or education for new farmers, young farmers or 1st generation farmers
- 6 referencing funding that would help with green practices (e.g., land clean-up, taking better care of the land and renewable energy)
- 5 referencing financing equipment (e.g., tillage equipment, tractors and combines)
- 3 referencing the value of FBM (Farm Business Management) and the need to continue to fund that program
- 2 making specific requests to continually focus on small/family farms (instead of corporate agriculture)

There are a lot of young farmers who could benefit from subsidized farming business education. As a younger business professional running a new farming business, I have met many, many young people who want to farm and have passion to do hard work, but they have no business training, specifically for business financials. Tony Wells, Regeneration Farms, LLC

Any programs and funding to do with helping the environment is always a good thing. We all live here on this earth so we need to do our part, manure pits would be an example. Carey Tweten, Valley Acres Dairy, LLC

Stakeholder Perspectives: The Livestock Investment grant is considered particularly useful for younger producers, helping fund project ideas and advancing their farm operations. However, there are a few challenges. Keith Olander of AgCentric wishes that with Livestock Investment they'd do fewer AND larger awards. He also wondered if in construction projects, rather than delay a $250K project from getting started awaiting final word from AGRI of a $25K award, that AGRI could be more flexible and allow grantees to start the project.

Both stakeholders and grantees acknowledged that the Livestock Investment Grant has supported an important conversation around farm safety and the resources to get an operation in shape so that it can be safely passed on to the next generation.

New Market Development Cost-Share

Background: Minnesota food and beverage companies explore new markets and expand their market reach. The program provides startup companies and entrepreneurs with business development help and financial assistance for specific marketing activities to help them gain competitive advantage in regional, national, and international markets. The program also works on connecting Minnesota farm ingredients to Minnesota-based food companies. The program reimburses eligible expenses to Minnesota farms and small-medium Minnesota food and beverage companies on a first-come, first-served basis, with reimbursement limits that change annually or biannually. Specific expenses considered for New Markets Cost-Share reimbursement fall in the following categories:

1. In-Store Demonstrations
2. Business-to-Business Tradeshows (virtual or in-person)
3. E-Commerce
4. Contracted Store Merchandising
5. Certain point-of Sale Promotions

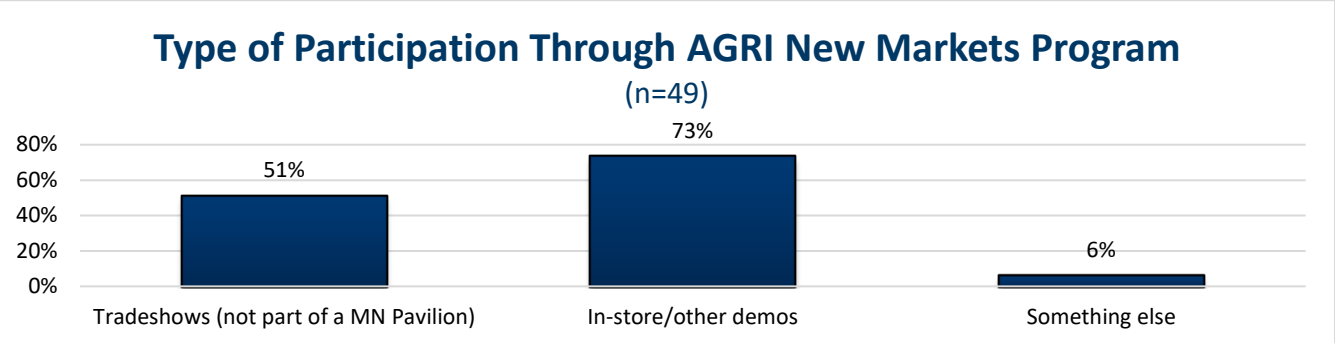
It should be noted that the final three options were new in Fiscal Year 2020 and were not options for program years under review here. Many programs participants still commented on these activities as they are most fresh in their minds.

Characteristics of Participants: In 2015 – 2019 the AGRI program provided funds to approximately 500 New Market Development participants at roughly 200 organizations. Forty-nine (n=49) of these participants completed an online survey for this assessment.

- One-third have been in business for less than 5 years.
- Over half (53%) are women-owned businesses.

Note: A more detailed summary of the characteristics of the assessment participants and their organizations are covered in the Appendix.

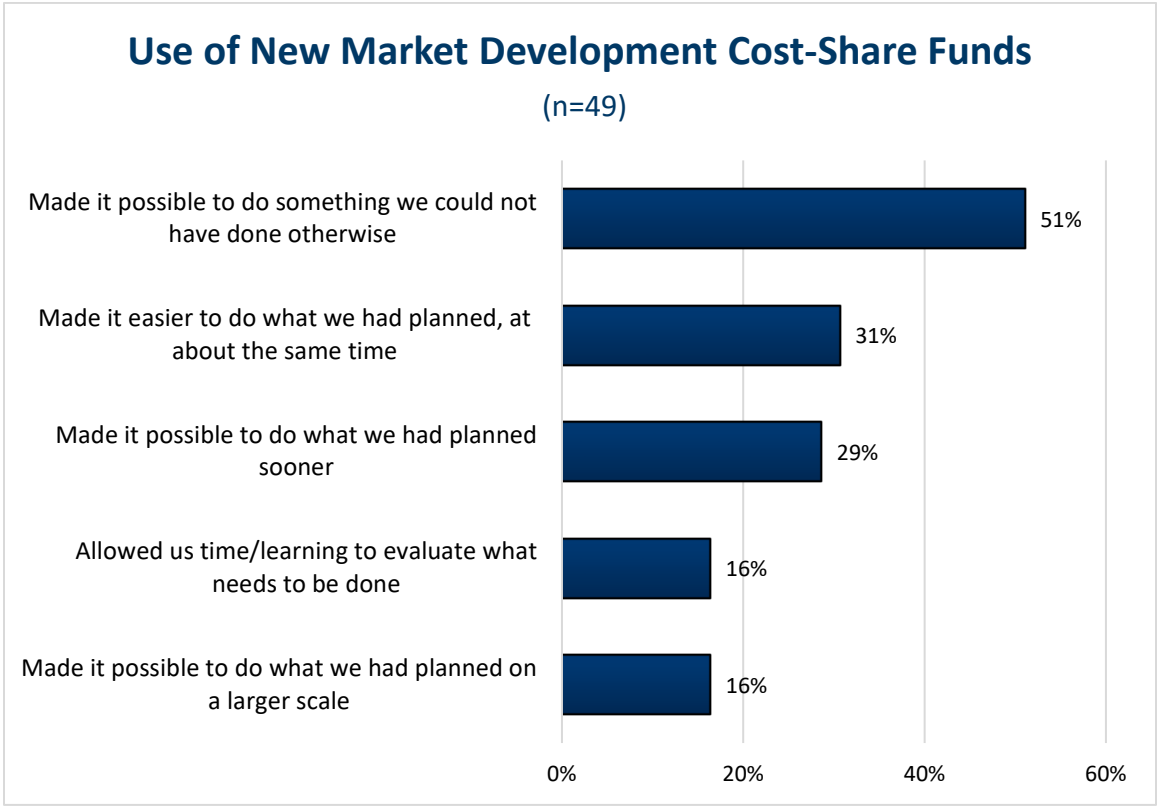
Type of Participation: Most (73%) of the New Market Development cost-share recipients used the money to showcase their products and services through in-store demos and about half (51%) used it for tradeshows. Those who indicated they used the funds in other ways listed “e-commerce” and “end caps,” both of which were eligible beginning in Fiscal Year 2020.



Upfront Goals: The top reason given by the participants in this program was to increase awareness of what they bring to the market, with over eight in ten (84%) stating this goal. This is really a "means" to an "end" and several of the other goals highlight what they hoped to get from an increase in awareness: increased sales (71%), entries into new markets (67%) and more partnerships (63%). Half or more mentioned each of goals below:

- To increase awareness of our products, services or processes
- To increase sales
- To expand into new markets (e-commerce, different processers, new outlets, etc.)
- To create more business partnerships
- To increase the number of product demos
- To participate in more tradeshows

Use of Funds: About half of the New Market Development participants indicated that the AGRI cost-share made it possible to do something new – something they could not have done otherwise. Three in ten said it made it easier to execute on plans and roughly the same proportion said the cost-share make is possible to do something sooner.



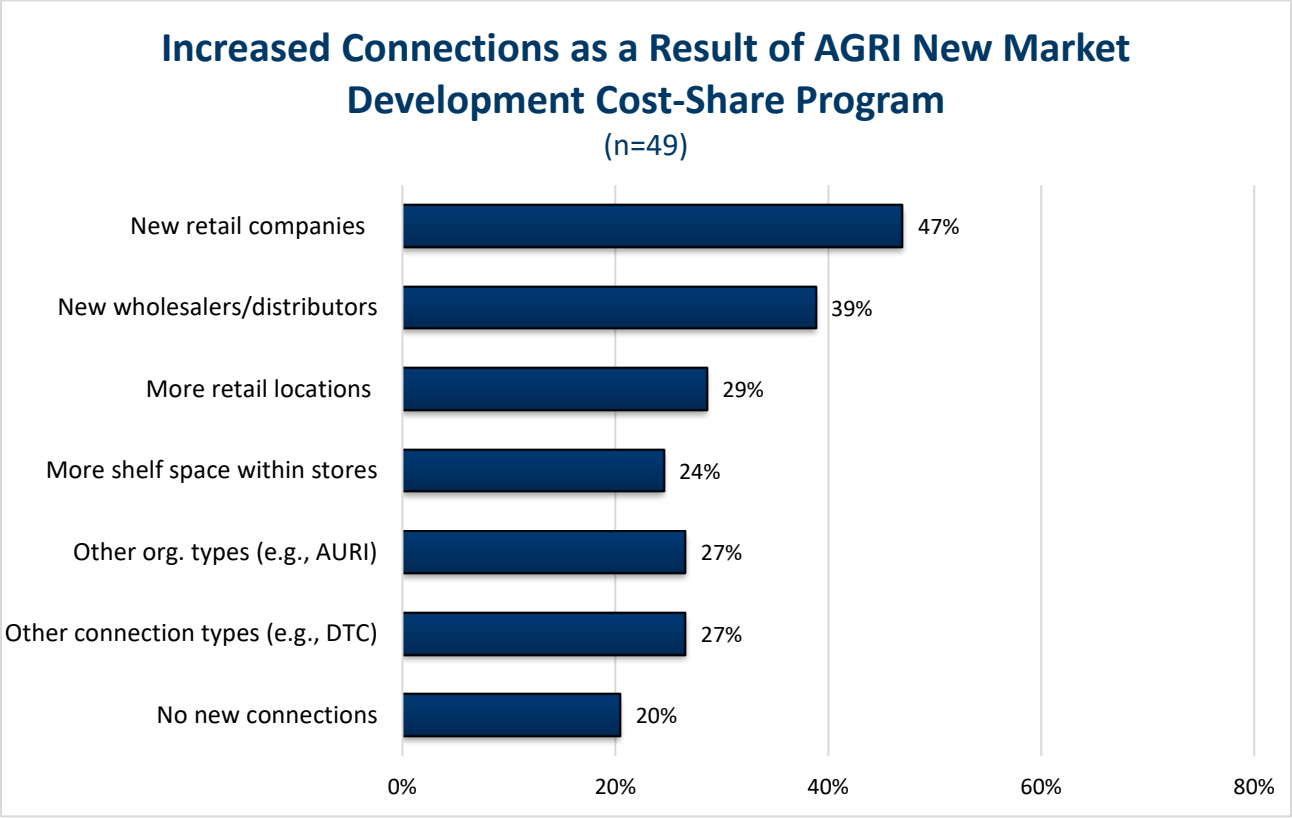
Key Outcomes/Benefits: Regardless of the upfront goals, participants were asked about what outcomes/benefits they experienced and which ones were sustained. Three-quarters were able to achieve and increase in awareness and sales and most indicated these have carried through to today. A variety of other outcomes surfaced across these organizations, as shown below.

New Market Development Participants		
Top Outcomes by Category (40% or higher)	Experienced	Sustained
Product/Process Improvements Outcomes/Benefits:		
Grew or produced more and/or meet more demand	45%	31%
Financial Outcomes/Benefits:		
Increased sales*	76%	55%
Increased long-term profitability of the business/farm	41%	22%
Awareness Goals		
Increased awareness of our products/services/processes*	76%	67%
Expanded into new markets (e-commerce, different processers, new outlets, etc.)*	59%	51%
Created more business partnerships	51%	39%
Increased the number of product demos*	61%	31%
Participated in more tradeshows*	43%	27%
Engaged with more organizations (public or private)	45%	24%
Other Goals		
Increased my own knowledge	47%	37%
Increased optimism about the future of the operation*	43%	31%
** Outcomes classified as a substantial improvement by 20% or more of the total.*		

- *Because we are more "visible" now, we have many more interested companies reaching out to us. We are working toward growing those relationships.* Alisa Dale, Planet Princess Foods
- *By continuing and building relationships with retailers/wholesalers/distributors we are able to keep producing our regeneratively raised 100% grass fed beef.* Matt Maier, Lifetime Grazed

Specific Outcomes: The New Market Development participants were asked to note any increased or enhanced connections and changes in gross revenue.

1. Increased Connections: Overall, eight in ten (80%) of the AGRI New Market Development cost-share recipients increased their marketplace connections as a direct result of their participation in the program. The most common are of expansion through the AGRI New Market Development program was within the retail environment. About half (47%) said they were able to connect with new retail companies (chains or local stores) as a result of this cost-share. Other were increasing their footprint within their existing retailers, by getting their products features in more of their locations (29%) or getting more shelf space (24%). Four in ten (39%) added new wholesalers or distributors into their mix. Some acknowledged other connections, like “direct-to-consumer” and “other local food makers.”



Here is how participants describe the value of these connections:

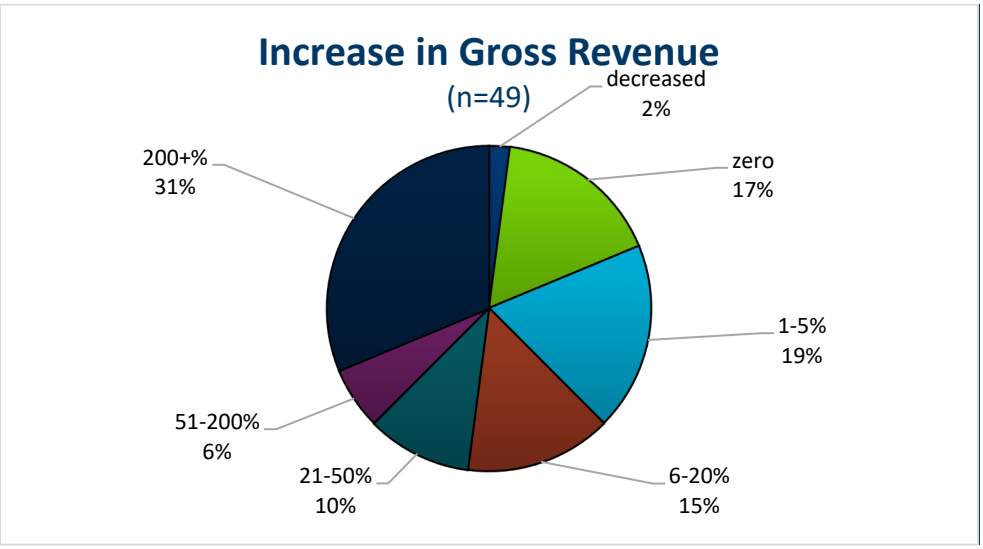
- Over the years we've connected with around 30 retail companies due to tradeshows. Kathy Carton, Shop Heavenly Treats
- During sale periods we now have two in-store locations where our products are located/sold in some select stores. Britt Jungerberg, Plucky Pickle DiP

2. A Growing Business Ecosystem: The number of new connections or the size of the increased presence in retail varied considerably. Regardless, half or more:

- Gained 5-6 or more new retail connections;
- Gained 2 or more new wholesale/distributors;
- Added 5-6 or more new locations within their existing retailers;
- Gained 25% or more shelf space.

Increases	Increases Due to AGRI New Market Development Cost Share		
Number:	Range of Increase	Median Increase	Average Increase
New retail companies (n=23)	1-to-200	5.5	18*
New wholesalers/distributors (n=19)	1-to-30	2	4
More retail locations (n=11)	3-to-1000	5.5	95*
Percentage:	Range of Increase	Median Increase	Average Increase
More self-space (n=9)	5%-to-60%	25%	22%
**Large outliers were removed from the base when calculating the average. The sample size for each connection is small. These increases demonstrate progress gained by these organizations but should not be generalized.*			

3. Increased Gross Revenue: About half of the cost-share participants saw an increase in revenue of more than 20%, and almost one-third (31%) saw their revenue more than double.

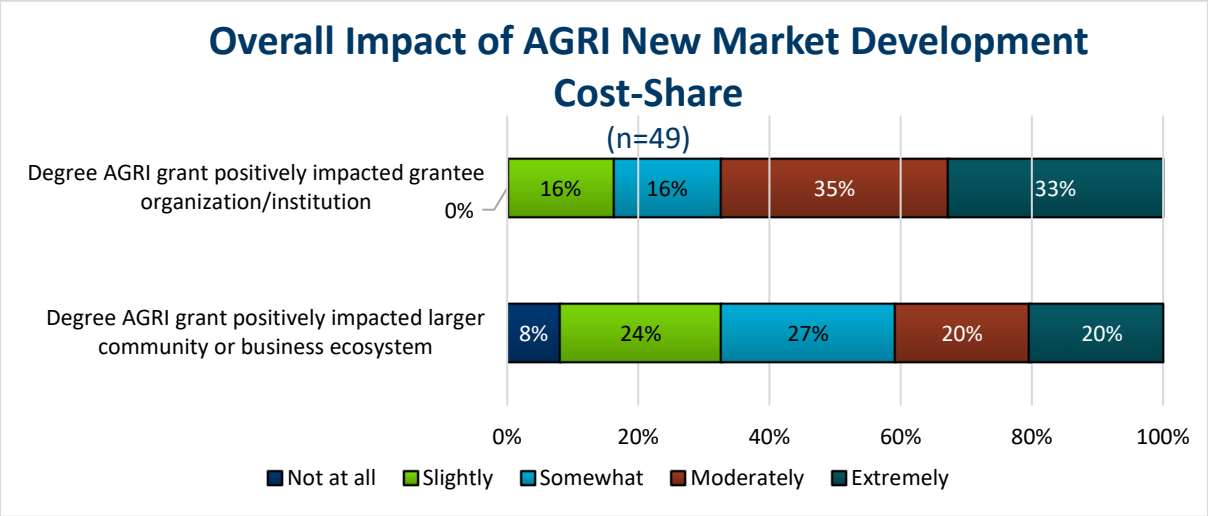


Perceived Impact Compared with Expectations: Almost all (94%) of the New Market Development participants felt that the impact of the cost-share met or exceeded their expectations. For the 11 participants who said the impact was much greater than expected, the comments below reflect their reasoning:

- *Without the financial support of the demo grant program, I would have been hard-pressed to do as many demos as I wanted/needed to. My primary, and first expense was, of course, production.* Pamela Hoepner, Pam's Pepper Jam, LLC
- *E-commerce support is HUGE! It's expensive to get an impact on Amazon search so the resources to help generate a return are VERY helpful and they WORK!* Scott Dillon, The Twisted Shrub, LLC
- We have seen tangible and immediate impacts on our business growth with these programs...and have seen that the Minnesota Ag programs are far better than those of other states. Rick Dow, Big Watt Coffee

Degree of Perceived Impact: And as shown in the chart below, when asked to rate impact on their organization and the wider community:

- All felt the cost-share program had a positive impact on their organization and one-third classified the impact as extremely positive.
- Nine in ten felt it had a positive impact on their community/business ecosystem, and one in five classified this wider impact as extremely positive.



For the 16 participants who said the cost-share program extremely positively impacted their organization, the comments below express that sentiment.

- *It has been a positive boost for product recognition, brand awareness and profitability. I have gained lots of very valuable knowledge from fellow makers the Agriculture Utilization Research Institute I that I can use every day in building and sustaining my business so I can keep doing what I love and feel proud of how far I've come.* Debra Fairbanks, Oak Valley Creations
- *This program enables a community network in food. This is hugely important for networking. One conversation or event leads to another and after two years can become something very meaningful. John Strohfus,* Minnesota Hemp Farms
- *The cost sharing plan has helped us be able to attend trade shows that we normally would not be able to attend. The cost sharing plan for international trade shows have opened up huge opportunity for export to other parts of the world that I would have not have access to if it wasn't for the trade shows*. Caleb Krienke, Popdkerns

For the 10 participants who reported that the cost-share program extremely positively impacted their community or business ecosystem, the comments below express that sentiment.

- *Our small business now employs 3 full-time and 13 part-time employees.* Kristin Mohagen, TC Chocolate
- *It brings great awareness to local products who don't have huge marketing budgets.* Matt Glover, Hoyo Sambusa

Program Improvements: Participants were given the opportunity to suggest program improvements to the New Market Development Program. Fourteen (14) participants provided ideas: eight ideas related to additional funding needs, and five related to communication. Others mentioned their satisfaction with the program. Here are a handful in their own words:

- *Making money available for all of the start-up things small companies need to do. Packaging, graphic designer, photographer, promo materials, website fees, license fees*. Stephanie Lonetti, 3 Lonetti Sisters
- *Resources for new product development would be helpful. For us... the reduced amount available was a problem. We utilize a copacker from out of state because Minnesota is limited. Our copacker uses products from Minnesota so we should qualify for the full amount. The demo support has been extremely helpful. The wholesale ad benefit is also helpful.* Jeanette Tostenson, Qwiznibet Foods
- *I would appreciate more emails about the ongoing programs.* Mary Williams, Pipz Jerky

Other Things MDA Might Fund: When asked about funding that MDA could potentially offer to sustain or enhance their organization or the community, 19 participants contributed ideas including several who mentioned continuing to provide e-commerce support:

- *I really like the new e-commerce cost-sharing program. It's much more useful to us because we can increase online business without having to spend thousands of dollars on trade show fees, lodging and travel (if they're not local). Those shows are too expensive for little vendors like us, even if 50% is reimbursed. Valerie Notermann, Savor More Food*
- *We also need events that help with product DISTRIBUTION. So much of the remaining legacy retail is hinged on national distribution and this is a chicken/egg problem to balance the retail buyer with a distributor. Each one wants the other to come first. John Strohfus, Minnesota Hemp Farms*

> *Given our current business climate, I would hope the eComm would continue and potentially increase in reimbursement amounts.* Rick Dow, Big Watt Coffee

Others mentioned:

- *Greater cost support with AURI.* Mark Porisch, Lucky S Sauces
- *Funds for product development and test batch.* Jeanette Tostenson, Qwiznibet Foods
- *Please open up funding to Minnesota-based businesses who have their production just over the border (in our case, Hudson, Wisconsin).* Leigh Taylor, Hell Raising Hot Sauce

Stakeholders Perspective: Stakeholders believe the cost-share is invaluable to smaller farms and food businesses, allowing them to do things they would not otherwise have the funds to do. Tradeshows and in-store demonstrations are where so much business development happens so this program affords participants this opportunity. The transition of the program due to COVID to support e-commerce was considered very impactful.

- *I think that being creative with getting food businesses off the ground is hard to do but producers are eager to know that there is state support. In my experience, having these programs brings farmers into conversation with the department. That conversation leads them to other connections, for financing and*

problem solving. These conversations are very helpful and hard to measure. Stu Lorey, Minnesota Farmers Union

Sustainable Agriculture Demonstration Grant

Background: The AGRI Sustainable Agriculture Demonstration Grant funds projects that research or demonstrate farm-based agricultural techniques or systems that address one or all of the following:

- Energy efficiency
- Environmental benefit of sustainable agriculture practices or systems
- Profitability

Grantees report annually on their progress, and their reports are compiled and published by the MDA in the *Greenbook* so other farmers and researchers can learn from their experiences. Grants are competitive; proposals are reviewed and scored by a panel of MDA staff and outside experts, including farmers, agriculture scientists, educators, and marketing specialists. The program funds two and three-year projects with a maximum award of $50,000. Grants over $25,000 require a dollar-for-dollar match.

Characteristics of Grantees: In 2015 – 2019 the AGRI program provided approximately 50 Sustainable Agriculture grants to just over 30 organizations. Fifteen (n=15) of these grantees completed an online survey for this assessment. This small sample represents a substantial proportion of the total grantee organizations, but caution should still be used when generalizing. About two-thirds of these respondents are first-generation farmers/owners (64%), and about one-third of the organizations are owned by women (36%).

Photo courtesy of the Land Stewardship Project

Note: A more detailed summary of the characteristics of the assessment participants and their organizations are covered in the Appendix.

Projects: A wide range of content is being evaluated though the Sustainable Agriculture grant program. Some examples include growing and testing the nutrient profile and palatability of novel corn varieties for poultry; demonstrating cover crop and intercropping alternatives during the establishment period of perennial fruit plants and evaluating any added value of secondary crop produced; and using precision ag data to maximize economic and environmental benefits.

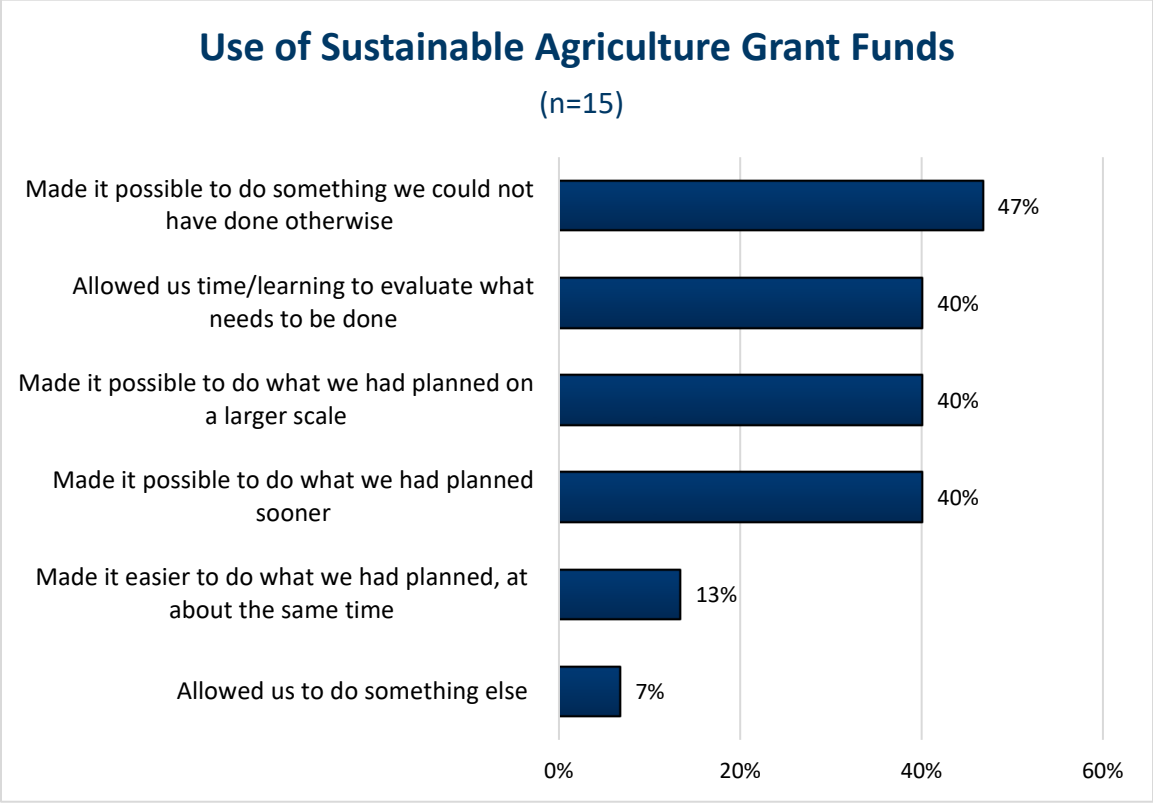
Upfront Goals: The goals of these Sustainable Agriculture grantees were wide-ranging, including enhancements to their operation, improvements for their animals, a better bottom line, and transition plans. Half or more mentioned the following goals for their grant:

- To find or move toward a more sustainable practice/process for our farm/business
- To increase long-term profitability of the business/farm
- To increase personal knowledge

- To invest in innovation (more agile processes, more automation, fewer inputs, more efficient outputs, etc.)
- To raise healthier animals/crops
- To investigate/evaluate or conduct a trial run of an alternative product/process
- To make products/processes more environmentally friendly (e.g., lower greenhouse gas emissions, reduced carbon footprint
- To learn new skills

Use of Funds: About half of the Sustainable Agriculture grantees indicated that their grant made it possible to do something they could not have done otherwise.

Almost as many indicated these funds made it possible to evaluate needs, do something on a larger scale or do something sooner. Very few (n=2) said these funds simply made it easier to do what they had planned.

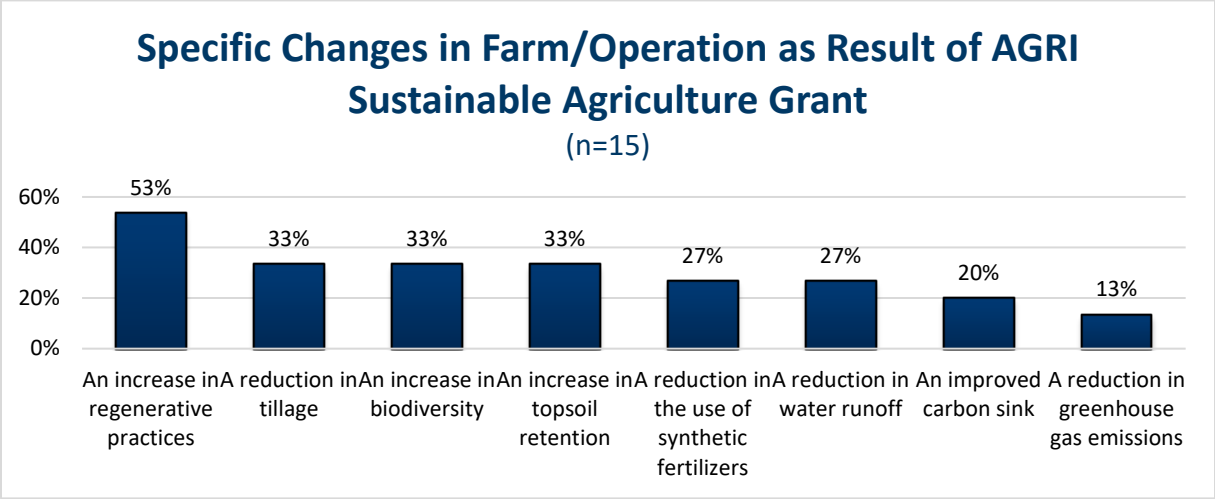


Key Outcomes/Benefits: Regardless of the upfront goals, grantees were asked about what outcomes/benefits they experienced and which ones were sustained. The top outcome was increasing their own personal knowledge, followed by finding a more sustainable practice. Furthermore, these outcomes, along with the others in the top set, were sustained by most who achieved them.

Sustainable Agriculture Grantees		
Top Outcomes by Category (40% or higher)	**Experienced**	**Sustained**
Product/Process Improvements Outcomes/Benefits:		
Investigated/evaluated a trial run of an alternative product/process*	60%	33%
Raised healthier animals/crops*	53%	40%
Invested in innovation*	40%	33%
Financial Outcomes/Benefits:		
Increased long-term profitability of the business/farm	47%	40%
Environmental Outcomes/Benefits:		
Found/moved toward a more sustainable practice/process*	67%	60%
Awareness Outcomes/Benefits		
Increased awareness of products/services/processes*	47%	47%
Other Outcomes/Benefits:		
Increased personal knowledge*	100%	87%
Learned new skills	47%	40%
Increased optimism about the future of the operation*	60%	47%
** Outcomes classified as a substantial improvement by 20% or more of the total.*		

Positive Changes: As a result of their Sustainable Agriculture grant:

- About half saw an increase in regenerative practices, which included more cover crops, better grazing management, or some combination of these practices.
- One-third saw one or more of the following: a reduction in tillage (ranging from 10 to 300 acres), an increase in biodiversity, and/or an increase in topsoil retention.
- A handful also reduced their use of synthetic fertilizer (ranging from 25 pounds to 18,000 pounds) and/or water runoff.
- A couple saw an improved carbon sink and/or a reduction in greenhouse gas emissions.
- Almost all (93%) reported that one or more individuals from relevant groups (ranging from 1 to 50 groups) reached out for more information about the project.



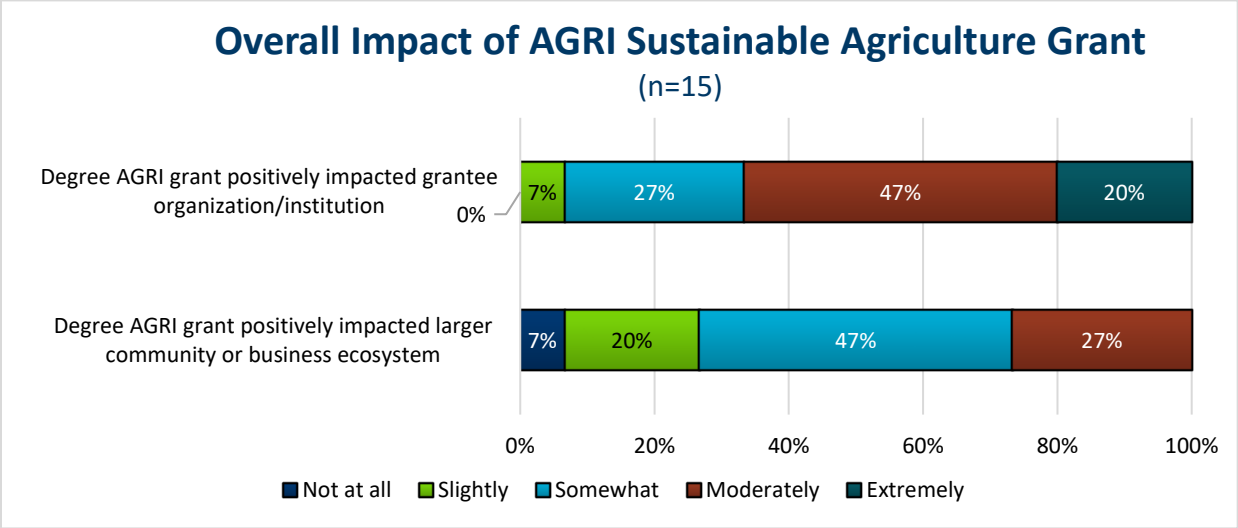
Hoch Orchard integrated animals safely into perennial fruits. At Canosia Grove, they demonstrated that silvopasture in the orchard could control under forage and increase biodiversity in the pasture. Grazing as a service was attempted in winter months to successfully determine that goats could control invasive species even with significant snow on the ground. The Land Stewardship Project demonstrated several regenerative practices including no-till, multi-species cover crops, managed grazing, and crop rotation to hundreds of interested farmers.

Perceived Impact Compared with Expectations: Most (93%) of the Sustainable Agriculture grantees felt that the impact of the grant met or exceeded their expectations. Two of those who said exceeded, had this to say:

- *The farmers went above and beyond in response to the trials they did, buying equipment and permanently adopting more and more complex covers in their rotations.* Robin Moore, Land Stewardship Project
- *The knowledge gained was greater than I expected, and level of interest was great as well.* John Beckwith, Minnesota Association of Resource Conservation and Development Councils, Inc.

Degree of Perceived Impact: As shown in the chart below, when asked to rate impact on their organization and the wider community:

- All felt it had a positive impact on their organization and one-fifth classified the impact as extremely positive.
- Over nine in ten felt it had a positive impact on their community/business ecosystem.



For the three grantees who said the grant extremely positively impacted their organization, they had this to say by way of explanation:

- *Increase production of feed for animals while sustaining soil health, less fertilizer, less tillage, less fuel consumption, going on seven years now.* Darryl Patnode
- *Without this support, we would have never been able to get our food business up and running!* David Andrew Bernhardt, The Good Acre
- *The fencing reduces labor while increasing animal safety. Grazing more sheep on our land has increased the health of our orchard and our sheep business at the same time.* Robert Blair, Canosia Grove

And from those reporting a positive impact on the community:

- *Another farmer in our county is growing Kernza and others are interested.* Mike Jorgenson, Jorgenson Family Farm
- *Our knowledge (gained) regarding the viability of hazelnuts has allowed us to make better recommendations to other farms interested in growing perennial crops.* Wyatt Parks, Main Street Project

Program Improvements: Grantees were given the opportunity to suggest program improvements. Four grantees offered suggestions covering general communication, the application process, and making more funds available in the Sustainable Agriculture program. In their own words, grantees said:

- *More awareness amongst farmers that it exists. It's an incredible opportunity for them to advance their business.* Eric Sannerud, Mighty Axe Hops
- *The online portal or submitting process should be the very same as the original Request for Proposal. Very frustrating.* Steve Poppe, University of Minnesota

More applications in Spanish, and better notification when the application process opens. I did not get a notification this year. Robin Moore, Land Stewardship Project

Other Things MDA Might Fund: When asked about funding that MDA could potentially offer to sustain or enhance their organization or the community, four ideas were offered and all were about better funding for infrastructure and/or facilities.

Stakeholder Perspectives: The Sustainable Agriculture Demonstration Grant is acknowledged for launching, demonstrating, and promoting new ideas. Some noted that farmers trust other farmers, so when they see a new process, product, or seed-type successfully demonstrated or read about it the *Greenbook*, it promotes adoption and spawns additional ideas for demonstrating.

Grantees often need assistance in applying, managing the grant and promoting field days, required for Sustainable Agriculture grantees. Even when collaborating organizations support them, their staff time is not free.

- *Applicants often need someone to navigate. It could be at a discounted rate or cover a certain number of hours of grant writing. We go out and raise funds to provide those services, or in some cases we do it for free.* Jan Joannides, Renewing the Countryside
- *I like that the grant has an outreach component, but it is harder for farmers to do. We get asked by farmers and other organizations to partner. What they really want is us to do it and it costs us money. Can there be more money available to do outreach (including) cost of the field day?* Theresa Keaveny, Sustainable Farming Association

One stakeholder thought the definition of sustainable may pose a problem for the program as there are quite a variety of definitions. He also noted that the *Greenbook* could be clearer that it is a report of demonstration, not research. Funding levels were noted as reasonable and the ability to apply for up to $50,000 meaningful.

Another stakeholder identified a meaningful role for MDA gathering data around emerging practices.

- *As we talk about carbon neutrality, DNR and MDA could play a key role in measuring, assessing, facilitating research to get the numbers right. We should be able to get the research right (around) best practices in cutting carbon or improving on-farm carbon sequestration.* Tamara Nelson, AgriGrowth

Value-Added Grants

Background: The AGRI Value-Added Grant offers funding for Minnesota value-added businesses including bioenergy producers to invest in equipment. Value-Added is defined as adding value to an agricultural product through processing. The intent of the program is to increase sales of Minnesota agricultural products by investing in production capacity, market diversification, and market access for value-added products. Thus, projects must:

1. Increase the sales of Minnesota agricultural products and/or
2. Increase market access

AGRI Value-Added Grants primarily fund equipment and physical infrastructure. In some years, dependent on the availability of funds, the MDA has also been able to fund grants for feasibility studies. The grants aim to fund projects that impact many farmers. Grantees include individuals, farmers, businesses, agricultural cooperatives, or local government entities. The focus of this section is on the equipment related grants.

From the stakeholders' perspective value-added grants are both innovative and easy to understand compared to other federal and state grants. These grants provide a catalyst for growth and transformation on the producer side.

Value-Added Equipment

Projects: The Value-Added Equipment grantees used their funds to invest in a range of equipment, physical infrastructure, and software upgrades. These investments were designed to improve food safety, cleaning, storage, pasteurization, co-packing and processing across distilleries, apple orchards, doughnut and maple syrup production, grain facilities, cheese and meat processing plants and more.

Characteristics of Grantees: In 2015 – 2019 the AGRI Value-Added Equipment program provided approximately 250 grants to about 180 organizations. Sixty-eight (n=68) of these Value-Added Equipment grantees completed an online survey for this assessment.

- About half of these respondents are first-generation farmers/owners (45%).
- About half of the organizations are owned by women (45%).

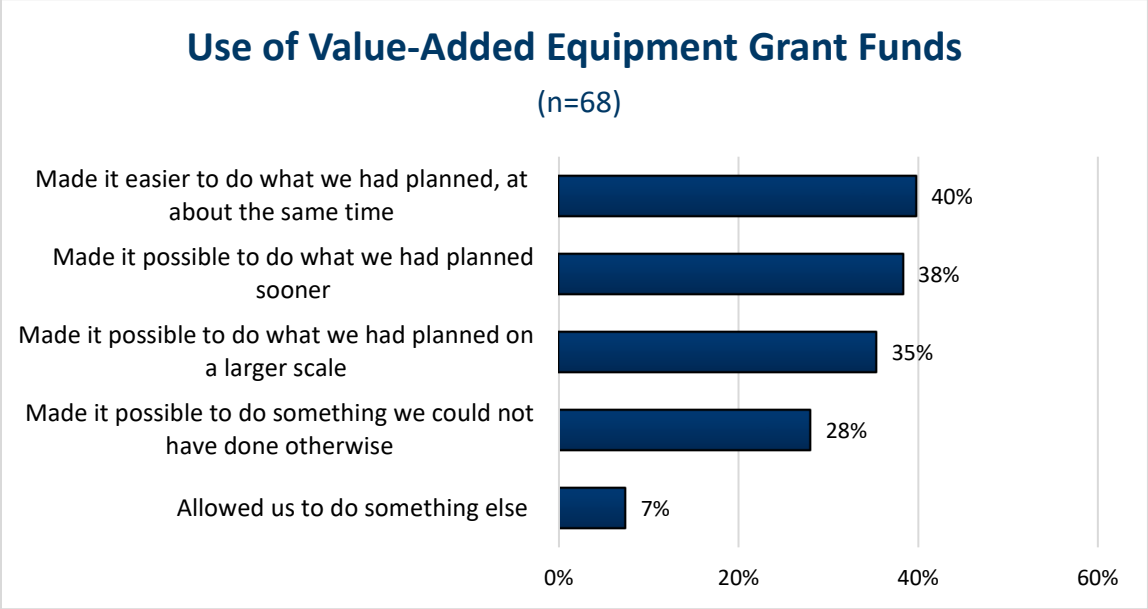
Note: A more detailed summary of the characteristics of the assessment participants and their organizations are covered in the Appendix.

Upfront Goals: The goals of the 68 Value-Added Equipment grantees were wide-ranging, including enhancements to their operation, improvements for their animals, a better bottom line, and even transition plans. Half or more mentioned the following goals for their grant:

- To grow or produce more and/or meet more demand
- To increase long-term profitability of the business
- To increase the efficiency of the operation
- To increase value-added production

- To improve the quality of products/services
- To invest in innovation
- To comply better with regulations (food safety, etc.)
- To increase sales
- To increase the use of more Minnesota grown/raised products
- To have a positive impact on the community
- To create jobs

Use of Funds: Four in ten of the Value-Added Equipment grantees indicated that the grant made it made it easier to do what they had planned or do it sooner. About one-third said it allowed them to increase the scale of their project and about three in ten indicated it made it possible to do something new.



Simple, my small business did not have enough assets or capital to do the expansion that was required to be up to code for USDA inspections. With the grant funding, my local bank was willing to fund the rest of the project.
Jeremy Johnson, Conger Meat Market

Key Outcomes/Benefits: Regardless of the upfront goals, grantees were asked about what outcomes/benefits they experienced and which ones were sustained. The top outcomes aligned well with the goals they reported for the grant. Notably, most who achieved a goal were able to sustain it.

Value Added Equipment Grantees		
Top Outcomes by Category (40% or higher)	Experienced	Sustained
Product/Process Improvements Outcomes/Benefits:		
Grew or produced more and/or meet more demand*	65%	60%
Increased the efficiency of the operation (more output per input, increase employee efficiency, etc.)*	65%	60%
Improved the quality of products/services*	63%	59%
Increased value-added production*	56%	49%
Invested in innovation (more agile processes, more automation, fewer inputs, more efficient outputs, etc.)*	56%	51%
Complied better with regulations (food safety, etc.)*	59%	57%
Increased employee safety*	46%	41%
Financial Goals		
Increased sales*	62%	59%
Increased long-term profitability of the business/farm*	57%	51%
Improved the balance sheet with new equipment, vehicles and/or buildings*	54%	43%
Awareness Goals		
Increased the use of more Minnesota grown/raised products	57%	53%
Expanded into new markets (e-commerce, different processers, new outlets, etc.)*	41%	41%
Helped us source or process more Minnesota grown/raised products	41%	31%
Increased awareness of our products/services/processes	47%	40%
Other goals		
Created jobs*	50%	44%
Had a positive impact on the community	47%	40%
Increased optimism about the future of the operation*	44%	41%
Increased my own knowledge	43%	35%
** Outcomes classified as a substantial improvement by 20% or more of the total.*		

Those who increased sales had this to say,

- *We have been much busier.* Cathy Mackenthun, Mackenthun's Meat and Deli
- *Had more demand for products.* Jean Braatz, My Minnesota Farmer

Those who improved the quality of their products or services mentioned

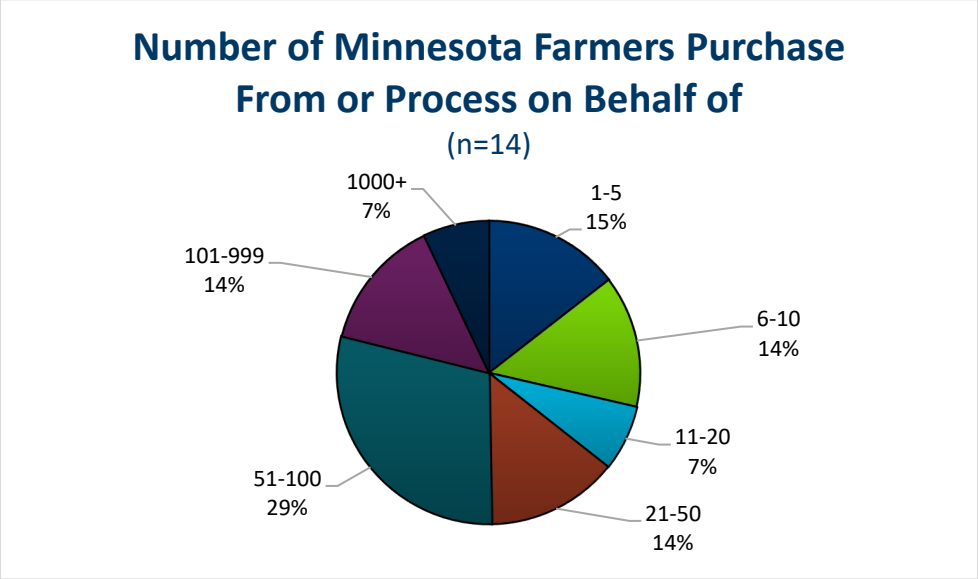
- *There have been very few boxes of apples returned by stores due to quality issues once we began using the new washer.* Chad Johnson, Whistling Well Farm

One grantee who created jobs had this to say,

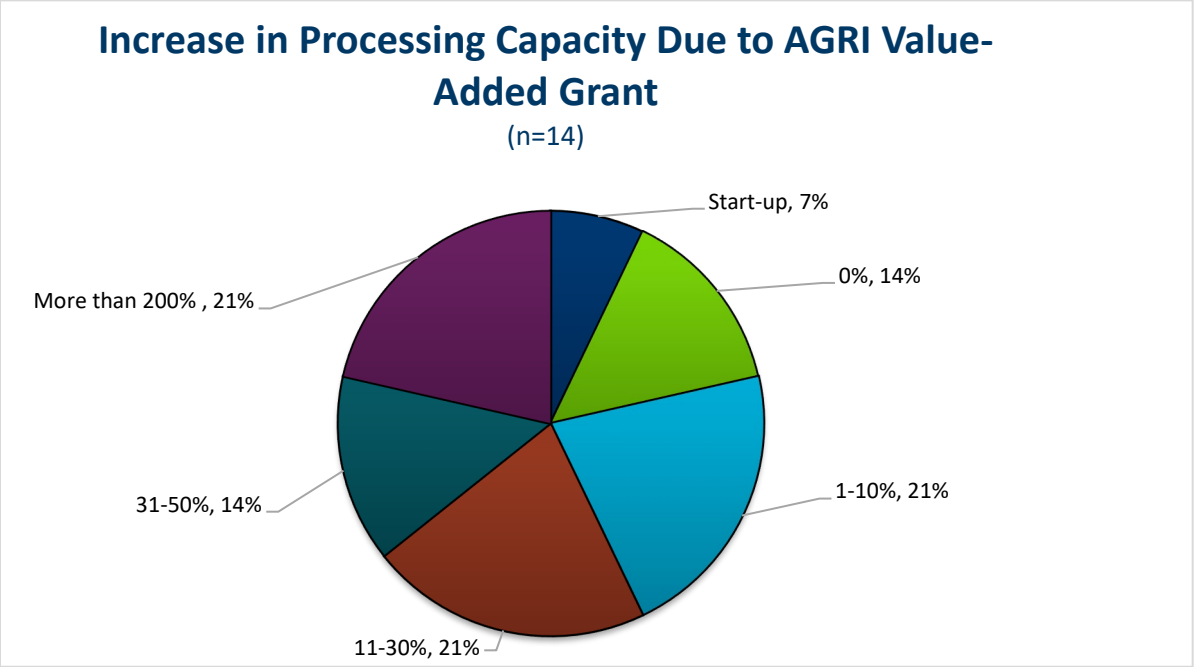
- *We live in a small community. Every job counts. By the time this expansion is fully operational, we will have added 14 jobs. It is a real boost to our community and encourages everyone in the area to see a successful business - especially in the midst of the COVID situation*. Karie Kirschbaum, Soyko International

Increasing Number of Employees: Over half 56% of the Value-Added Equipment grantees increased the number of people employed as a result of their AGRI grant (either full-time or part-time, seasonal or permanent). Among those who did, the average increase was 7 people with approximately 5 being permanent.

Livestock Processing: Approximately one in five (22%) process meat/poultry and one in ten (13%) process dairy. Among those who process livestock, they average purchasing from/processing on behalf of about 50 farms. One person indicated they are a co-packer and do not purchase livestock.



Overall Processing Capacity: When asked to quantify changes in their overall processing capacity as a result of the grant, most (86%) said they experienced an increase, and almost one in five (21%), said the increase was over two-times their pre-grant capacity.



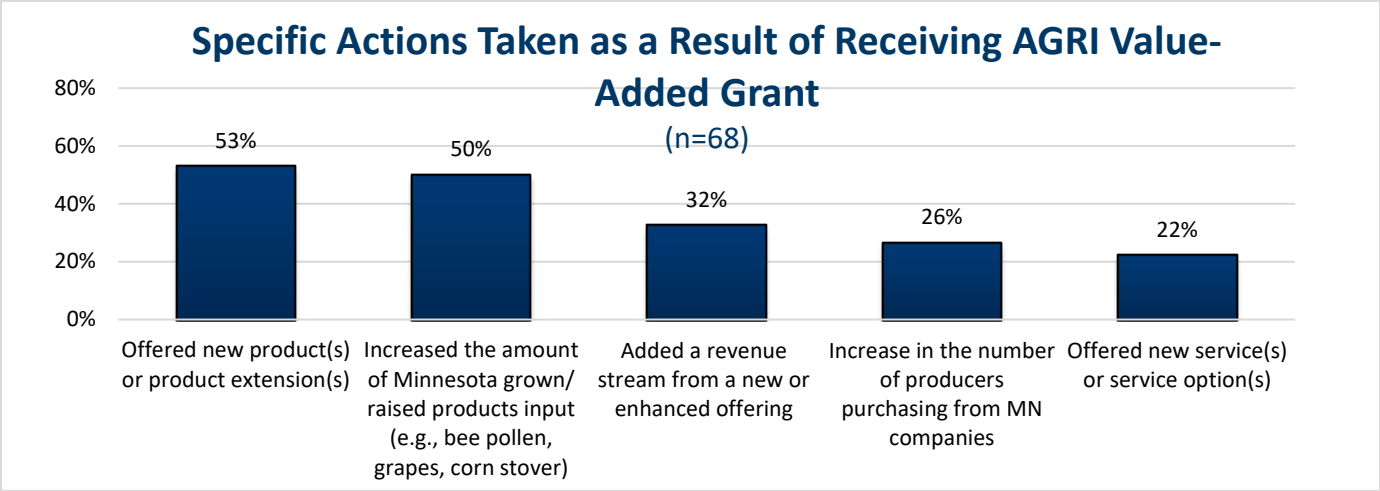
Specific Processing Capacity: When drilling down to specific types of animal processing and milk production there were impressive increases in the main types of processing attributed to the AGRI Value-Added Equipment Grant.

Type of processing	**Changes Due to AGRI Value Added Grant**		
Meat:	Average Number Before Grant	Average Number After	Average Percentage Increase
Beef (n=12)	1264	1791	42%
Swine (n=12)	412	541	31%
Sheep/Goat (n=10)	61	79	30%
Bison (n=7)	838	1211	45%
Dairy:	Average Lbs. of Milk Before Grant	Average Lbs. of Milk After Grant	Average Percentage Increase
Milk (n=8)	712,000	1,275.000	79%
NOTE: Many of these processors are processing multiple species. Other animals processed include poultry and venison or a combination (i.e. all red meat). The averages shown are based upon those who provided counts. Among all of those who were already processing animals, the average increase per processor was 17%. One person started processing four different animals, which increased the average increase. One grantee was getting into meat processing and another into dairy processing but has not yet started production. The sample size for each product is small. These increases demonstrate progress gained by these organizations but should not be generalized.			

Positive Changes and Increases: The Value-Added Equipment grantees were asked if they had taken any specific actions that would results in an increase in products or revenue or both, and about how their gross revenue changed as a result of receiving the grant.

1. Positive Actions Taken

The most common actions driven by the AGRI Value-Added Equipment grant for half or more were offering new products or product extensions (53%) and increasing the amount of Minnesota grown and raised inputs (50%). One-third (32%) also added a revenue stream, roughly one-quarter (26%) increased the number of Minnesota producers they purchased from or offered a new service (22%).



The increases seen from those taking each action are impressive, with half or more *of each group* seeing the following gains:

- 5 or more new products
- 4-5 or more additional producers purchasing from Minnesota companies
- 2 or more new services or service options
- $35K or more spent on Minnesota grown/raised product inputs
- $95K or more in additional revenue streams

Increases	**Increases Due to AGRI Value Added Grant**		
Number:	Range of Increase	Median Increase	Average Increase
New products (n=36)	1-to-25	5	7
Producers purchasing from Minnesota Companies (n=18)	2-to-30K	4.5	9.1*
New Services (n=15)	1-to-16	2	3.5
Dollars:	Range of Increase	Median Increase	Average Increase
Dollars spent on Minnesota Grown/raised input (n=31)	$1K-to-$30M	$35K	$99K*
Dollars from new revenue stream (n=18)	$3K-to-$10M	$95K	$313K*
**Large outliers were removed from the base when calculating the average. The sample size for each action is small. These increases demonstrate progress gained by these organizations but should not be generalized.*			

In their own words, grantees talk about outcomes of their grants*:*

Products*:*

- *Increased sausage production, increased variety of product using less time and energy.* Kevin Pfeffer, Von Hanson's Meats
- *Without the grant, we would not have been able to start our venture. We offer 12+ beers on tap and at the start of 2020 had 10 part-time employees.* Deborah Torgersen, Torg Brewery

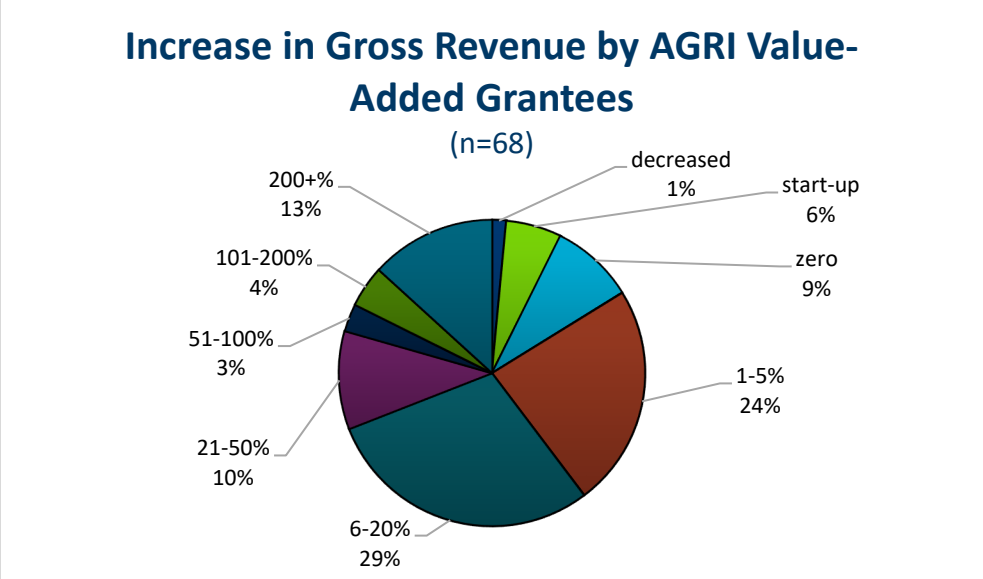
Services*:*

- *We were able to open a new custom meat processing business for the local farmers.* Amanda Isaacson, Backroad Meats
- *The grant was to install color sorter technology in our seed plant. We use it in every application, and it has brought us more customers and even more opportunities to out-compete competitors.* Jim Falk, Falk's Seed Farm

Spending on Minnesota inputs*:*

- *Additional dollars would simply be the dollars paid to dairy farmers for processing more milk at the plant.* Sarah Schmidt, AMPI
- *Our purchase of Minnesota commodities (largely dairy) has increased by over $400,000 annually as sales have increased.* Connor Wray, Jonny Pops

2. Increased Gross Revenue: Almost none of the Value-Added Equipment grantees saw revenue decrease and over three in ten saw an overall increase of more than 20%.



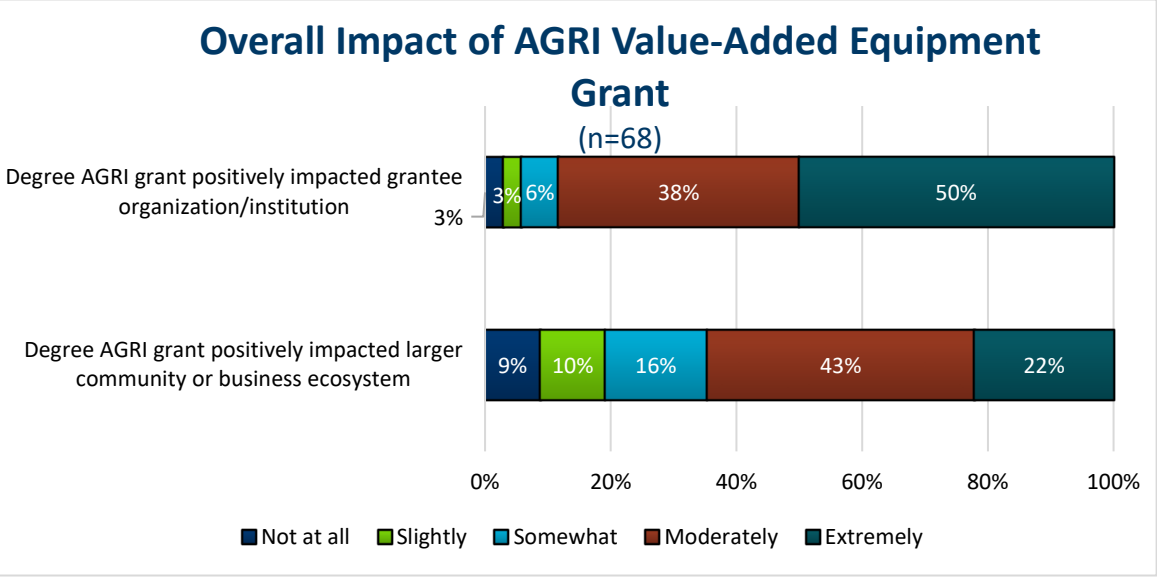
- *It's a sweet story. We manufacture fudge for fundraising using dairy and sugar products. The company has been growing very well (at least until COVID) with help from AGRI.* Stephen Klein, Klein Foods
- *This is very difficult to determine. The grant/loans acted as a foundation for what is happening today. COVID moved the business to where it is today but that couldn't have happened without the grant.* Martha Glanville, Sunrise Flour Mill

Perceived Impact Compared with Expectations: Almost all (94%) of the Value-Added Equipment grantees felt that the impact of the grant met or exceeded their expectations. For the 17 grantees who said the impact exceeded their expectations, the comments below express that sentiment. *Note: The complete set of comments can be found in the Appendix.*

- *The need and demand that is out there seems to continue more than we ever expected. This program has helped make it possible for us, without it, we may not have.* Amanda Briard, Friendliest Butcher
- *We didn't realize how important the impact of the improvements we made on our farm were until after we made them. Without the AGRI grant funding, we would continue to "make do" and struggle. The funding allowed us to innovate and succeed.* Kirstin van den Berg, Sawtooth Maple

Degree of Perceived Impact: And as shown in the chart below, when asked to rate impact on their organization and the wider community:

- Almost all felt it had a positive impact on their organization and one-half classified the impact as extremely positive.
- Over nine in ten felt it had a positive impact on their community/business ecosystem and over two in ten classified this wider impact as extremely positive.



For the 34 grantees who said the grant extremely positively impacted their organization, the comments below reflect their reasoning.

- *The grant made possible things that would have otherwise been financially challenging for us to accomplish.* It lowered financial risk. Joan Olson, Prairie Drifter Farm
- *We were considering stopping our egg enterprise because washing was such an obstacle and we didn't want to invest in additional storage facility for an enterprise that was not fitting into our goals for the farm because of the work and stress of daily washing. Because of the washer and refrigerated storage, we kept doing eggs, expanded our flock by 50 percent this year and will likely expand it by another 50 percent in the coming year.* Elizabeth O'Sullivan, Auntie Annie's Fields, LLC
- *It has made us efficient enough to survive and take on more processing since the COVID shutdowns.* Dale Tellinghuisen, Lakes Area Cooperative

For the 15 grantees who reported that the grant extremely positively impacted their community or business ecosystem, the comments below provide some examples for context.

- *We purchased a locker plant that had been successfully operated for decades. The owners were ready to retire and the facility was basically worn out. The established business, good will, was well worth the cost of buying and renovating the facility. These grant funds helped make it possible for us to do all the necessary renovations at one time.* Jeff Weiss
- *As we have grown we have sourced dramatically more products from local providers, and have added jobs while increasing wages.* Connor Wray, Jonny Pops
- *Our community and our business partners now have access to high quality, local, organic vegetables throughout the winter instead of buying from California.* Erin Johnson, Open Hands Farm

Program Improvements: Grantees were given the opportunity to suggest program improvements to the Value-Added Equipment Grant program and 18 provided ideas. Within these suggestions, 11 pertained to funding enhancements, and five were about the application process. Twelve (12) individuals commented on their satisfaction with the program and gratitude for receiving the grant. Here are a handful of comments in their own words:

- *I was impressed with the whole process and my experience in communicating with staff was very favorable. Be sure you keep a focus on having good, qualified staff hired.* Jim Falk, Falk's Seed Farm
- *Dedicate some grant funds to be used for sales and marketing of the products. Many people do not know how to sell their products or get them to market and this could help.* Grant Schoenberg, Stony Creek Dairy
- *It would be amazing if there was a simplified application (similar to the FSA micro loan which is for $50k or less) for small farmers. This application is too complicated for many new, emerging, immigrant or refugee farmers. Having a simpler application process would help make this great grant program more accessible to a greater population of producers.* Laura Frerichs, Loon Organics

Other Things MDA Might Fund: When asked about funding that MDA could potentially offer to sustain or enhance their organization or the community, 19 grantees responded with ideas including 7 related to different types of useful funding and six related to skilled training/intern/apprenticeships:

- *Huge need for more indigenous foods. We have a hard time sourcing produce that should be grown here but isn't — juniper, sea buckthorn, aronia berries, rhubarb, fresh herbs of any varietal. Incentivize non-mainstream crops to add diversity.* Scott Ervin, Norseman Distillery
- *Fund incumbent training. When new equipment arrives, there is funding for training new employees - but ultimately, we would like to train and promote our loyal staff.* Karie Kirschbaum, Soyko International
- *We could use more intern incentive programs. We need to get like-minded students into our industry to keep ag business impactfully growing.* Patrick Dombrovski, Dombrovski Meats
- *Projects deemed successful should be followed up with an option for a marketing grant to bring it to the marketplace.* Harlan Anderson, Idle Acres

Stakeholders Perspective: The shift to an annual program cycle for Value-Added grants has made them less usable.

- *If a company wants to do equipment in December, they may need to wait until the following October. Every 6 months, you can catch the pace of business.* Michael Sparby, AURI

The variety of applicants in the Value-Added Equipment program makes this innovative program particularly difficult to judge.

- *The difficulty is that you have a meat processor going against someone who is looking for a wash station for their apple orchard so literally apples and oranges. Multiple projects with divergent interests, so difficult for the reviewers. If they could get a consistent set of reviewers so that they are scoring on a regular basis, you could get more consistent outcomes. I'm not criticizing the reviewers, just each person brings a limited perspective, a big divergence depending on who that committee is.* Michael Sparby, AURI

Value-Added Feasibility

Projects: The Value-Added Feasibility grantees used the grant funds to evaluate or a range of issues, such as evaluating the market feasibility of Minnesota grown and produced organic pellets for livestock feed; investigating ways to improve the food distribution system between farmers/producers and businesses purchasing food (retail and food service) within a 100-mile radius of Detroit Lakes; and investigating value-added strategies to increase production and sale of local, organic lettuce.

There were four survey respondents who respondents about this grant. Three of the four felt it had a positive impact on their organization. When asked if their feasibility study helped them make any "go/no-go" decisions on any value-added, diversification or expansion projects, one said, "yes," one said "no," and the other two said "somewhat." Regardless, they were all asked to explain.

Insights mentioned included:

- *Having the feasibility study done helped us to understand the scalability of our idea. It helped us understand the need to modify our plans to align with our population base. Our feasibility study results were not favorable for implementation at that time. We have not yet been able to bring new products to our market to share with our community. We had to secure a personal loan to pay expenses related to this feasibility study, but then the reimbursement process went smoothly to pay back the local lender.* Mark Lange, Little Creek Creamery
- *(We) looked at markets and sales projected and realized there was a large demand. We are known for our products all over and without the funding for marketing and staffing we would not have had the reach. It has drawn people to the area and has helped make our community more rounded out. The reimbursement process was hard and confusing. It would be better if not so complicated.* Tracy Heald, Country Blossom Farm

> *It provided more clarity of the market segment and the value of the potential market. Our activity and research of diversity have allowed for other projects and partnerships. The partnerships, collaborations and information gained had great value even if the financial gains were not huge. Everyone worked well to make sure the projects were complete and the (reimbursement) process went as planned.* Chad Friese, Chippewa Valley Ethanol Company

NOTE: The person who indicated it has not positively impacted their organization nor aided them in decision-making indicated they have not yet completed their project.

Stakeholder Perspectives: The shift to an annual program cycle has made these grants less usable.

- *For VA-Feasibility, which is a wonderful program, it used to be a rolling grant. If a client came forward, they'd apply and do the review at any time. That process was very usable, I don't know why it changed, becoming less usable.* Michael Sparby, AURI

Key Findings and Recommendations

Staff are highly regarded by grantees/participants and stakeholders alike. Their accessibility is a key strength and stakeholders noted staff participation in regular planning calls, attending events and conferences to help get the program information out, and in turn, deepening relationships between MDA staff and relevant communities. Responsive and timely on information requests and very supportive when program applicants reach out for clarification, they are seen as hardworking, highly engaged in their work, and extremely helpful. They do a thorough job of administering the programs, solve problems creatively, and are open to discussing new ideas.

- We love working with the department. It is a phenomenal collaboration between them on the governmental regulatory side and us providing technical services. It is a feeder program for us, so it helps all of us. Michael Sparby, AURI

Programs are admired by other states. The AGRI programs are considered a great asset to Minnesota agriculture and are envied by residents of other states. The ability and willingness to be flexible and adaptive with the programs proved critically important during the COVID-19 outbreak and its aftermath.

The broad focus of the programs with a diverse mix of crops and species supported, large and small organizations funded, and urban and greater Minnesota investments, is considered a real strength by some.

- *It's essential to Minnesota with diverse crops and a lot of things going on in urban and greater Minnesota. The flexible, broad and innovative nature of the program can make investments where Minnesota needs a product, or something that can benefit our state in the long run such as sustainable agriculture. It's unique, which makes its strong.* Tamara Nelson, AgriGrowth

I also appreciate how they focus on current events. This year the response to civil issues, COVID and meat processing. It's well done in the areas they serve and pivoting to respond to challenges. Amber Glaeser, Minnesota Farm Bureau

The application and reimbursement processes work well. The application is considered highly usable and balanced in that it is not asking for too little or too much information in comparison with other grant applications such as USDA grants. The reimbursement process met or exceeded expectations for most and the proportion who said the process was much better than expected increased over time.

The AGRI program attracts a wide array of organizations. The proportion of grantees and cost-share participants who are women-owned businesses, newer organizations and smaller organizations all increased from 2015 to 2019.

The AGRI funds enhance current plans and promote increased revenue. For many farms and organizations, the AGRI funds make it easier to pursue, expedite or expand on stated goals. In addition, it allows for many to take

on something that would not have happened without the grant or cost-share. The proportion who credited the AGRI grant with enabling them to make an investment or change they could not have performed otherwise increased from about one-third in 2015 to just under half in 2019.

In addition, almost one-quarter of the farms and businesses saw an increase in gross revenue of 100% or more because of the grant or cost-share; and over four in ten saw an increase of more than 20%.

The programs are promoting community and/or economic development. Overall, 42% of these grantees/participants increased the number of people employed as a result of their AGRI grant or cost-share (either full-time or part-time, seasonally or permanently). Among those who increased employees, the average increase was 4-5 people (with 3 being permanent and 1-2 being seasonal).

Although most stakeholders did not offer specific numbers, they do see and hear about the community and economic development afforded by the grants and cost-share. Several mentioned the programs' ability to stimulate innovative ideas and problem solving. The help in scaling food businesses was also noted. The grants and cost-share help move an organization forward. Several appreciate the triple bottom line approach.

- *MDA honors the values in the region, <u>both</u> environmental stewardship and economic development. More pounds of foods or more growers at the expense of water quality just are not a thing for MDA. MDA considers environmental impact in their funding. Serving the underserved is the 3rd prong – They ask, "Are we getting the underserved to participate in this value chain and the agricultural economy?" i.e. Women farmers. Other agencies do some, MDA is leader in this area.* Cheryal Hills, Region Five Development Commission
- *I've seen the community development with VAE and meat processing. They bring value to the community as a whole. Wineries, craft brewers are also bringing value to the small communities.* Amber Glaeser, Minnesota Farm Bureau
- *A farmer's found a niche, on the side, using the cottage-kitchen food exemption. But how do they scale it up to a business which can employ them full time and create a community business in rural Minnesota? When working best, these programs make that bridge.* Stu Lorey, Minnesota Farmers Union

Some stakeholders did cite economic development data.

- *We do reports showing how the monies are circulating. We report on these grants broadly within a region. It is supported through recognized practices and respected 3rd party evaluator. Our results indicate that monies are circulating 5-7 times. When intentionally focused on underserved or BIPOC communities, there is even a better return.* Cheryal Hills, Region Five Development Commission
- *Once the growers sell the crop, they're getting $1000/ acre for the sale of turf seed, compared to soybean or corn $400- 500/ acre. It is spread around the economy and turf seed takes away risk due to tolerance of heavy rainfall. It creates jobs at the 3 processing facilities, both working in the plants and transportation.* Marv Zutz, Minnesota Turf Seed
- *In 2017 either Value-Added Equipment or Feasibility, for 4 projects we saw the total invested as reported by the client $86,000 and a capital $27 million and gross annual sales increase of $31 million. Creation of 37 new jobs and 13 retained (lost if not invested with this project).* Michael Sparby, AURI

The AGRI program has real and lasting impact. The range of outcomes is impressive and the top outcomes show how robust the uses are for the funds AGRI provides. For those awarded Crop Research (who had very unique goals), the top outcomes were sharing knowledge with the community/world, increasing the scope of learning and securing additional funding for university research. For the other programs, the top outcomes were increased efficiency, profitability, awareness of products, services, processes, or research or personal knowledge. While the top outcomes align with the primary goals, many recipients experienced other tangible and intangible outcomes and most of those who achieved a goal were able to sustain it.

Almost all (95%) said the impact met or exceeded expectations. Virtually all (99%) felt their AGRI grant or cost-share positively impacted their organization and 90% believe it positively impacted the wider community. Those who used the grants for an effort they could not have taken on otherwise were the most likely to say the grant was extremely impactful – for their organization and the community. Women business owners were also more positive about the impact the AGRI grant or cost-share had for their organizations.

Beyond the direct impact, the grant dollars or cost-share are facilitating new initiatives.

The application is needed in multiple languages.

- *English is not the first language for many of my clients. This is a challenge in these competitive processes. It does not mean s/he is not an excellent grower, but this is a challenge for limited English-speaking growers, ranchers and even mid-point processers. If the application is all in English (we have got a problem.) The MDA is the only state agency that has a multi-lingual application, but it hasn't moved into these programs.* Cheryal Hills, Region Five Development Commission

Allow funds for professional and technical services. Applicants often need help navigating the process and writing the grant application. There could be great ideas which folks can't submit because they don't turn that idea into information that is needed in the application. AURI only works with a portion of those seeking funds through these programs. Other independent grant writers assist other applicants, however, not all know of these resources or can afford to pay a grant writer. The perception of those who have served on review teams is that having a grant writer develop an application makes a difference in the scoring.

The match and the inability to receive advances is limiting.

The grants and cost-share database indicates that emerging farmers and diverse business enterprises continue to be underrepresented in the programs. Make sure they are afforded the opportunity to participate by removing any barriers such as upfront money, or match.

- *Emerging farmers is an important group, yet they might have problems putting monies up front, too. I understand that the department is being a good steward, but (this practice) may limit democratizing these opportunities.* Stu Lorey, Minnesota Farmers Union
- *I appreciate that some require a match, and some do not. Although in working with emerging and BIPOC farmers bringing forward a match is difficult.* Theresa Keaveny, Sustainable Farming Association
- *Consider removing the match within education so that colleges and high schools can access grants.* Keith Olander, Central Lakes College, AgCentric

Expand marketing and outreach. The website has improved over the years making finding the programs easier now, but for some it still lacks the visual appeal and compelling stories which would resonate with potential applicants. Continue to improve the website with a more user-friendly interface, reduce the amount of small text and make finding information easier. Share stories that go deep on the value of the programs.

Stakeholders understand the challenge of targeting information to those most in need. Providing press releases announcing open RFPs to a wide array of organizations serving diverse communities was considered promising. Others suggested webinars or workshops once the RFPs are issued. These stakeholders share the challenge of communicating about the programs and look to partner with AGRI on solutions.

- *There are so many different agriculture programs across entities. Targeting info to those most likely to need it is challenging. Some who have received grants and cost-shares, do it again and again, and that's fine. They know the value. But how about the others who are eligible?* Amber Glaeser, Minnesota Farm Bureau
- *Are they at the limit for marketing dollars spent? If not, more monies could be spent on marketing to provide equal access. People who know about the programs use them and use them well – others have no idea that they exist.* Alison Hohn, GrowNorth
- *We've done a workshop on AGRI VA grant, problem was it was two weeks before the deadline. It was recorded, well done and AGRI's new person put some time into walking through successful programs. We added a reviewer to share what they look for and what makes a grant successful and what to avoid. We did that work because AGRI doesn't. We just did the educational program because we feel farmers need to apply. We've attempted to fill the breach in their outreach and marketing. The department could use our recordings if they choose to.* Theresa Keaveny, Sustainable Farming Association
- *Minnesota Soybean Growers Association has it in the priorities that AGRI remains funded, although some growers still don't know the programs, so that's our challenge.* Tom Sluneka, Minnesota Soybean Growers Association

More monies are needed to achieve bigger goals. Agriculture/Food Processing is the second largest sector contributing to the state's GDP yet receives a small fraction of the budget. More monies invested in agriculture generally and these programs specifically could address so many tough challenges facing the state.

- *How do you address rural and urban healthful eating, community gardens and solving water quality and climate change? Minnesota could be a bellwether in so many areas with an investment in the agriculture budget.* Tamara Nelson, AgCentric

However, if program funding remains at current levels and applicant requests continue to exceed funds available consider clarifying program purpose and weighting this more heavily in application scoring. Is the purpose thriving rural communities, agriculture, or something else? Furthermore, consider whether the programs are working together to achieve the desired goals.

- *I think the existing grants are great but give some thought to how the programs work together. Sometimes the grant programs can be siloed and the more we can create a sense of integration and complementarity, they could add up to bigger goals.* Tim Penny, Southeastern Minnesota Initiative Foundation

One stakeholder suggested that if an individual has an open award, perhaps they should not be eligible for a new one. He also suggested considering a lifetime cap at the individual or business unit at or around $200,000.

Continue to invest in local food businesses and processing. Although Minnesota has a large food processing industry, several stakeholders noted the state does not have enough food processing plants. AGRI could help along the value chain from local growers to local processors yielding local food, fiber ingredients and value-added products.

- *It would be great to identify our processing strengths: the types of growers, size of growers and processing capabilities. This would identify the needs by town, allowing them to shift their ag to higher value-added processing. Fund a stand-alone study for processing. Such a study is right at the balance between DEED and MDA. MDA's hands in agriculture is a natural partnership to DEED in where to invest.* Alison Hohn, Grow North
- *At the Agriculture Innovation Campus in Crookston there is a great opportunity for processing innovation, to get opportunities from the farm gate to the grocery shelf. This will be a new opportunity finally for testing ideas to make an impact on the processing problems and (address the) cry for more local processing. AGRI could help with that.* Tom Slunecka, Minnesota Soybean Growers Association
- *Local foods are a way for us to get back to small-scale farming, family farming and community. There is enormous potential too, and a legitimate role for the government to play here as economic development. When you want to bring a facility to the industrial park in Mankato, there is always involvement by the city and county. For a tiny fraction of that a person could build a local food business. With a small fraction of the subsidies, you could grow the local food sector and bring vitality to small towns all across the state.* Tim Penny, Southern Minnesota Initiative Foundation

Develop and launch cutting-edge grant programs and knowledge sharing practices. Take the long view and invest in cutting-edge ideas and technologies, cleaner and greener practices, and regenerative agriculture. Consider making investments in measurement, data capture and additional knowledge sharing tools so that what is learned of these newer practices is widely available and understood.

- *Look at the program emphasis, highlight, prioritize different types of programs. We've seen the stuff you usually see over 10 – 20 years, no emphasis on stuff on the horizon. Need more focus on cutting-edge technology or concepts. The stuff we are seeing is carbon credits, hydrogen economy, bio-digesters, it would be nice to see grant programs following suit.* Michael Sparby, AURI

- *A mechanism for a county to buy a (shared) reduce tillage machine and not have the farmer make that $100k investment on their own. And everyone runs the biofuel plant we've been running for 30-40 years. Can we reduce the carbon footprint? Can AGRI be a driver of that making plants cleaner and greener?* Tom Slunecka, Minnesota Soybean Growers Association
- *Regenerative agriculture is where we need to move to survive in the future.* Alison Hohn, Grow North

APPENDIX

Staff Discussions

1. Guide

Hi, I'm Karen Schultz, a part of the Transform research team assessing the AGRI Program. Our first step is to interview the program staff to further understand the program goals, perceived impacts, challenges and opportunities.

For this interview I'm going to ask you a series of approximately 14 questions that go from high level to details to future considerations. This interview will take no more than 45 minutes.

Q1: You will be recorded. Are you okay with that?

- A1 - "Yes." – I will then start recording now then.
- A2 - "No." – I will then just be taking notes then.

Q2: Can you give me a high-level overview of what you do for the Minnesota Department of Agriculture AGRI Program?

High level:

Q3: What goals were set for the program early on that have materialized more or less as expected?

Q4: Which ones, if any, have not for some reason? Do you have a sense of why?

Q5: What measures do you think would showcase the impact/outcome (not just output) from grantees and why.

Q5b: How do you think grantees might assess the value or the impact of the grant? (measures, intangibles, etc.) Possible probes or examples:

- What would be their measures of success?
- And, do you have any insights on things they a) might track, b) be able to easily answer, c) not be able to answer for some reason or that d) seem logical to ask about/track but are not?

Q6: What "intangible" benefits do you see that may be hard to quantify (with a single measure or a number of any kind)?

Q7: What kinds of impact seem to be most important to continue at this budgeted level? (Any politically charged areas?)

Q8: What is happening in Minnesota ag, bioenergy and food production which may affect desired impacts?

Details to better understand important nuances:

Walk me through a program year:

Q9: How is it marketed? How do those who qualify learn of the opportunity? How many apply/ are awarded? Why would someone qualify and not be awarded? Are there any barriers to participating in this program?

Q10: Do you have a story or an example that highlights the best aspects of the program?

Q11: Do you have a story or an example that highlights where there is a void or it is difficult?

Q12: Any definitions you use to make sure we get to the heart of things consistently?

Future considerations:

Q13: Do you feel the emphasis, target market and/or any other major aspect of the program should change to meet more needs and/or be better positioned to continue?

Q14: Any smaller changes you'd like to see?

That's all the questions I have. If you have additions in the next two business days, please feel free to contact me. Thank you for your time!

2. Staff Participants

The following MDA employees were interviewed as background to this study: Ashley Bress, Brian Erickson, Paul Hugunin, Ann Kuzj, Emily Mehr, Andrea Vaubel, and Courtney VanderMey.

Stakeholder Conversations

1. Guide

Respondent:

Phone:

Organization:

Date: Time:

MDA Agricultural Growth, Research, and Innovation (AGRI) Programs

Thank you for agreeing to participate in this phase of the AGRI program assessment

First, which program or programs are you most familiar with?

- Livestock Investment
- Crop Research
- Sustainable Ag
- New Market Development (tradeshows and in-store demonstrations)
- Value-Added Equipment
- Value-Added Feasibility

What is working well with the programs, (Pause) and are there any challenges in your opinion?

Working Well

Challenges

Can you describe any specific impacts on your constituents/ members?

Are there other opportunities to support agriculture, food processing and/ or bioenergy which MDA may be missing?

2. Stakeholders Participating:

Name	**Organization**
Cheryal Hills	Region Five Development Commission
Tim Penny	Southern Minnesota Initiative Foundation
David Preisler	Minnesota Pork
Joe Smentek & Tom Slunecka (jointly)	Minnesota Soybean Growers Association
Amber Glaeser	Minnesota Farm Bureau
Stu Lorey	Minnesota Farmers Union
Marv Zutz	Minnesota Turf Seed
Theresa Keaveny	Sustainable Farming Association
Tamara Nelson	AgriGrowth
Allison Hohn	Grow North
Jan Joannides	Renewing the Countryside
Michael Sparby	AURI
Keith Olander	Central Lakes College, AgCentric

Grantee Conversations

1. Guide

Respondent:

Organization:

Type:

Email:

Phone:

Date, Time:

The Story:

2. Grantees Who Shared Their Stories:

First Name	Last Name	Organization
John	Beckwith	Minnesota Association of Resource Conservation and Development Councils, Inc
Alan	Krause	Cannon River Watershed Partnership
Steve	Poppe	University of Minnesota
Sue	Wiegrefe	University of Minnesota
Robin	Moore	Land Stewardship Project
Chad	Friese	Chippewa Valley Ethanol (CVEC)
Kevin	Smith	University of Minnesota
Mike	Swanson	Far North Spirits
Walid	Sadok	University of Minnesota
Matt	Clark	University of Minnesota
Nancy	Ehlke	University of Minnesota
Eric	Hoese	Hoese Dairy
Juan	Solorzano	KBQ
Carey	Tweten	Valley Acres Dairy, LLC
BethyJo	Jeutten	Jeutten's Oakwood Angus
Judy	Worm	Clayhill Farm and Forest
Jillian	McGary	Mostly Made
Caleb	Krieneke	Popped Kerns
Ameeta	Jaiswal	Panache Apples
Debbie	Fairbanks	Oak Valley Creations
Valerie	Notermann	Savor More Food
Deeann	Lufkin	CannonBelles Cheese
Sam	Akers	Lorentz Meats
Adam	Wagner	Vertical Malt
Grant	Schoenberg	Stony Creek Dairy
Valerie	Kloss	Grand Champion Meats

Online Survey Participant Characteristics & Responses

Individuals: Owner, Manager or Principal Operator/Researcher Demographics by Program and Year of Grant or Cost-Share.

NOTE: For some characteristics, the percentages sum to slightly more or less than 100% due to rounding.

Demographics of Owner, Manager or Principal Operator/Researcher	**Program Type** (overall segment sample sizes)						Total
	CR (n=22)	LI (n=130)	SA (n=15)	NM (n=49)	VA-E (n=68)	VA-F (n=4)	
Gender: (n=272)							
Male	55%	85%	54%	35%	52%	75%	65%
Female	45%	15%	46%	65%	48%	25%	35%
Age: (n=272)							
20-39	12%	65%	18%	21%	23%	0%	41%
40-49	29%	23%	27%	28%	24%	25%	25%
50-59	35%	6%	27%	19%	26%	50%	17%
60+	24%	6%	27%	32%	27%	25%	18%
Key Segments: (n=257)							
First-generation farmer, researcher or owner	44%	27%	64%	30%	45%	50%	35%
Women business owner	13%	15%	36%	53%	45%	25%	30%
Military veteran	0%	5%	9%	2%	13%	0%	6%
LGBTQ	6%	1%	9%	9%	3%	0%	4%
Individual with disability	0%	1%	0%	2%	3%	0%	2%
BIPOC	0%	1%	0%	0%	2%	0%	1%
Race/Ethnicity: (n=263)							
White	88%	98%	100%	96%	95%	100%	97%
Asian	6%	0%	0%	2%	3%	0%	2%
Hispanic	0%	2%	0%	0%	0%	0%	1%
American Indian	0%	0%	0%	0%	2%	0%	0.4%
Black	0%	0%	0%	0%	0%	0%	0%

- *Sample sizes are small. Use caution when generalizing at the cell level.*
- *The base size varies for the demographics because percentages exclude those who selected "prefer not to answer."*
- *Base also excludes 7 individuals who work for non-profits. They were asked about their executive director and/or board. Within this group, 5 noted women, 1 an American Indian and 1 a Hispanic individual as the director or on the board.*

Demographics of Owner, Manager or Principal Operator/Researcher	Year Grant or Cost Share was Awarded				
	2015 (n=34)	2016 (n=44)	2017 (n=42)	2018 (n=67)	2019 (n=101)
Gender: (n=272)					
Male	73%	61%	72%	69%	59%
Female	27%	39%	28%	31%	41%
Age: (n=272)					
20-39	26%	50%	55%	38%	39%
40-49	29%	20%	17%	27%	27%
50-59	19%	13%	14%	19%	17%
60+	26%	18%	14%	16%	18%
Key Segments: (n=257)					
First-generation farmer, researcher or owner	47%	35%	36%	32%	33%
Women business owner	20%	30%	22%	30%	36%
Military veteran	0%	5%	3%	10%	8%
LGBTQ	3%	0%	6%	2%	5%
Individual with disability	0%	3%	0%	0%	3%
BIPOC	0%	0%	0%	3%	0%
Race/Ethnicity: (n=263)					
White	100%	95%	100%	91%	99%
Asian	0%	0%	0%	5%	1%
Hispanic	0%	3%	0%	2%	0%
American Indian	0%	0%	0%	2%	0%
Black	0%	0%	0%	0%	0%

Organizations: Organizations or institutions characteristics by Program and Year of Grant or Cost-Share. *NOTE: For some characteristics, the percentages sum to slightly more or less than 100% due to rounding.*

Characteristics of Organization, Farm or Institution (n=288)	**Program Type** (overall segment sample sizes)						Total
	CR (n=22)	LI (n=130)	SA (n=15)	NM (n=49)	VA-E (n=68)	VA-F (n=4)	
Years in business:							
<=5 years	9%	42%	20%	33%	16%	25%	31%
6-10	9%	25%	20%	45%	19%	25%	26%
11+	64%	32%	60%	22%	59%	50%	41%
Other	18%	1%	0%	0%	6%	0%	3%
Still in business	*100%*	*99%*	*93%*	*98%*	*99%*	*100%*	*99%*
Structure of Organization:							
Sole proprietorship	0%	64%	33%	14%	16%	0%	37%
Partnership	0%	8%	0%	6%	6%	0%	6%
LLP	0%	2%	13%	0%	1%	0%	2%
LLC	0%	21%	7%	51%	43%	75%	30%
Corporation	5%	5%	7%	24%	28%	0%	14%
Nonprofit	18%	0%	20%	0%	0%	0%	2%
Academic/research-funded institution	77%	0%	7%	0%	0%	0%	6%
Other (trusts, co-ops, combinations, etc.)	0%	1%	13%	4%	6%	25%	3%
Role in Organization:							
President/Head of Farm/organization	9%	53%	27%	57%	41%	50%	46%
Co-owner	0%	49%	33%	41%	43%	50%	42%
Manager/Supervisor	9%	16%	7%	10%	19%	0%	15%
Employee/Contractor	0%	6%	20%	0%	3%	0%	5%
Researcher/Extension educator	23%	1%	7%	0%	0%	0%	2%
Professor/Faculty	59%	1%	0%	0%	0%	0%	5%
Other	5%	1%	13%	4%	10%	0%	5%
Average Number of Employees* in 2019:							
Full-time (mean*)	NA	1.5	2.5	3.1	8.4	14.5	3.8
Part-time (mean)	NA	1.7	1.2	2.8	7.2	2.3	3.3
Seasonal Full-time (mean*)	NA	0.1	0.3	1.3	0.3	0.5	0.4
Seasonal Part-time (mean*)	NA	0.8	1.6	0.8	2.0	1.7	1.1
Organizational Revenue* in 2019:							
Less than $25,000	NA	12%	33%	14%	6%	0%	12%
$25,000-$99,999	NA	22%	17%	22%	12%	0%	19%
$100,000-$499,999	NA	31%	42%	33%	28%	50%	31%
$500,000-$999,999	NA	10%	0%	10%	12%	25%	10%
$1,000,000-$9,999,999	NA	11%	0%	14%	29%	0%	16%
$10,000,000+	NA	15%	8%	6%	13%	25%	13%

Sample sizes are small. Use caution when generalizing at the cell level.
**Number of employees and revenue not asked of non-profits or academic institutions (n=263). Large outliers were removed from the base when calculating the average.*

Characteristics of Organization, Farm or Institution	Year Grant or Cost Share was Awarded				
	2015 (n=34)	2016 (n=44)	2017 (n=42)	2018 (n=67)	2019 (n=101)
Years in business:					
<=5 years	12%	18%	36%	31%	40%
6-10	38%	30%	12%	31%	22%
11+	50%	50%	48%	34%	35%
Other	0%	2%	5%	3%	4%
Still in business	*100%*	*98%*	*98%*	*99%*	*99%*
Structure of Organization:					
Sole proprietorship	32%	52%	33%	36%	34%
Partnership	9%	2%	14%	6%	3%
LLP	3%	0%	0%	4%	2%
LLC	29%	27%	31%	24%	34%
Corporation	12%	11%	10%	16%	15%
Nonprofit	3%	2%	2%	1%	3%
Academic/research-funded institution	9%	2%	7%	6%	7%
Other (trusts, co-ops, combinations, etc.)	3%	2%	2%	6%	3%
Role in Organization:					
President/Head of Farm/organization	41%	32%	48%	58%	46%
Co-owner	47%	59%	45%	31%	38%
Manager/Supervisor	6%	11%	14%	19%	16%
Employee/Contractor	6%	5%	7%	6%	2%
Researcher/Extension educator	3%	0%	5%	1%	3%
Professor/Faculty	9%	2%	2%	4%	6%
Other	3%	7%	0%	4%	6%
Average Number of Employees* in 2019:					
Full-time (mean)	4.5	1.9	3.7	3.9	4.2
Part-time (mean)	4.7	2.3	5.2	2.6	3.1
Seasonal Full-time (mean)	0.1	0.1	0.1	0.2	0.2
Seasonal Part-time (mean)	1.6	0.9	0.9	1.5	0.9
Organizational Revenue in 2019:					
Less than $25,000	7%	12%	5%	11%	16%
$25,000-$99,999	17%	19%	21%	13%	22%
$100,000-$499,999	21%	29%	31%	35%	33%
$500,000-$999,999	10%	17%	10%	16%	3%
$1,000,000-$9,999,999	28%	7%	18%	16%	14%
$10,000,000+	17%	17%	15%	8%	11%

**Number of employees and revenue not asked of non-profits or academic institutions (n=263). Large outliers were removed from the base when calculating the average.*

Livestock Investment (n=130)	Upfront Goal	Achieved Goal to Any Degree	Degree Outcome Achieved				Sustained Outcome
			Not at all	Minimally	Moderately	Substantially	
Product/Process Goals							
To increase the efficiency of the operation (more output per input, increase employee efficiency, etc.)	61%	65%	35%	4%	29%	32%	59%
To raise healthier animals/crops	56%	58%	42%	4%	29%	25%	52%
To improve animal welfare	55%	66%	34%	3%	32%	32%	58%
To invest in innovation (more agile processes, more automation, fewer inputs, more efficient outputs, etc.)	49%	42%	58%	3%	21%	18%	34%
To grow or produce more and/or meet more demand	38%	33%	67%	2%	14%	17%	30%
To improve the quality of products/services	26%	35%	65%	5%	20%	10%	27%
To increase value-added production	22%	23%	77%	2%	9%	12%	15%
To increase employee safety	21%	25%	75%	2%	11%	12%	21%
To comply better with regulations (food safety, etc.)	12%	15%	85%	3%	7%	5%	12%
To investigate/evaluate or conduct a trial run of an alternative product/process	2%	3%	97%	0%	2%	1%	2%
For some other product/process goal. Please briefly specify here:	5%	4%	96%	2%	0%	2%	3%
Financial Goals							
To increase long-term profitability of the business/farm	73%	62%	38%	8%	30%	24%	54%
To decrease debt	50%	60%	41%	22%	25%	12%	45%
To improve the balance sheet with new equipment, vehicles and/or buildings	30%	44%	56%	6%	21%	17%	39%
To reduce labor costs	29%	28%	72%	3%	17%	8%	25%
To improve our opportunity to secure more financing	25%	28%	72%	5%	12%	12%	22%
To increase sales	13%	23%	77%	5%	10%	8%	19%
For some other financial goal.	2%	3%	97%	1%	1%	2%	3%
Environmental Goals							
To find or move toward a more sustainable practice/process for our farm/business	44%	45%	55%	2%	30%	12%	41%
To comply with environmental requirements or recommendations	34%	38%	63%	3%	17%	17%	32%
To reduce energy use	29%	32%	70%	8%	15%	7%	29%
To make products/processes more environmentally friendly	26%	24%	77%	5%	13%	5%	18%
To become more energy efficient (more output per kWh or therm)	18%	21%	79%	2%	12%	6%	15%
To become more energy independent (use more renewable energy, produce some of our own energy	2%	2%	98%	0%	1%	1%	2%
For some other environmental goal.	2%	2%	98%	0%	0%	2%	2%
Other Goals							
To increase our ability to bring in a new generation of owners/operators	52%	46%	54%	2%	19%	25%	42%
To increase optimism about the future of the operation	45%	56%	44%	3%	24%	29%	49%
To improve personal satisfaction/mental health	37%	50%	50%	3%	23%	24%	47%
To increase my own knowledge	33%	53%	47%	5%	29%	18%	46%
To have a positive impact on the community	30%	26%	74%	2%	16%	9%	24%
To advance our succession or transition plan	29%	35%	65%	5%	13%	17%	32%
To learn new skills	22%	31%	69%	1%	15%	15%	25%
To create jobs	21%	24%	77%	6%	12%	5%	20%
To increase hourly wage of some/all employees	5%	6%	94%	1%	3%	2%	6%
For some other goal.	1%	2%	0%	0%	0%	100%	2%

Crop Research (n=22)	Upfront Goal	Achieved Goal to Any Degree	Degree Outcome Achieved				Sustained Outcome
			Not at all	Minimally	Moderately	Substantially	
Product/Process Goals							
To share knowledge with the community/world (publish, webinars, seminars, etc.)	77%	95%	5%	5%	27%	64%	91%
To increase the adoption of new/better processes and technologies by/for farmers, food processors or bioenergy	73%	55%	50%	5%	18%	27%	41%
To secure funding for the university/organization (to further its stated goals and plans)	59%	73%	27%	9%	18%	45%	64%
To evaluate processes or technologies (to determine if they are beneficial, harmful and/or worthy of investment/adoption	59%	64%	36%	0%	27%	36%	55%
To make agricultural products/processes more environmentally friendly	55%	55%	45%	5%	23%	27%	41%
To increase the scope of learning (able to explore new unfunded areas, generate research spin-offs, etc.)	50%	82%	18%	0%	9%	73%	73%
To increase the understanding of new/alternative ag processes, food production and bioenergy	45%	68%	36%	0%	18%	45%	50%
To establish or enhance the credentials of the university/organization as an expert/leader in a particular area	14%	55%	45%	0%	23%	32%	55%
To increase my stature or visibility within the university/organization (promotions, tenure)	9%	36%	64%	5%	14%	18%	27%
For some other awareness/networking goal	5%	23%	77%	0%	9%	14%	23%
Other Goals							
To have a positive impact on the community	77%	86%	18%	9%	50%	23%	68%
To increase my own knowledge	68%	100%	0%	9%	36%	55%	86%
To learn new skills	27%	50%	50%	0%	27%	23%	41%
To increase our ability to bring in a new generation of owners/operators	14%	18%	82%	9%	5%	5%	18%
To advance our succession or transition plan	9%	18%	82%	0%	5%	14%	14%
To increase optimism about the future of the operation	5%	23%	77%	0%	5%	18%	23%
To create jobs	5%	14%	86%	5%	9%	0%	5%
To improve personal satisfaction/mental health	0%	27%	73%	0%	27%	0%	23%
To increase hourly wage of some/all employees	0%	9%	91%	0%	9%	0%	9%
For some other goal	14%	14%	0%	0%	67%	33%	14%

Sustainable Agriculture (n=15)	Upfront Goal	Achieved Goal to Any Degree	Degree Outcome Achieved				Sustained Outcome
			Not at all	Minimally	Moderately	Substantially	
Product/Process Goals							
To invest in innovation (more agile processes, more automation, fewer inputs, more efficient outputs, etc.)	60%	40%	60%	20%	0%	20%	33%
To raise healthier animals/crops	60%	53%	47%	0%	27%	27%	40%
To investigate/evaluate or conduct a trial run of an alternative product/process	60%	60%	40%	0%	27%	33%	33%
To increase the efficiency of the operation (more output per input, increase employee efficiency, etc.)	47%	33%	67%	13%	0%	20%	33%
To improve animal welfare	33%	33%	67%	7%	20%	7%	13%
To increase value-added production	33%	13%	87%	0%	7%	7%	13%
To improve the quality of products/services	27%	27%	73%	27%	0%	0%	20%
To grow or produce more and/or meet more demand	27%	20%	80%	7%	0%	13%	20%
To comply better with regulations (food safety, etc.)	13%	20%	80%	7%	7%	7%	20%
To increase employee safety	0%	0%	100%	0%	0%	0%	0%
For some other product/process goal	0%	7%	93%	0%	7%	0%	7%
Financial Goals							
To increase long-term profitability of the business/farm	73%	47%	53%	7%	27%	13%	40%
To reduce labor costs	33%	33%	67%	0%	27%	7%	27%
To increase sales	27%	27%	73%	0%	20%	7%	27%
To decrease debt	7%	7%	93%	7%	0%	0%	0%
To improve our opportunity to secure more financing	0%	7%	93%	0%	7%	0%	0%
To improve the balance sheet with new equipment, vehicles and/or buildings	0%	0%	100%	0%	0%	0%	0%
For some other financial goal.	13%	27%	73%	0%	13%	13%	27%
Environmental Goals							
To find or move toward a more sustainable practice/process for our farm/business	87%	67%	33%	7%	33%	27%	60%
To make products/processes more environmentally friendly (e.g., lower greenhouse gas emissions, reduced carbon footprint	53%	33%	67%	7%	13%	13%	20%
To reduce energy use	13%	7%	93%	0%	0%	7%	7%
To become more energy efficient (more output per kWh or therm)	0%	0%	100%	0%	0%	0%	0%
To become more energy independent (use more renewable energy, produce some of our own energy	0%	0%	100%	0%	0%	0%	0%
To comply with environmental requirements or recommendations	0%	20%	80%	7%	7%	7%	20%
For some other environmental goal.	13%	7%	93%	0%	7%	0%	7%
Awareness Goals							
To increase awareness of our products/services/processes	40%	47%	53%	0%	27%	20%	47%
To engage with more organizations (public or private)	40%	33%	67%	0%	20%	13%	27%
To increase the use of more Minnesota grown/raised products	33%	20%	80%	0%	20%	0%	20%
To expand into new markets (e-commerce, different processers, new outlets, etc.)	27%	7%	93%	0%	0%	7%	7%
To create more business partnerships	20%	33%	67%	7%	20%	7%	33%
To help us source or process more Minnesota grown/raised products	20%	7%	93%	0%	0%	7%	7%
To participate in more tradeshows	0%	7%	93%	7%	0%	0%	0%
To increase the number of product demos	0%	0%	100%	0%	0%	0%	0%
For some other awareness/networking goal	7%	7%	93%	0%	7%	0%	7%
Other Goals							
To increase my own knowledge	67%	100%	0%	0%	60%	40%	87%
To learn new skills	53%	47%	53%	0%	40%	7%	40%
To have a positive impact on the community	40%	27%	73%	7%	20%	0%	7%
To increase optimism about the future of the operation	20%	60%	40%	7%	33%	20%	47%
To improve personal satisfaction/mental health	13%	13%	87%	0%	7%	7%	13%
To increase our ability to bring in a new generation of owners/operators	7%	7%	93%	0%	0%	7%	7%
To create jobs	7%	20%	80%	13%	7%	0%	7%
To advance our succession or transition plan	0%	7%	93%	0%	7%	0%	7%
To increase hourly wage of some/all employees	0%	7%	93%	7%	0%	0%	0%
For some other goal	7%	0%	0%	0%	0%	0%	0%

New Market Development (n=49)	Upfront Goal	Achieved Goal to Any Degree	Degree Outcome Achieved				Sustained Outcome
			Not at all	Minimally	Moderately	Substantially	
Product/Process Goals							
To grow or produce more and/or meet more demand	37%	45%	55%	24%	6%	14%	31%
To increase value-added production	20%	24%	76%	8%	12%	4%	20%
To improve the quality of products/services	18%	27%	73%	14%	4%	8%	20%
To invest in innovation (more agile processes, more automation, fewer inputs, more efficient outputs, etc.)	10%	12%	88%	6%	2%	4%	6%
To increase the efficiency of the operation (more output per input, increase employee efficiency, etc.)	8%	8%	92%	2%	2%	4%	4%
To investigate/evaluate or conduct a trial run of an alternative product/process	8%	6%	94%	0%	2%	4%	6%
To comply better with regulations (food safety, etc.)	2%	4%	96%	2%	0%	2%	4%
To raise healthier animals/crops	2%	2%	98%	0%	2%	0%	2%
To increase employee safety	0%	0%	100%	0%	0%	0%	0%
To improve animal welfare	0%	0%	100%	0%	0%	0%	0%
For some other product/process goal	22%	8%	92%	0%	0%	8%	8%
Financial Goals							
To increase sales	71%	76%	27%	12%	31%	31%	55%
To increase long-term profitability of the business/farm	33%	41%	59%	16%	12%	12%	22%
To reduce labor costs	24%	24%	78%	8%	8%	6%	10%
To decrease debt	20%	29%	71%	10%	12%	6%	16%
To improve our opportunity to secure more financing	8%	2%	98%	2%	0%	0%	0%
To improve the balance sheet with new equipment, vehicles and/or buildings	2%	2%	98%	0%	2%	0%	0%
For some other financial goal.	12%	10%	92%	0%	4%	4%	10%
Environmental Goals							
To make products/processes more environmentally friendly	6%	8%	92%	2%	4%	2%	6%
To find or move toward a more sustainable practice/process for our farm/business	6%	6%	94%	0%	4%	2%	4%
To comply with environmental requirements or recommendations	6%	4%	96%	2%	2%	0%	2%
To reduce energy use	4%	4%	96%	2%	2%	0%	2%
To become more energy efficient (more output per kWh or therm)	2%	2%	98%	0%	2%	0%	2%
To become more energy independent (use more renewable energy, produce some of our own energy)	2%	0%	100%	0%	0%	0%	0%
For some other environmental goal.	6%	4%	96%	0%	4%	0%	4%
Awareness Goals							
To increase awareness of our products/services/processes	84%	76%	27%	12%	33%	29%	67%
To expand into new markets (e-commerce, different processers, new outlets, etc.)	67%	59%	43%	4%	24%	29%	51%
To create more business partnerships	63%	51%	49%	10%	24%	16%	39%
To increase the number of product demos	61%	61%	41%	8%	18%	33%	31%
To participate in more tradeshows	51%	43%	57%	2%	20%	20%	27%
To engage with more organizations (public or private)	45%	45%	57%	14%	16%	12%	24%
To increase the use of more Minnesota grown/raised products	35%	24%	78%	0%	20%	2%	20%
To help us source or process more Minnesota grown/raised products	20%	20%	80%	2%	16%	2%	14%
For some other awareness/networking goal	0%	4%	96%	0%	0%	4%	4%
Other Goals							
To have a positive impact on the community	35%	20%	80%	6%	8%	6%	14%
To increase optimism about the future of the operation	33%	43%	57%	6%	10%	27%	31%
To increase my own knowledge	29%	47%	53%	8%	20%	18%	37%
To learn new skills	24%	24%	78%	0%	10%	12%	18%
To improve personal satisfaction/mental health	22%	33%	67%	2%	14%	16%	27%
To create jobs	22%	18%	82%	4%	2%	12%	12%
To increase hourly wage of some/all employees	18%	16%	84%	4%	2%	10%	8%
To advance our succession or transition plan	10%	8%	94%	0%	4%	2%	6%
To increase our ability to bring in a new generation of owners/operators	10%	6%	94%	0%	4%	2%	6%
For some other goal	2%	4%	0%	0%	50%	50%	4%

Value Added - Equipment (n=68)	Upfront Goal	Achieved Goal to Any Degree	Degree Outcome Achieved				Sustained Outcome
			Not at all	Minimally	Moderately	Substantially	
Product/Process Goals							
To grow or produce more and/or meet more demand	74%	65%	35%	15%	4%	46%	60%
To increase the efficiency of the operation (more output per input, increase employee efficiency, etc.)	66%	65%	35%	18%	0%	47%	60%
To increase value-added production	66%	56%	44%	3%	16%	37%	49%
To improve the quality of products/services	62%	63%	38%	22%	4%	35%	59%
To invest in innovation (more agile processes, more automation, fewer inputs, more efficient outputs, etc.)	62%	56%	44%	13%	3%	40%	51%
To comply better with regulations (food safety, etc.)	60%	59%	41%	3%	16%	40%	57%
To increase employee safety	38%	46%	54%	1%	19%	25%	41%
To improve animal welfare	6%	3%	97%	0%	1%	1%	1%
To raise healthier animals/crops	4%	6%	94%	0%	3%	3%	4%
To investigate/evaluate or conduct a trial run of an alternative product/process	4%	3%	97%	0%	0%	3%	1%
For some other product/process goal. Please briefly specify here:	7%	1%	99%	0%	0%	1%	1%
Financial Goals							
To increase long-term profitability of the business/farm	68%	57%	44%	7%	26%	22%	51%
To increase sales	60%	62%	40%	1%	31%	28%	59%
To improve the balance sheet with new equipment, vehicles and/or buildings	35%	54%	46%	1%	29%	24%	43%
To reduce labor costs	28%	35%	65%	3%	25%	7%	28%
To decrease debt	22%	31%	69%	9%	18%	4%	26%
To improve our opportunity to secure more financing	16%	22%	78%	3%	9%	10%	15%
For some other financial goal	3%	3%	97%	0%	0%	3%	3%
Environmental Goals							
To become more energy efficient (more output per kWh or therm)	31%	28%	72%	7%	13%	7%	25%
To reduce energy use	26%	31%	69%	6%	21%	4%	26%
To find or move toward a more sustainable practice/process for our farm/business	24%	21%	79%	3%	13%	4%	18%
To make products/processes more environmentally friendly (e.g., lower greenhouse gas emissions, reduced carbon footprint)	19%	15%	85%	0%	12%	3%	10%
To comply with environmental requirements or recommendations	12%	10%	90%	0%	7%	3%	9%
To become more energy independent (use more renewable energy, produce some of our own energy)	0%	1%	99%	0%	1%	0%	1%
For some other environmental goal.	1%	4%	96%	0%	1%	3%	4%
Awareness Goals							
To increase the use of more Minnesota grown/raised products	60%	57%	43%	4%	35%	18%	53%
To expand into new markets (e-commerce, different processers, new outlets, etc.)	47%	41%	59%	1%	16%	24%	41%
To help us source or process more Minnesota grown/raised products	43%	41%	59%	4%	24%	13%	31%
To create more business partnerships	37%	35%	66%	4%	16%	13%	31%
To engage with more organizations (public or private)	26%	24%	76%	6%	10%	7%	16%
To increase awareness of our products/services/processes	25%	47%	54%	6%	24%	16%	40%
To participate in more tradeshows	7%	7%	93%	0%	4%	3%	7%
To increase the number of product demos	7%	13%	87%	1%	9%	3%	6%
For some other awareness/networking goal	0%	3%	97%	0%	0%	3%	3%
Other Goals							
To have a positive impact on the community	54%	47%	53%	3%	34%	10%	40%
To create jobs	53%	50%	51%	13%	12%	24%	44%
To increase optimism about the future of the operation	34%	44%	56%	1%	13%	29%	41%
To increase hourly wage of some/all employees	32%	37%	63%	4%	13%	19%	37%
To increase our ability to bring in a new generation of owners/operators	29%	29%	71%	3%	15%	12%	26%
To improve personal satisfaction/mental health	25%	38%	62%	4%	15%	19%	31%
To advance our succession or transition plan	24%	22%	78%	0%	12%	10%	21%
To learn new skills	24%	32%	69%	3%	15%	13%	22%
To increase my own knowledge	19%	43%	57%	7%	25%	10%	35%
For some other goal	1%	4%	0%	0%	100%	0%	3%

Value Added - Feasibility (n=4) *very small sample size*	Upfront Goal	Achieved Goal to Any Degree	Degree Outcome Achieved				Sustained Outcome
			Not at all	Minimally	Moderately	Substantially	
Product/Process Goals							
To increase value-added production	75%	50%	50%	0%	25%	25%	25%
To invest in innovation (more agile processes, more automation, fewer inputs, more efficient outputs, etc.)	50%	50%	50%	50%	0%	0%	0%
To grow or produce more and/or meet more demand	50%	50%	50%	25%	0%	25%	50%
To increase the efficiency of the operation (more output per input, increase employee efficiency, etc.)	50%	50%	50%	50%	0%	0%	50%
To improve the quality of products/services	0%	25%	75%	0%	0%	25%	25%
To increase employee safety	0%	0%	100%	0%	0%	0%	0%
To comply better with regulations (food safety, etc.)	0%	0%	100%	0%	0%	0%	0%
To raise healthier animals/crops	0%	0%	100%	0%	0%	0%	0%
To improve animal welfare	0%	0%	100%	0%	0%	0%	0%
To investigate/evaluate or conduct a trial run of an alternative product/process	0%	25%	75%	25%	0%	0%	0%
For some other product/process goal	0%	0%	100%	0%	0%	0%	0%
Financial Goals							
To increase long-term profitability of the business/farm	100%	50%	50%	25%	0%	25%	50%
To increase sales	50%	25%	75%	0%	0%	25%	25%
To improve our opportunity to secure more financing	25%	0%	100%	0%	0%	0%	0%
To improve the balance sheet with new equipment, vehicles and/or buildings	25%	0%	100%	0%	0%	0%	0%
To decrease debt	0%	0%	100%	0%	0%	0%	0%
To reduce labor costs	0%	0%	100%	0%	0%	0%	0%
For some other financial goal	0%	0%	100%	0%	0%	0%	0%
Environmental Goals							
To become more energy efficient (more output per kWh or therm)	50%	25%	75%	0%	25%	0%	25%
To reduce energy use	25%	25%	75%	0%	25%	0%	25%
To make products/processes more environmentally friendly (e.g., lower greenhouse gas emissions, reduced carbon footprint)	25%	25%	75%	0%	25%	0%	25%
To find or move toward a more sustainable practice/process for our farm/business	25%	25%	75%	25%	0%	0%	0%
To become more energy independent (use more renewable energy, produce some of our own energy)	0%	0%	100%	0%	0%	0%	0%
To comply with environmental requirements or recommendations	0%	0%	100%	0%	0%	0%	0%
For some other environmental goal.	0%	0%	100%	0%	0%	0%	0%
Awareness Goals							
To engage with more organizations (public or private)	75%	50%	50%	0%	25%	25%	50%
To increase awareness of our products/services/processes	50%	50%	50%	0%	50%	0%	50%
To create more business partnerships	50%	50%	50%	0%	50%	0%	50%
To increase the use of more Minnesota grown/raised products	50%	25%	75%	0%	25%	0%	25%
To help us source or process more Minnesota grown/raised products	50%	50%	50%	0%	50%	0%	50%
To expand into new markets (e-commerce, different processers, new outlets, etc.)	50%	25%	75%	25%	0%	0%	25%
To participate in more tradeshows	25%	25%	75%	25%	0%	0%	0%
To increase the number of product demos	0%	0%	100%	0%	0%	0%	0%
For some other awareness/networking goal	0%	0%	100%	0%	0%	0%	0%
Other Goals							
To have a positive impact on the community	75%	50%	50%	0%	25%	25%	50%
To increase my own knowledge	50%	75%	25%	0%	50%	25%	75%
To create jobs	50%	25%	75%	0%	0%	25%	25%
To increase hourly wage of some/all employees	50%	25%	75%	0%	25%	0%	25%
To increase our ability to bring in a new generation of owners/operators	25%	25%	75%	25%	0%	0%	25%
To learn new skills	25%	0%	100%	0%	0%	0%	0%
To increase optimism about the future of the operation	25%	25%	75%	0%	0%	25%	25%
To improve personal satisfaction/mental health	0%	25%	75%	25%	0%	0%	0%
To advance our succession or transition plan	0%	0%	100%	0%	0%	0%	0%
For some other goal.	0%	0%	0%	0%	0%	0%	0%