

FarmShift

Stay ahead of the curve

Team Alberta 2017 Farmer Survey Results

Final Report

December 18, 2017

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Executive Summary

Executive Summary

Introduction

This report presents the results of a quantitative survey of Alberta growers, conducted on behalf of Team Alberta in October and November 2017. The survey provides measurement and input regarding two key topic areas: Agricultural Carbon Offset protocols and the Next Agricultural Policy Framework (NPF), and gathers input on environmentally sustainable practices and technologies that growers are interested in adopting or further implementing.

The results will be used by Team Alberta to provide input into and advocate for programming changes that are in line with producer preferences and priorities. Further, the results will be used as Team Alberta considers what extension or education is needed to support growers as they adopt environmentally sustainable practices and apply for related funding programs.

The methodology was an online survey (telephone recruit to web), with a final sample size of 339

Executive Summary

Carbon Offset Programs

Just over one-third of Alberta growers have participated in the Conservation Cropping Protocol. Larger-acreage growers are more likely to be users of this program with almost half of those with 5000 or more acres indicating that they have used it. We also see higher usage in northern Alberta and among those aged 65 years or over.

Among users of this program, overall satisfaction appears moderate, with about three-quarters being satisfied (mostly “somewhat” satisfied). A further 22% are dissatisfied, overall. There are lower levels of satisfaction when it comes to specific aspects including ease of participating (30% are dissatisfied), adequate compensation for time spent (45% dissatisfied), and overall impact on the farm (33% dissatisfied).

When asked how the Conservation Cropping program could be improved, three types of suggestions top the list. First, participants indicate that the program needs better compensation, feeling that the compensation received is not worth the time and effort required. A related category of needed improvements is to simplify the program forms and paperwork, as respondents feel the paperwork is onerous. The third most common theme is that the program should include a wider range of practices.

Executive Summary

For those who do not participate in the Conservation Cropping program, the main barriers are:

- Feeling that the paperwork is too onerous for the value received.
- Practices and equipment don't fit the program; relatedly, some farming practices are excluded.
- Lack of familiarity and understanding of the program.
- The need to obtain landlord approvals.
- Not agreeing with the premise of carbon credits.
- Feeling that the aggregators are taking too large a portion of the carbon credits.
- Feeling that the program is too complicated.

Not unexpectedly, awareness of NERP is fairly low, with almost two-thirds having never heard of it and 22% just having heard the name. However, about three-quarters indicate interest in this program once it is launched.

Executive Summary

Growing Forward 2

About one-quarter of growers have participated in any Growing Forward 2 (GF2) program. About half know a little or a lot about GF2, and about one quarter have never heard of it or only heard the name.

Respondents were given a description of five GF2 programs (related to sustainability), and asked about their awareness and use of these programs. The programs explored include: On-Farm Water Management, On-Farm Stewardship, On-Farm Solar Photovoltaics, On-Farm Energy Management, and Irrigation Efficiency.

Participation in these programs ranges from 4% to 14%. One-quarter of the sample has participated in at least one of these five programs. Utilization of these programs is notably higher among growers with \$2 million or more in gross farm sales.

Outside of program participants, awareness of these programs varies. For On-Farm Water Management and On-Farm Stewardship programs, about one-third of producers have never heard of these or only know the name. For On-Farm Solar Photovoltaics and On-Farm Energy Management programs, the portion who are unaware or only know the name rises to two-thirds. The Irrigation Efficiency program appears well known among those with irrigation.

Executive Summary

Participants in each GF2 program were asked to rate several aspects of the program they were in. Following are some summary comments about the general trends. Note that because of the small number of cases (participants in each program), these conclusions are directional versus statistically significant.

- Satisfaction is highest for the Irrigation Efficiency program. This appears driven by stronger ratings of application processing time, overall impact on the farm, ease of participating and eligibility requirements.
- The On-Farm Stewardship program also has relatively higher positive ratings, and fewer participants give negative ratings.
- The attributes garnering the lowest relative ratings across all programs are application processing time, cost-sharing allocation, and ease of participating. Note, however, that for all attributes and programs, positive ratings significantly outnumber low ratings.
- The attributes with the most positive ratings are overall satisfaction and impact on the farm.

Executive Summary

Participants were asked if they have any suggestions for improvement of GF2. The most common theme is to simplify the process – less “red tape” and paperwork. Second most commonly, respondents suggest speeding up the processing time.

For those who know about but did not participate in GF2 programs, the main reasons for not participating vary by program, but the most common reasons include lack of relevance to their farm, lack of familiarity with the program, the project still being too expensive even with funding assistance, not being able to get approval retroactively, the program ran out of money, and the application process is too complicated.

Incentive Structure

Over half of respondents agree that the incentive structure of GF2 programs works well to encourage investment in innovative, energy efficient, or sustainable technologies and practices. Only 1 in 10 feel it does not, while one-third are not sure.

The largest portion of growers think that cost sharing is the best format for incentives, with 6 in 10 choosing this as the top ranked-option. Rebates are next in order of preference (one-quarter rank this as top), followed by tax incentives (20% rank as top).

Executive Summary

When asked for suggestions for improvement specifically related to the incentive structure, the largest group of responses fall under the theme that the programs should cover more of the costs or have more realistic caps. A second theme is that there should be more information and advice. Thirdly, some respondents feel that the process needs to be made simpler, with less “red tape” involved. Respondents also would like to see more money in the programs so they do not run out as quickly, or funds allocated better between programs so that the more popular programs have greater funding allocation. Some also note that the programs seem to be more accessible to larger producers and those with more expendable/available funds, and would like more accessibility for others.

At various other places in the survey, growers were asked what type of support they would prefer to encourage them to adopt environmentally sustainable practices. These findings show that funding is the preferred form of support, though there is also strong interest in information, support and advice, as well as applied on-farm research demonstrations.

Executive Summary

Changes Planned on Farm Related to Environmental Sustainability

An open-ended question revealed that growers would like to adopt a wide range practices that they consider to be good candidates for funding programs that encourage environmental sustainability. It is notable that these changes span a wide range of practices, and no one type of change having more than 9% unaided mention, and most having in the range of 2% to 6%. Those with more than 5% unaided mentions included: sectional controls / auto steer / GPS-related; improved fertilizer technologies / practices / equipment; variable rate application of fertilizer; and better on-farm energy management.

Respondents were given a list of environmentally sustainable best practices (aided) and asked which they would like to adopt or further implement on their farm, if there were no barriers to doing so. Respondents could select as many items as they are interested in. The most common types of changes that growers are interested in, with over 50% selecting them, include: improved fertilizer technologies, practices, equipment; better use of GPS data such as yield, soil, as-applied, topography (data management, use, analysis, storage); and improved pesticide technologies, practices, equipment. Other common areas of interest are on-farm solar power, variable rate application of fertilizer, increased planting of nitrogen fixing crops, better on-farm energy management and improved waste management.

Executive Summary

When asked to select their greatest priority or interest, the top items include: improved fertilizer technologies/practices/equipment, solar power, GPS data use, and improved pesticide technologies/practices/equipment.

When asked to indicate the main barriers to adopting those items that they selected in the aided question, following are some of the main themes (note, these barriers were selected from a given list).

- Cost or economic considerations are the most frequent barrier for every practice.
- The least severe barrier, is related to land ownership or landlord considerations. The only practice where this is seen to be much of a barrier is conversion of marginal land from annual crops to ground cover.
- Three practices have consistently higher portions of growers identifying cost, uncertain ROI, and complexity as key barriers. These include: on-farm solar power, better use of GPS data and on-farm energy management. The first two are also high-interest changes for a considerable portion of growers.
- The practices with the lowest level of barriers include: increased planting of nitrogen fixing crops, less tillage / more direct seeding, and improved waste management.

Executive Summary

Program Design Considerations

Respondents validated the importance of several program design attributes that had been previously identified (qualitatively). For all of the design attributes, about half consider them to be very important, and most of the rest consider them somewhat important. The attributes addressed included: application processing time, ability to find out application progress, taking a whole farm approach to avoid farms having to work between multiple programs, flexibility in design to accommodate innovative ideas, and retroactive approvals. Application processing time is the only attribute that stood out with an even higher portion of growers rating this very important.

Precision Farming

Respondents were asked about their use of three precision farming practices. Currently, 35% do yield mapping, 22% do variable rate fertilizer application, and 6% use sensors on equipment to apply crop inputs more accurately (such as Green Seeker). Overall almost half of the sample (44%) indicate that adoption of precision farming practices is of medium priority for them over the next five years, while about 1 in 10 indicate that precision farming is a high priority. About one-third consider it to be low priority.

Executive Summary

Tillage Practices

There is a slight trend towards more zero-till farming. Currently, 18% of respondents say they have no acres on their farm that are zero-till. In three years, that figure drops to 13%. Further, the average portion of zero-till acres has risen from 73% three years ago to a current level of 75%, and growers expect this to rise to 79% three years from now.

Observations and Suggestions

Observations and Suggestions

We offer the following observations and suggestions based on the survey findings.

- With respect to the Conservation Cropping program, growers would like to see higher compensation for time spent, combined with (or resulting from) third party aggregators taking a smaller cut. Some also call for a simpler application process that is more accessible to allow producers to apply on their own (we recognize that this may not be feasible, and is the reason aggregators exist).
- A particular issue that growers have with the Conservation Cropping program is that it asks for the same information every year – if nothing changes, growers would like to not have to re-submit the same information year after year.
- Some focus could be put on promotion of the Conservation Cropping program to segments that use it less – small to mid-sized farms, younger producers, and those in south and central regions of the province.
- Generally, the GF2 programs have been used more by larger producers. For CAP, perhaps consideration could be given to having some quotas on awarding funding by farm size or gross revenue category.

Observations and Suggestions

- For future programs, growers are looking for a reasonable level of cost sharing allocation and appropriate caps. When we consider the scope and complexity of changes that some want to make, this is understandable. A barrier for many in the GF2 program was that even with funding, the changes they wanted to undertake were still not economically feasible.
- Some of changes growers want to make have significant barriers in terms of cost, uncertain ROI and complexity. In particular, solar power and making better use of GPS data are of high interest but are seen to have these significant barriers. Funding may help growers take action, but there is also a high need for information and assistance in adopting these (and other) practices.
- The issue of timing, and ability to get projects that had already started approved retroactively does appear to have been an issue for some – this stood out more in the On-farm Stewardship and On-Farm Water Management programs.
- Funding is the most preferred type of support, though information, assistance and advice and on-farm demonstrations are also of interest. As far as how the financial assistance is delivered, cost sharing is seen as effective and is generally preferred over tax incentives or rebates.

Observations and Suggestions

- With many perceiving the application process to be complicated and a lot of work, perhaps there is potential to offer assistance with the application process. This may already be available, but it appears there is room for more awareness or accessible help, since so many bring it up.
- We also see a general lack of awareness of some of the programs, as well as respondents citing lack of familiarity or information as a reason for not participating. Communications could be reviewed, to ensure that appropriate messaging is being conveyed effectively and through appropriate channels. It is notable that there is reasonably high interest among those unaware or unfamiliar, in knowing more about these programs (CAP, Conservation Cropping, and NERP when it is launched).
- Though there is high interest in some “big ticket” type practices, there are also some practices that a relatively high portion are interested in, where cost is not as great a barrier (e.g. waste management, conversion of marginal land, increased planting of nitrogen fixing crops).
- Related to adoption of environmentally sustainable practices, this survey has shown some particular areas of interest among producers, which perhaps will be useful input as to where funding is allocated.

Observations and Suggestions

- With improved fertilizer technologies / practices / equipment being the top-rated type of change growers are interested in, there could be increased emphasis on this in funding allocation and on related extension activities.
- Given various findings of this research – growers wanting to make better use of their GPS data, planning to adopt fertilizer technology and equipment, and interest in adopting variable rate application, this would support some attention to programs that support growers in their adoption of precision farming practices.
- Respondents endorsed the importance of several design considerations. Most important is ease of application and speed of processing the application. However, all the other design considerations tested were also of key importance, such as program flexibility and consideration of projects that are outside the program boxes, ability to obtain retroactive approval, and smoothing the process for growers with large projects that “tick the boxes” of more than one program.

Observations and Suggestions

- Related to respondents' concerns about the programs running out of funding, this may be related to awareness (they find out about a program too late), or perhaps could also reflect a potential improvement of staging the availability of funding over the years the program is in effect (perhaps this is already done). Consideration should also be given to continuing programs under CAP that were over-subscribed in GF2.
- If not already in place, perhaps there could be a concise pre-approval process to help applicants determine the extent to which their project qualifies and whether it is worth the time and effort to go through the full application process.
- It is recommended that Team Alberta review all the verbatim comments (provided in an appendix). While these are categorized and summarized in the report, a review of all the comments, particularly the suggestions for improvement, would add increased depth of understanding.

Introduction and Research Methodology

Introduction

This report presents the results of a quantitative survey of Alberta growers, conducted on behalf of Team Alberta in October and November 2017. The survey provides measurement and input regarding two key topic areas: Agricultural Carbon Offset protocols and the Next Agricultural Policy Framework (NPF), and gathers input on environmentally sustainable practices and technologies that growers are interested in adopting or further implementing.

The results will be used by Team Alberta to provide input into and advocate for programming changes that are in line with producer preferences and priorities. Further, the results will be used as Team Alberta considers what extension or education is needed to support growers as they adopt environmentally sustainable practices and apply for funding programs.

The methodology was an online survey (telephone recruit to web), with a final sample size of 339.

Research Objectives

- For carbon offset program and GF2 (aspects related to environmental sustainability), assess awareness & familiarity with these programs, participation rates, input from growers who have direct experience, barriers to participation, participants' recommendations for improvement, etc.
- Obtain grower perspectives on incentive mechanisms
- Assess growers' interest in making changes on their operations and adopting practices or technologies related to environmental sustainability and climate changes, and barriers to making these changes.
- Obtain ideas regarding what is needed for future programming to assist growers (and the province) in achieving goals for environmental sustainability and climate change.
- Obtain profiling information on extent of adoption of precision farming practices, zero-till, development of plans (certification etc.) related to environmental sustainability.
- Based on the above, assess what type of extension and education may be needed to overcome barriers, encourage participation in the programs and ultimately adoption of best practices and climate-smart technology.

Methodology

The farmer quantitative survey was conducted via a recruit-to-web methodology, using a random farmer list. Growers were first contacted by phone and asked a few short screening questions, and then sent a link to an online survey. The screening questions ensured that:

- Respondents are one of the main decision makers on their farm operation
- They don't plan to retire or get out of farming in the next five years
- Their operation derives at least half its revenue from a crop operation
- They have at least 640 acres under crop in a typical year
- Must grow at least one of wheat, canola, barley or pulse crops

Methodology

Data collection occurred between October 24 and November 27. An incentive of \$10 was offered, and this was raised to \$15 during the last week, in order to move more quickly towards the targeted sample size.

Compared to other surveys, this one had a somewhat lower level of engagement (evidenced by a lower than normal response rate and a somewhat higher level of drop-off). Possibly, the subject matter is not of high interest to some. Further, based on some open-ended comments in the survey, there is a segment of farmers who disagree with government programs in general, so it may be that these respondents started the survey but decided they did not want to spend the time to provide detailed input.

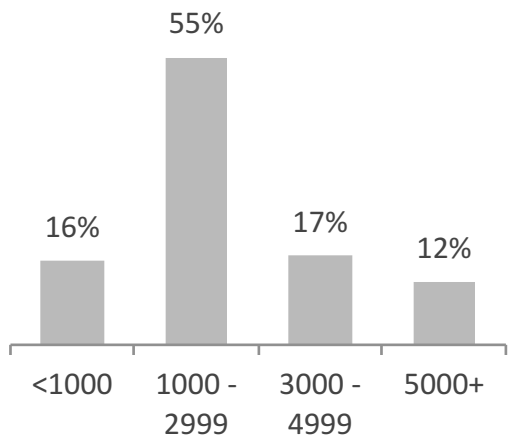
The final sample size was 339. A sample of this size provides a maximum margin of error of +/- 5.3% at the 95% confidence level.

The survey targeted a representative distribution based on farmer counts by Census Agricultural Region. The analysis looked for statistical differences by age and farm size and region (North, Central and South) at the 90% and 95% confidence levels. Where notable and meaningful, these are described in the report.

Respondent Profile

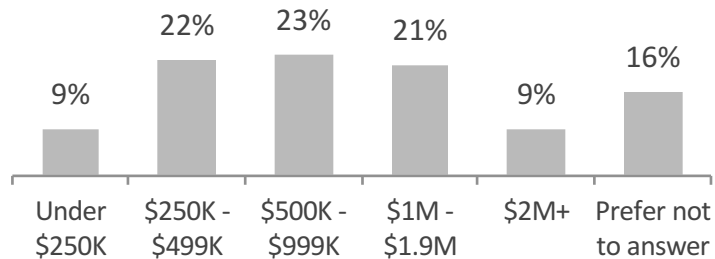
Respondent Profile

Cropped Acres

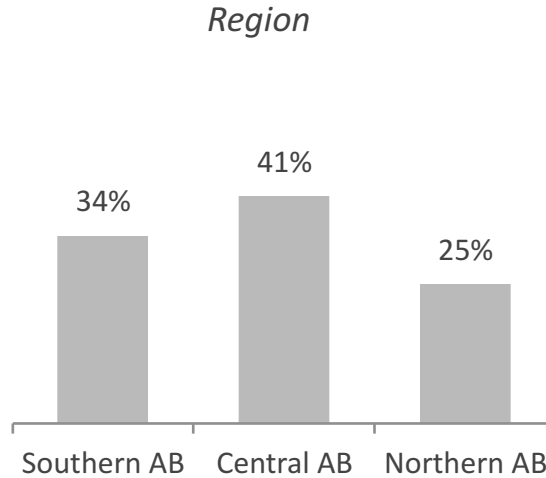
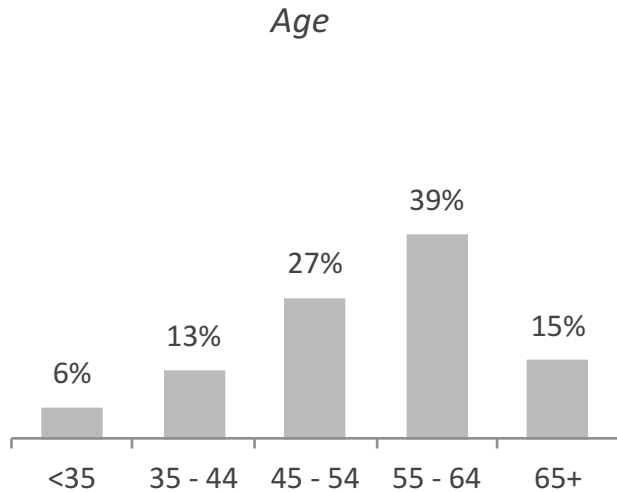


Average acres: 2676

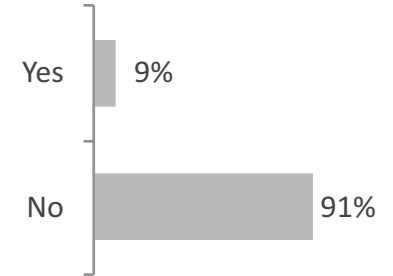
Gross Farm Receipts



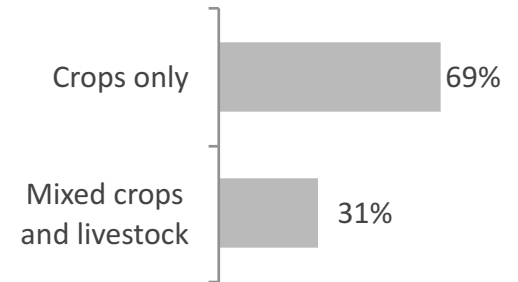
Respondent Profile



Acres under Irrigation



Farm Type



Crops Grown

	Percent who grow	Average acres
Canola	96%	1026
Wheat (any)	94%	1039
Barley	56%	507
Pulse crops - any	49%	636
Peas	47%	557
Lentils	5%	822
Dry beans	1%	326
Faba beans	2%	165

Completion of or Plans to Complete Plans Related to Environmental Sustainability

As seen on the following slide, almost 7 in 10 respondents have an Environmental Farm Plan (EFP), while another 16% plan to develop one within the next five years.

Other types of sustainability plans are less common – 4% have a 4R nutrient stewardship plan and 7% have a Long Term Water Management (LTWM) plan. However if intentions pan out, this could rise to 26% having a 4R plan and 21% having a LTWM plan in the next five years.

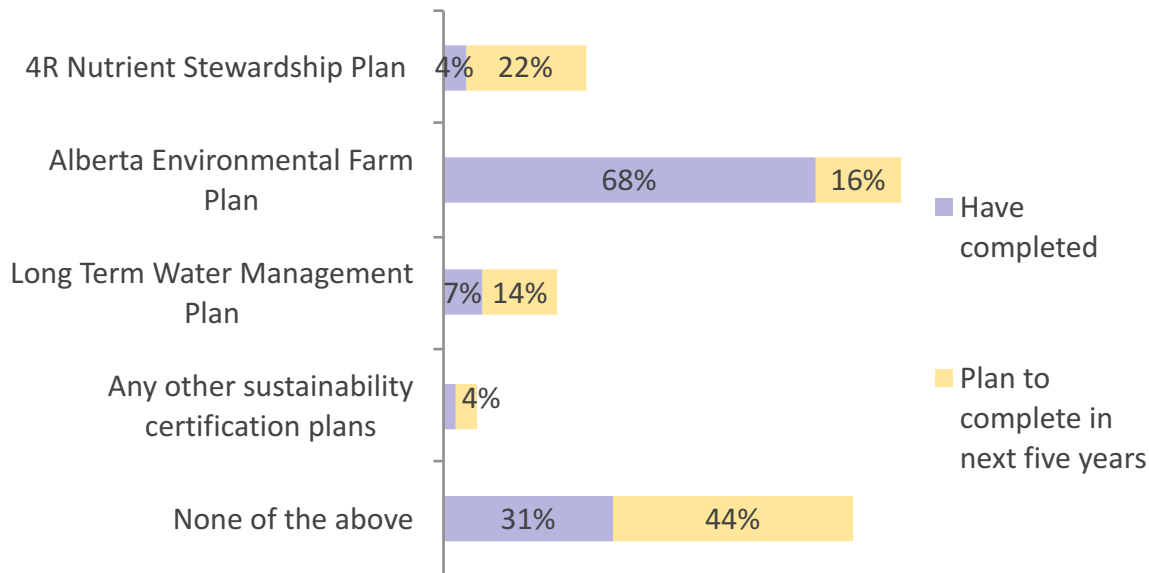
Segment Differences:

- The portion who have an EFP rises as income rises – from 53% who gross under \$250,000 to 90% of those with over \$2 million revenue.
- Those with under 1000 cropped acres are less likely to have any of these plans, with 43% not having any. However, they are more likely than average to plan to develop an EFP in the next five years.
- Those with mixed farms are more likely to have a LTWM plan, and more likely to plan to develop one in the next five years.
- Those in Northern Alberta are more likely to have completed a 4R plan, with 10% having done so, versus 3% in other regions.

Completion of or Plans to Complete Plans Related to Environmental Sustainability

Have you completed any of the following?

If not, do you plan to develop them within the next five years?



Base: All respondents (N=339)

Other sustainability certification plans include: Alberta Pesticide Applicator License; Battle River Watershed Alliance, Cows and Fishes; Carbon credits; Certified nutrient dense food program with Rogers Foods; NRCB approval for feedlot; Verified Beef Production; fuel storage; and organic certification.

Familiarity with 4R Nutrient Stewardship

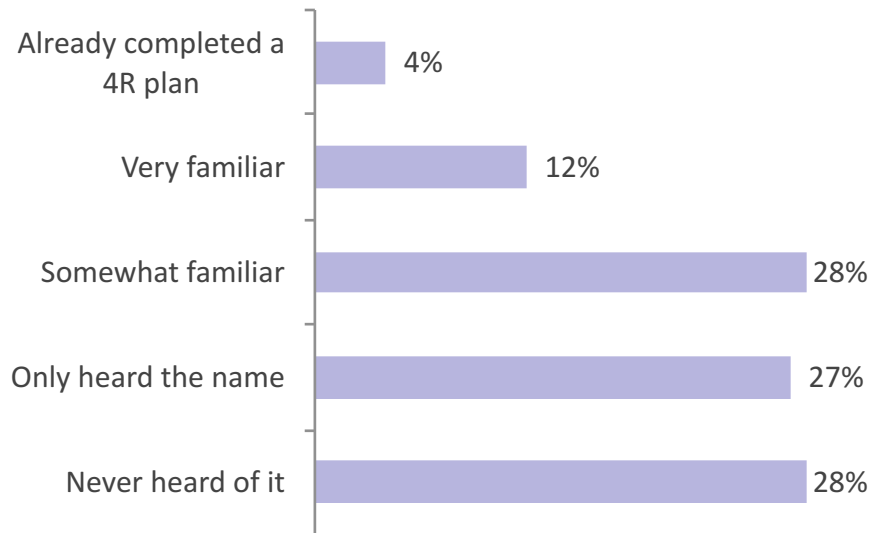
More than half of respondents have never heard of 4R nutrient stewardship, or have only heard the name.

About 3 in 10 are somewhat familiar with the 4R concept, while 12% are very familiar with it and 4% have a 4R plan.

Segment Differences

- Those under age 45 and those with \$2M+ gross sales are more familiar with the 4R concept (21% and 33%, respectively).
- Those with under 1000 cropped acres are more likely to have never heard of the 4R concept.

Which of the following best describes how familiar you are with the concept of 4R nutrient stewardship (right fertilizer source, right rate, right time, right place)?



Base: All respondents (N=339)

Adoption of Selected Precision Farming Practices

About one-third of respondents (35%) do yield mapping, and 22% use variable rate fertilizer application. Just 6% use sensors such as Green Seeker. Four in ten use at least one of these practices.

Segment Differences:

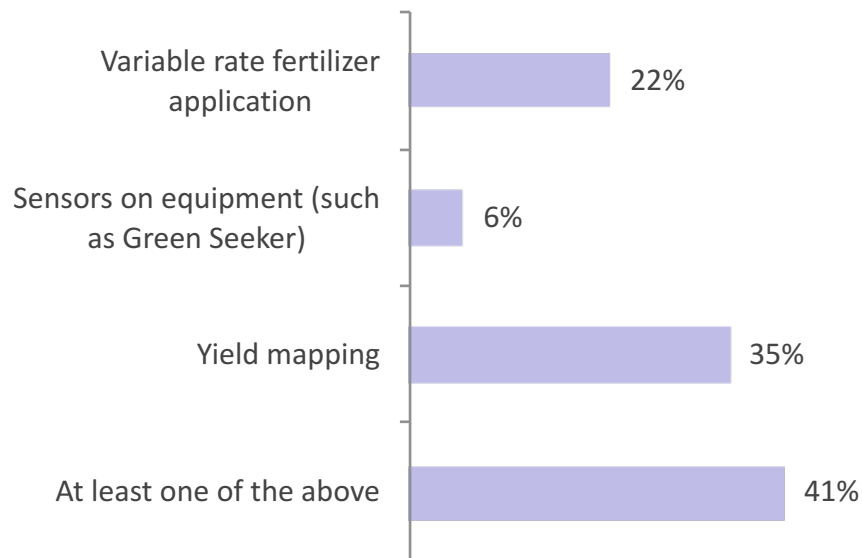
- VR fertilizer application and yield mapping are more common among those under age 45, those with 3000+ cropped acres, and use increases as gross sales increase.
- The only detectable segment difference for use of sensors is among those with \$2M or more in gross sales (17% use this technology versus the 6% average).

The largest portion of growers, (44%) consider adoption or further implementation of precision farming practices of medium priority. Just over one-third consider it low priority. About one in ten (12%), consider precision farming to be of high priority. Segment differences include:

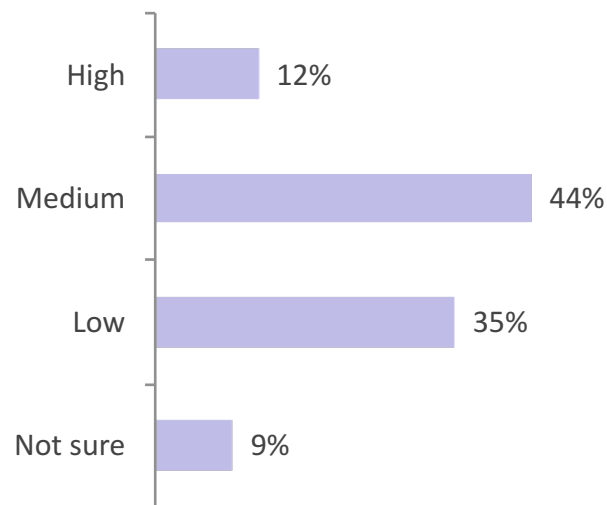
- More central Alberta farmers place a high priority on precision farming (18% vs. 6% - 9% in other regions).
- Those in the 3000 - 4999 acre category are also more likely to place a high priority on precision farming, as are those in the \$2M+ revenue category.

Adoption of Selected Precision Farming Practices

Do you currently do any of the following on your farm? (Portion saying Yes)



Do you consider adoption or further implementation of precision farming practices (such as those above or any others) to be of high, medium, or low priority, in light of all your farm priorities in the next five years?

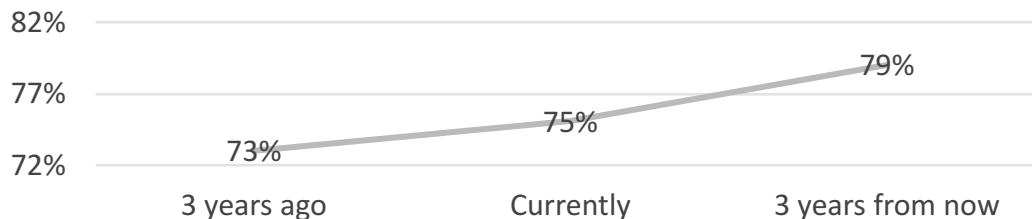


Trend in No-Till

There is a slight trend towards more zero-till farming. Currently, 18% of respondents say they have no acres on their farm that are zero-till. In three years, that figure drops to 13%. Further, the average portion of zero-till acres has risen from 73% three years ago to a current level of 75%, and growers expect this to rise to 79% three years from now.

What percentage of your cropped acres are no-till / zero-till?	3 years ago	Currently	3 years from now
No acres are zero-till	19%	18%	13%
Some of acres are zero-till (10% - 89%)	15%	16%	19%
Vast majority or all are zero-till (90%+)	66%	66%	68%

Average portion of acres that are zero-till



Base: All respondents (N=339)

Trend in No-Till – By Farm Size and Age

- Growers with <1000 acres are less likely than others to practice zero-till. However, their average zero-till acres have been rising, from an average of 55% of their acres three years ago to an expected 68% three years from now. An increasing trend is also seen in the 1000 – 2999 acre category.
- The trend in the 3000+ categories is fairly flat, though these growers already have a high portion of zero-till relative to the lower acreage segments.
- Growers aged 65 and over have a higher portion of zero-till acres.
- The average portion of zero-till acres shows an increasing trend for all age categories.
- There are no notable trends by region.

Average percentage zero-till	3 years ago	Currently	3 years from now
< 1000 acres	55%	57%	68%
1000 - 2999	74%	76%	79%
3000 - 4999	87%	86%	86%
5000+	78%	81%	78%
<45	74%	77%	80%
46 - 64	70%	73%	76%
65+	86%	85%	91%

Awareness of and Experience with Carbon Offset Programs

Awareness – Conservation Cropping / Conservation Tillage Protocol

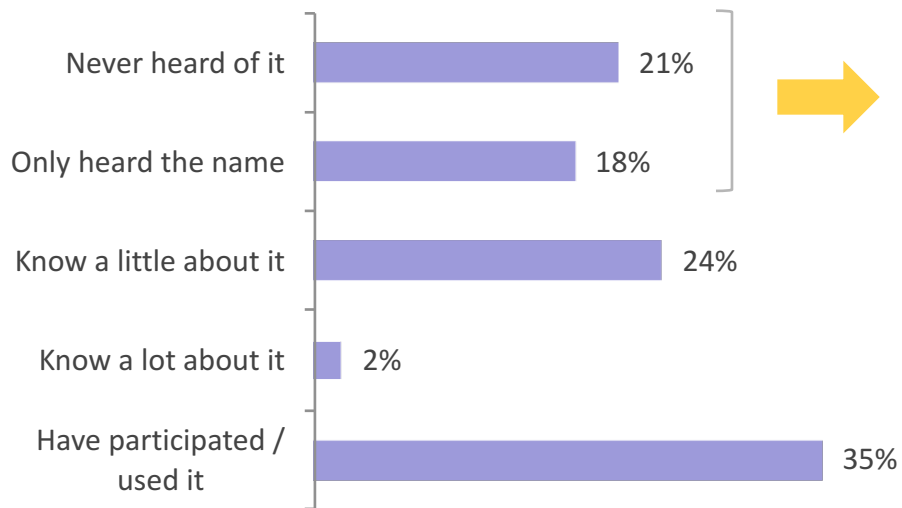
Respondents were asked about their awareness and use of the Alberta Conservation Cropping / Conservation Tillage Protocol.

Over one-third (35%) have participated in this program, while another quarter know at least something about the program. This leaves 4 in 10 who have either never heard of it (21%) or have only heard the name (18%).

Those who have only heard the name or never heard of it were given a brief description, and asked how interested they would be in knowing more about this program. There is moderate interest, with over half (54%) indicating they are somewhat interested and another 19% being very interested. Less than 20% are not interested, while 10% are not sure.

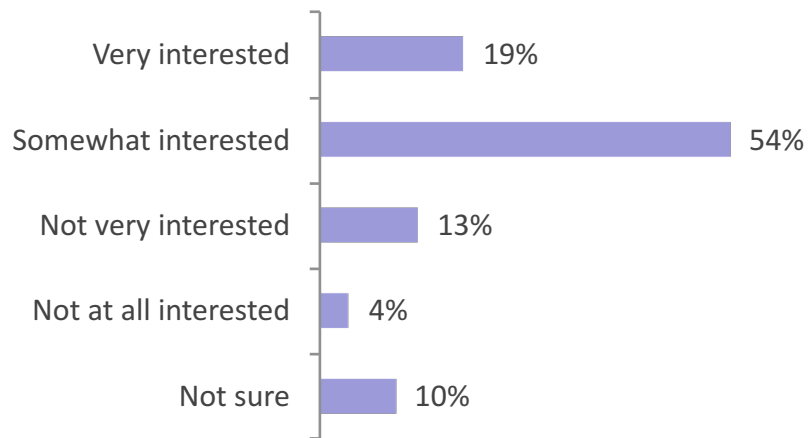
Awareness – Conservation Cropping Protocol

Which of the following best describes your prior level of awareness, experience or familiarity with the Alberta Conservation Cropping / Conservation Tillage Protocol?



Base: All respondents (N=339)

The Conservation Cropping / Conservation Tillage program gives producers financial credit for adopting or increasing no-till. How interested are you in knowing more about this program?



Base: Those who have never heard of program, or only heard the name (N=133)

Segment Differences – Awareness and Use of Conservation Cropping Protocol

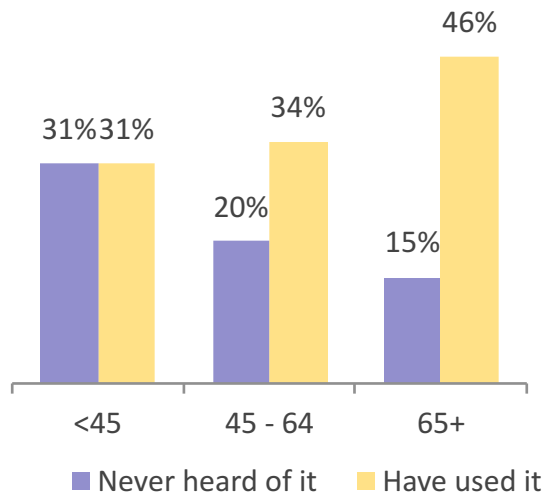
Awareness and usage of the Conservation Cropping program varies by age group. Those aged 45 and under are the mostly likely age group to have never heard of the program. As age increases, awareness increases. Correspondingly, usage of the program increases with age. While 31% of those under age 45 have used it, this rises to 46% of those aged 65 and over.

Usage of the program increases by the amount of cropped acres, from 25% of those with under 1000 cropped acres using it, to almost half (48%) of those with 5000 or more cropped acres.

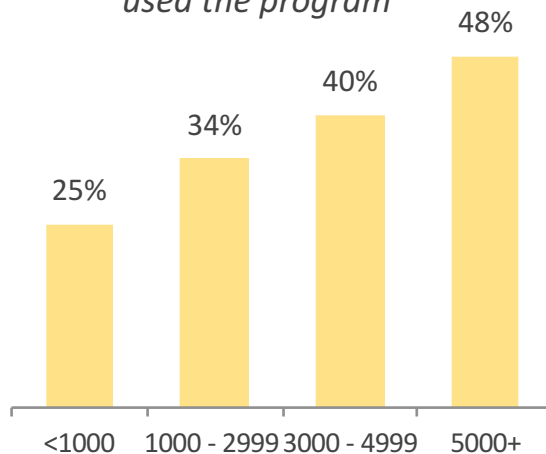
There is also a regional difference, with a higher portion of those in northern Alberta using the program. Awareness of the program is lowest in the south.

Segment Differences – Awareness and Use of Conservation Cropping Protocol

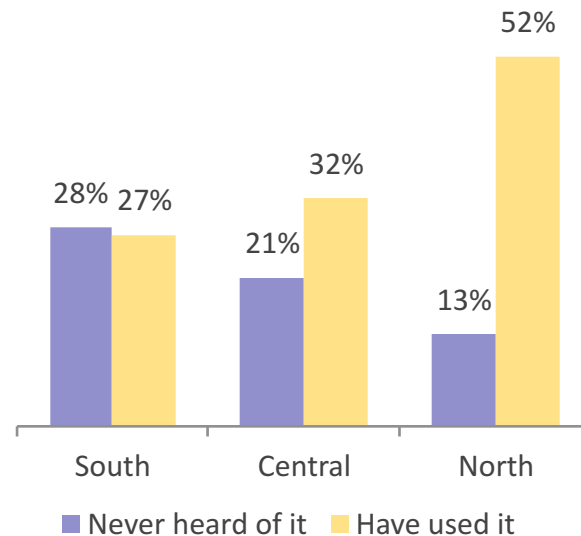
By Age Category



Cropped acres – Percent who have used the program



By Region



Base: All respondents (N=339)

Conservation Cropping Protocol – Years In Which Growers Participated

Between 55% and 60% of program participants have participated in the program in any given year from 2012 to 2016. There appears a slight dip in 2017, with 51% of program participants involved this year.

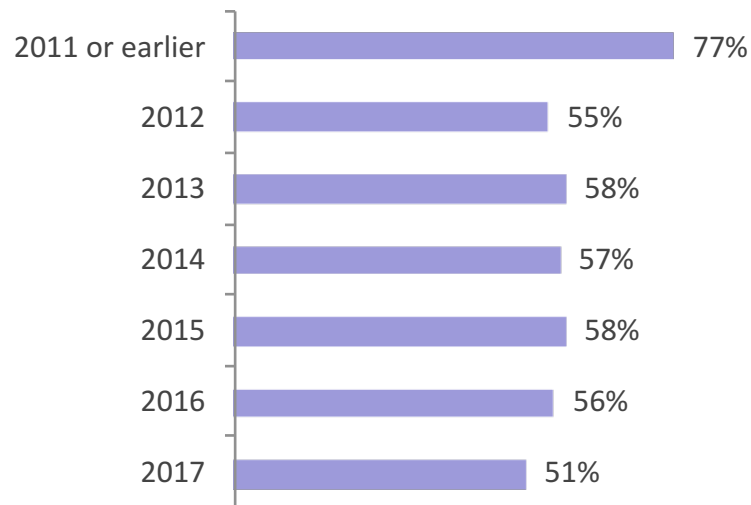
About one-third of program participants have only been involved in one year, about one-third have been involved for two to six years, and one-third have been involved for seven or more years.

Segment differences:

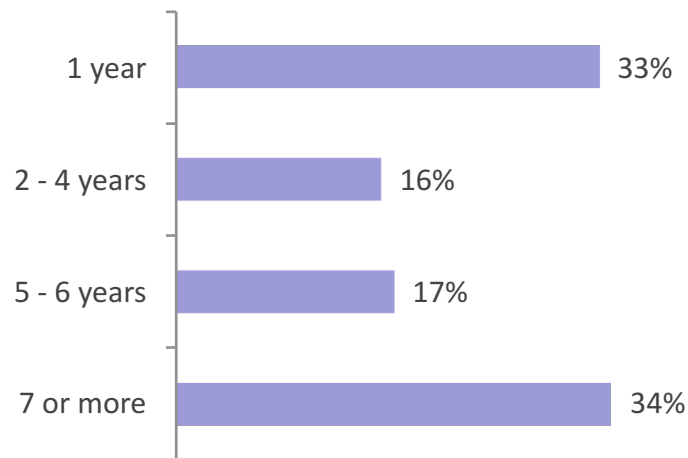
- Those in southern Alberta were less likely to be enrolled in 2017.
- Smaller farmers are more likely to have been enrolled in 2011 or before, and less likely to be enrolled in 2017.
- Crop-only farmers more likely to be currently participating.

Conservation Cropping Protocol – Years In Which Growers Participated

In which of the following years did you participate in the Conservation Cropping / Tillage program?



Number of years participating (counting 2011 or before as one year)



Participant Satisfaction with Conservation Cropping Protocol

Overall, satisfaction appears moderate, with 22% being very satisfied overall, and 54% being somewhat satisfied. A further 22% are not very or not at all satisfied. Satisfaction with specific aspects is less, however.

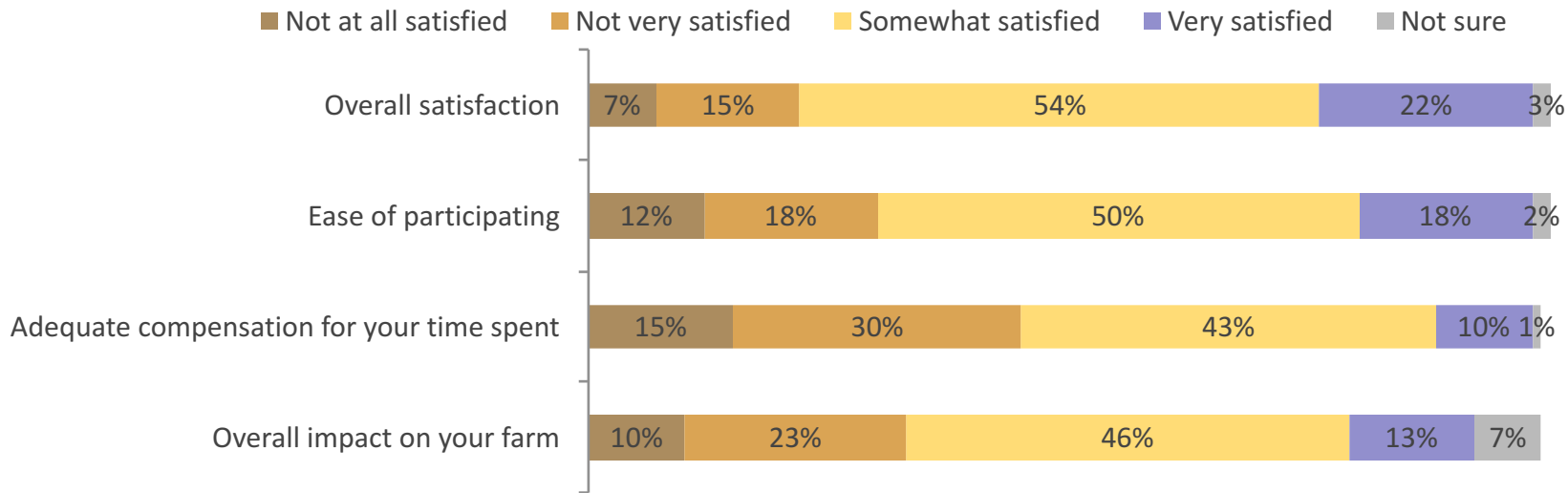
- Sixty-eight percent are satisfied with the ease of participating, while 30% are not satisfied.
- Fifty-three percent are satisfied with compensation for time spent, while 45% are not satisfied with this.
- Fifty-nine percent are satisfied with the overall impact on their farm, while 33% are not.

We see these segment differences:

- Those with crop only operations are more likely to be more satisfied, overall.
- Those over age 65+ less satisfied with ease of participation (25% not at all and 21% not very). They are also less satisfied with compensation for time spent (29% are not at all satisfied vs. avg. 15%).
- Those with \$2M or more in gross receipts also less satisfied with compensation received for time spent – 53% are not very satisfied vs. the 30% average.
- In terms of overall impact on the farm, those aged under 45 are less satisfied – 26% are not at all satisfied vs. the average of 10%.

Participant Satisfaction with Conservation Cropping Protocol

Please rate your satisfaction with the following aspects of the Conservation Cropping / Tillage program.



Base: Those who have participated in the program (N=120)

Participant Suggestions for Improvement in Conservation Cropping Protocol

Participants were asked for their suggestions for improvement. This was an open ended question, and the verbatim results were reviewed and coded into categories seen on the following slide.

Three types of suggestions topped the list. First, participants felt that the program needs better compensation, feeling that the compensation received is not worth the time and effort required. A related category of comments was second most common – that the paperwork is onerous and the program forms and paperwork need to be simplified.

The third most common category of suggestion was that the program should include a wider range of practices.

Another common comment was that aggregators take too large a cut and/or that it should be made simpler for growers to apply on their own.

Many also commented on the difficulties involved in having to have landlord approvals.

Please see the open ended verbatim responses in Appendix A.

Participant Suggestions for Improvement in Conservation Cropping Protocol

Based on your experience with the Conservation Cropping / Tillage program, what suggestions do you have for improvement?	
Better compensation, doesn't really pay, not worth the effort, price for carbon too low	21%
Onerous paperwork, difficult forms, simplify	19%
Additional inclusions, doesn't cover all the needs/practices	17%
Redundant information gathering each year	14%
Aggregators should take less of a cut, aggregators inefficient, make it easier for growers to apply themselves	12%
Landlord agreements are a hurdle	11%
Working well, fine as it is	7%
Not effective, waste of time, don't agree with carbon credits	5%
In a wet year more tillage is required	4%
Other	13%

Base: Those who have participated in the program, who had any comments (N=84).
Percentages add to more than 100 as multiple responses were allowed.

Sample Comments – Suggestions for Improvement of Conservation Cropping Protocol

For us as a larger farm it barely pays, for small farm it's not worth the effort for few bucks.

Program payment level barely worth the effort.

Doesn't reward enough to change farming practices to reduce tillage.

Make verifications less onerous; make net returns worth the time for application.

Streamline process. Reduce redundant information gathering.

Should include all forage crops and improved pasture. Should be a simple formula for each cropping practice implemented. Aggregating on all records that need to be supplied is time consuming and not worth the trouble.

To include turf and forage seed acres in program.

Why are there no carbon credits for tame pasture and even more for native pasture?

Make it easier to apply direct rather than have to use third parties who are only in it for money.

I find it difficult and time consuming to get landlords' signatures, and then is a presumption by them that they should share in the return.

Should allow more tillage in wet years. Many fields have extensive ruts and weed issues to repair.

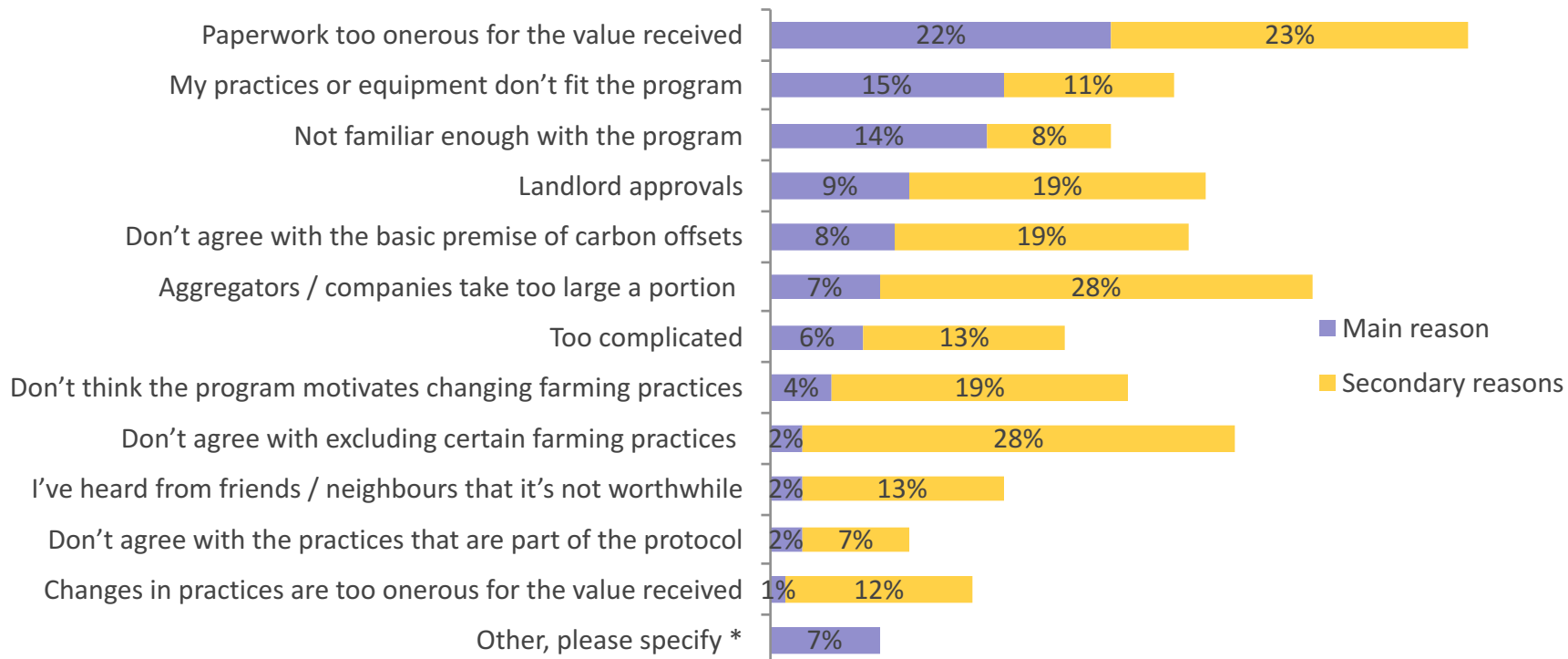
Reasons for Not Participating in Conservation Tillage Protocol

Those who know about the Conservation Tillage Program but are not participating were asked why they are not participating. They were asked to select the relevant reasons from a given list.

Key barriers include:

- Feeling that the paperwork is too onerous for the value received.
- Practices and equipment don't fit the program; relatedly, some farming practices are excluded.
- Lack of familiarity and understanding of the program.
- The need to obtain landlord approvals.
- Not agreeing with the premise of carbon credits.
- Feeling that the aggregators are taking too large a portion of the carbon credits.
- Feeling that the program is too complicated.

Reasons for Not Participating in Conservation Tillage Protocol



Base: Those who know a little or a lot about the program but haven't used it (N=86). Other – see Appendix A

Awareness – Nitrous Oxide Emission Reduction Protocol (NERP)

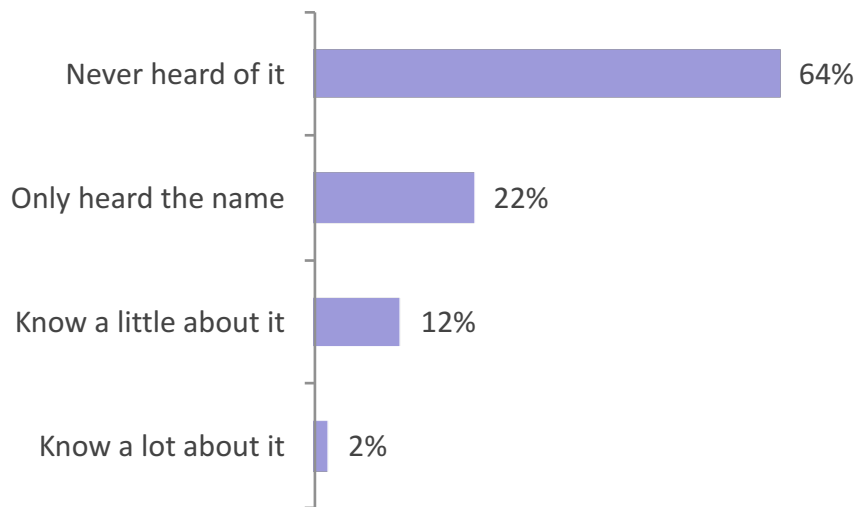
Not unexpectedly, awareness of NERP is fairly low, with 64% having never heard of it and 22% just having heard the name. Just 14% know anything about it.

When given a brief explanation of NERP, interest is moderate, with 55% saying they are somewhat interested and 18% being very interested. Just 16% are not interested, and 11% are unsure.

There are no notable differences between segments.

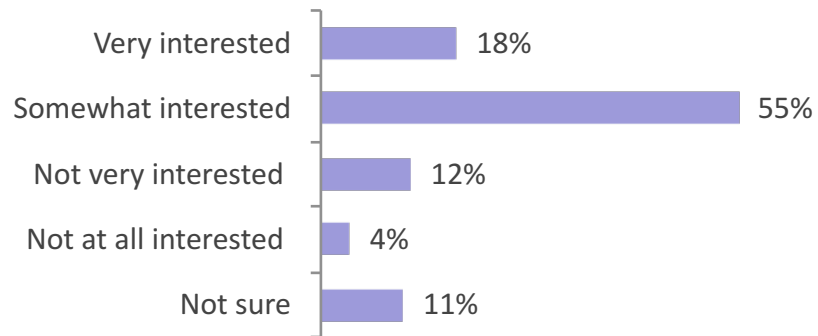
Awareness – Nitrous Oxide Emission Reduction Protocol (NERP)

Which of the following best describes your prior level of awareness or familiarity with Alberta's Nitrous Oxide Emission Reduction Protocol (NERP)?



Base: All respondents (N=339)

Although not yet operational, in the future, the Nitrous Oxide Emission Reduction (NERP) program would provide farmers with financial credit for more efficient practices for nitrogen application. Based on this brief explanation and anything you have read, seen or heard about this program, how interested do you think you will be in this program, when it is launched?



Base: All respondents (N=339)

Awareness of and Experience with Growing Forward 2 Programs Related to Environmental Sustainability

Awareness – Growing Forward 2

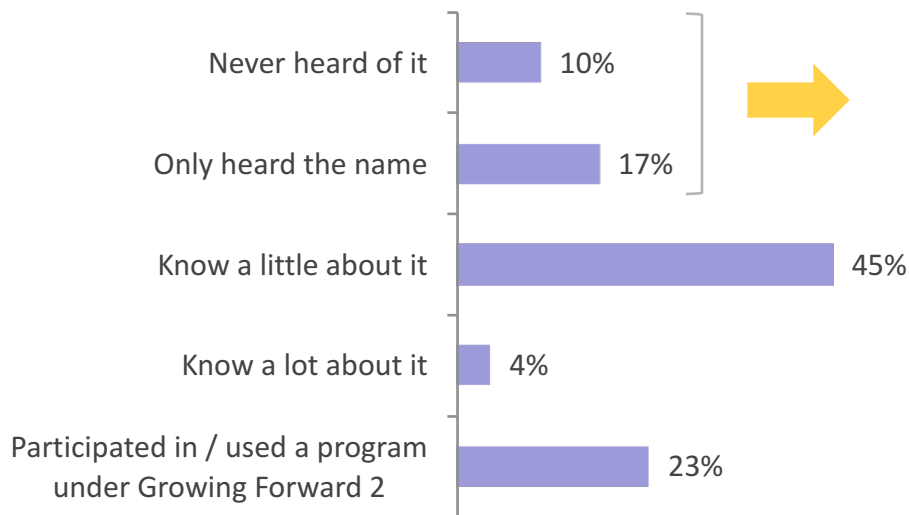
Respondents were asked about their awareness and use of Growing Forward 2. At first, they were asked this on a general level, prior to being asked about the environmental sustainability programs.

About one-quarter (23%) have participated in a Growing Forward 2 program. About half know a little or a lot about Growing Forward 2, and about one quarter have either never heard of it (10%) or have only heard the name (17%).

Those who have only heard the name or never heard of GF2 were given a brief description, and asked how interested they would be in knowing more about future government support and funding programs that focus on environmental sustainability. There is moderate interest, with just over half (52%) indicating they are somewhat interested and another 23% being very interested. Seventeen percent are not interested, while 8% are not sure.

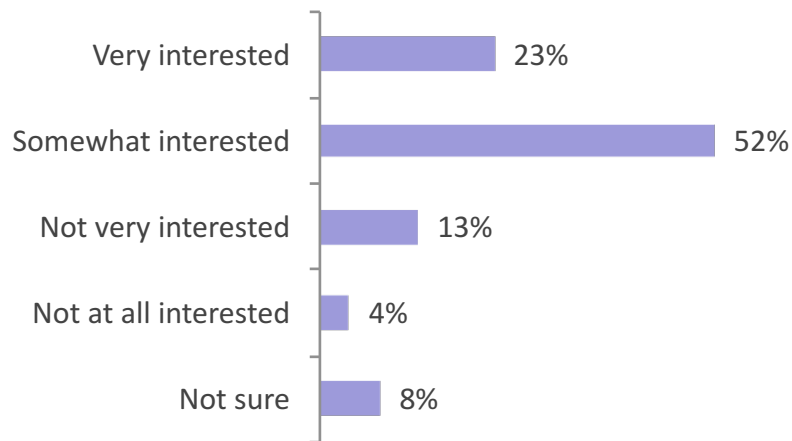
Awareness – Growing Forward 2

Which of the following best describes your familiarity and experience with Growing Forward 2 programs?



Base: All respondents (N=339)

These programs are cost-sharing programs for producers wanting to undertake various projects. They may be changed or different ones may be added for the next five years. In general, what is your level of interest in knowing more about future government support and funding programs that focus on environmental sustainability?



Base: those who have never heard of, or have only heard the name (N=75).

Segment Differences – Growing Forward 2

Awareness and usage:

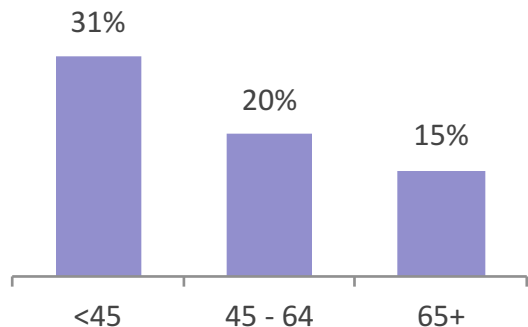
- Awareness of Growing Forward 2 is lower for those under age 45.
- The portion who have used the Growing Forward 2 program increases as cropped acres increases, and as gross sales increase. For example, as seen two slides forward, only 13% of those with under 1000 acres have used the program, versus 31% of those with 5000+ acres. It is also notable that 40% of those with \$2M or more in gross sales have used the program, compared to the 23% average.

Level of interest, if they were previously unaware of GF2:

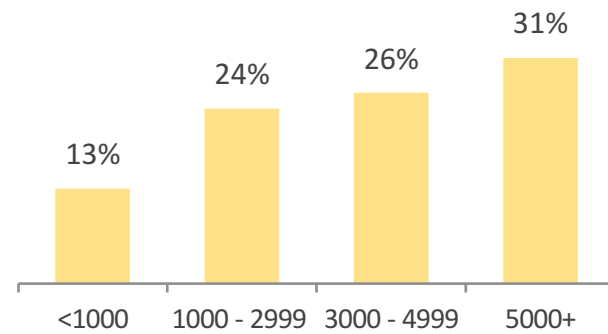
- Those under age 45 are more interested – 33% are very interested versus the 23% average.
- Further, the vast majority of those with >\$1M in gross sales are somewhat or very interested.

Segment Differences – Awareness and Use of Growing Forward 2

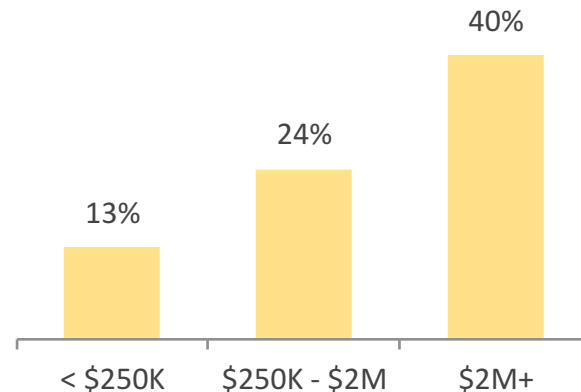
By Age Category – Percent who have never heard of the program



Cropped acres – Percent who have used the program



By Gross Revenue – Percent who have used the program



Base: All respondents (N=339)

Awareness and Use of Growing Forward 2 Programs Related to Sustainability

Respondents were given a brief description of five GF2 programs that are related to sustainability, and then were asked about their level of awareness and use of these programs. The programs that were asked about include: On-Farm Water Management, On-Farm Stewardship, On-Farm Solar Photovoltaics, On-Farm Energy Management, and Irrigation Efficiency.

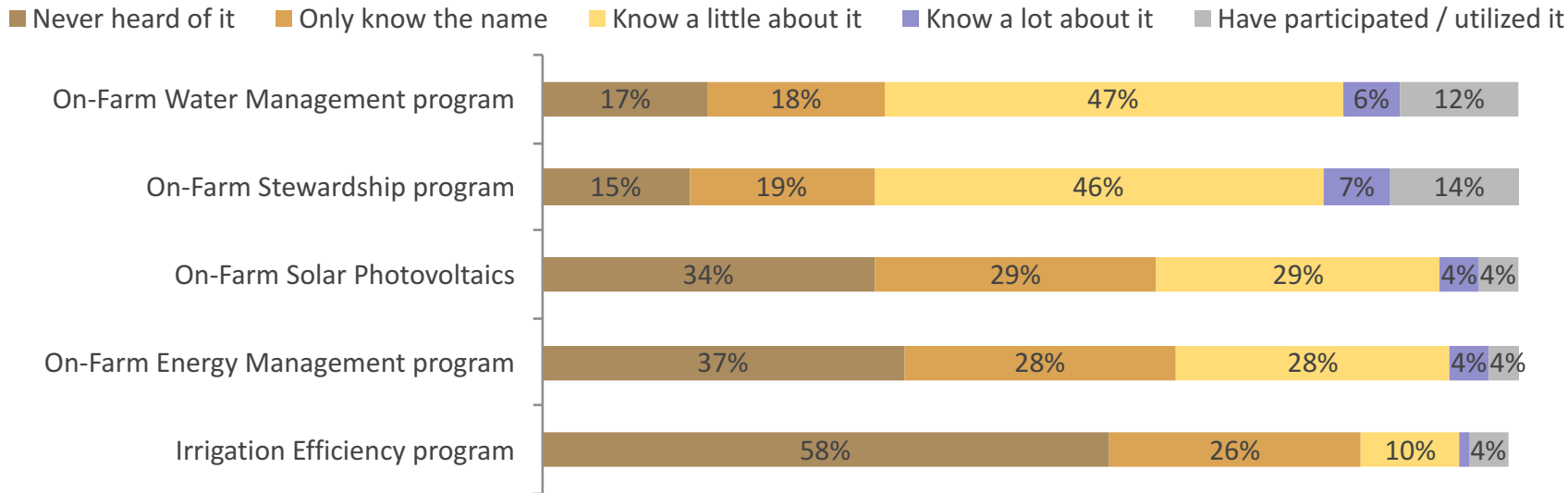
Participation in the programs ranges from 4% to 14%. One-quarter of the sample participated in at least one of these five programs, while 7% participated in more than one.

Outside of program participants, the portion who know a little or a lot about each program ranges, from just 11% (Irrigation Efficiency) to over half.

There is relatively higher awareness of the On-Farm Water Management program and the On-Farm Stewardship program, each with over half of respondents knowing a little or a lot about the program. There is lower awareness of the On-Farm Solar Photovoltaics and On-Farm Energy Management programs, with about one-third knowing anything about either. The lowest general awareness is of the Irrigation Efficiency program (just 1 in 10 know something about it). However, looking just at those with irrigation on their farm, 44% have used this program and a further 38% know something about it.

Awareness and Use of Growing Forward 2 Programs Related to Sustainability

Prior to this survey, which of the following best describes your prior level of awareness, experience or familiarity with each of these programs?



Base: All respondents (N=339)

Segment Differences – Growing Forward 2 Programs Related to Sustainability

- As gross sales increases, so does likelihood of using On-Farm Water Management program – 19% of those with \$1M – \$ 2M in gross sales and 20% of those with over \$2M have used this program compared to the average of 12%.
- The trend is the same with the On-Farm Stewardship program – among the \$2M+ segment, 30% have used this program versus the 14% average.
- The On-Farm Solar Photovoltaics program was used by a higher portion in smallest acre and revenue categories, but also by a higher portion of those in the highest revenue category -- 13% in the \$2M+ category used this program versus the 4% average.
- Similarly, the On-Farm Energy Management program use was highest in the \$2M+ revenue category, at 17% vs. 1% - 4% in other revenue categories.
- Use of the Irrigation Efficiency program was higher among those under the age of 45 – 11% of this group have used it versus the 4% average. Further, those with over \$2M in revenue are also more likely to have used this program, at 17%.

Status of Growing Forward 2 Projects

Was your project under [name of program] completed (i.e. fully implemented)?	Yes	No but I expect to complete it	No, I abandoned the project	Other
On-Farm Water Management program (N=31)	84%	7%	7%	3%*
On-Farm Stewardship program (N=33)	88%	12%	-	-
On-Farm Solar Photovoltaics (N=8)	N=6	N=2	-	-
On-Farm Energy Management program (N=5)	N=4	-	N=1	-
Irrigation Efficiency program (N=8)	N=8	-	-	-

It appears the majority of projects undertaken were completed or are expected to be completed. The only possible exception is the On-Farm Water Management program, where 2 of the 31 participants said they abandoned their project, and 1 said their project was completed but they were not compensated. One of the On-Farm Energy Management program participants said they abandoned the project, but with the small sample it is not possible to extrapolate this more generally.

Satisfaction with Growing Forward 2 Programs

Participants in each program were asked to rate several aspects of the program they were in, including overall satisfaction, ease of participating, cost-sharing allocation, overall impact on their farm, eligibility requirements, terms and conditions, application processing time and ease of understanding the application process. If they participated in more than one program (7% of the sample), they were only asked about one, randomly selected.

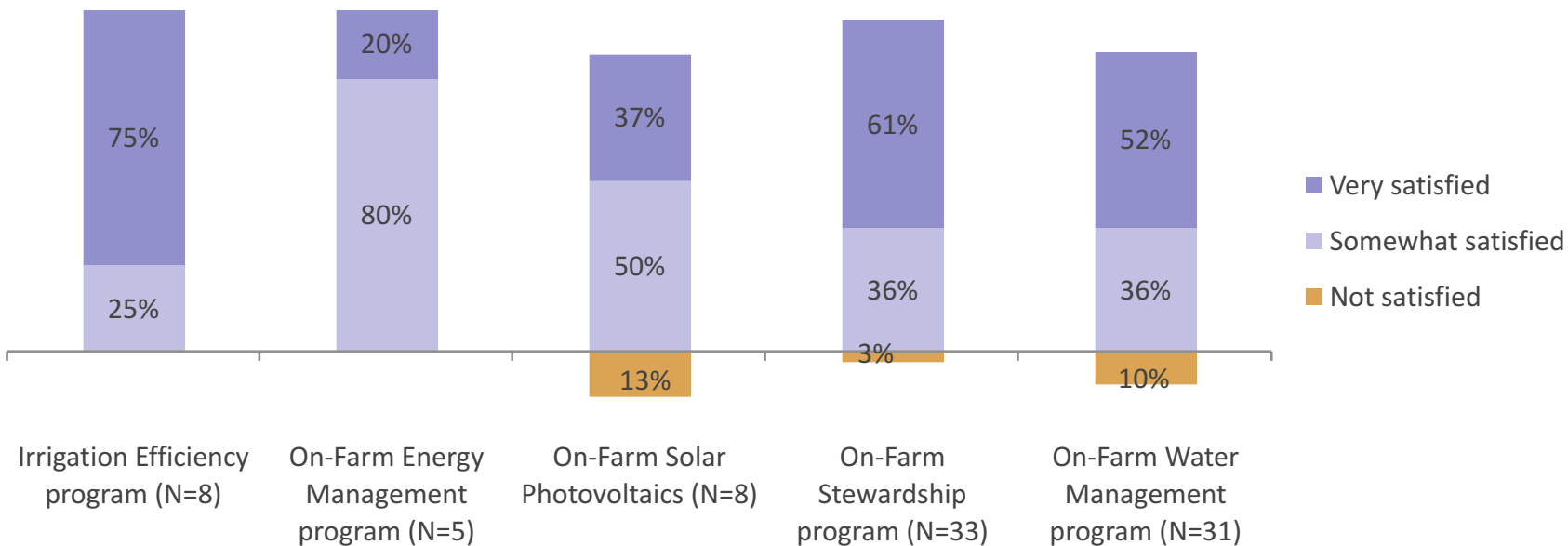
The following slides summarize each measure for all programs. Following are some summary comments about the general trends. Note that because of the small number of cases, these conclusions are directional versus statistically significant.

- Satisfaction is highest for the Irrigation Efficiency program. This appears driven by stronger ratings of application processing time, overall impact on the farm, ease of participating and eligibility requirements.
- The On-Farm Stewardship program also had relatively higher positive ratings, and fewer participants gave negative ratings.

Satisfaction with Growing Forward 2 Programs

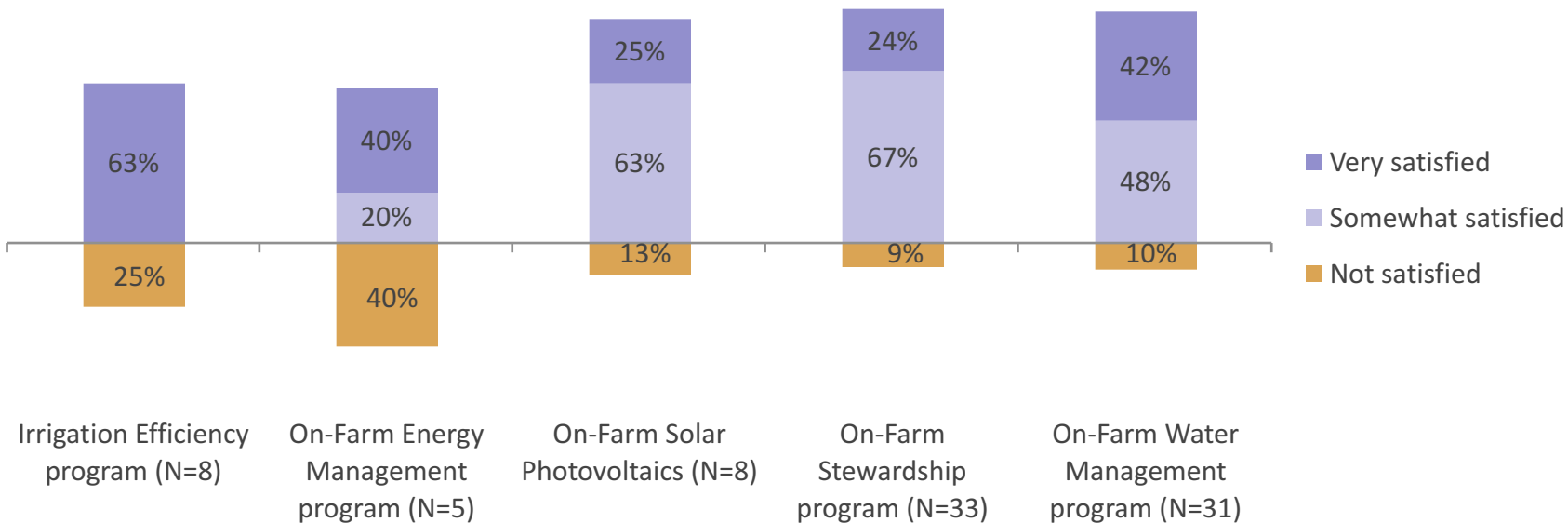
- The attributes garnering the lowest ratings overall were application processing time, cost-sharing allocation, and ease of participating.
- The attributes with the most positive ratings were overall satisfaction and impact on the farm.
- It is interesting that overall, participants rated the programs highly, but more negatively when it came to thinking about specific aspects.

Satisfaction With Growing Forward 2 Programs – OVERALL SATISFACTION



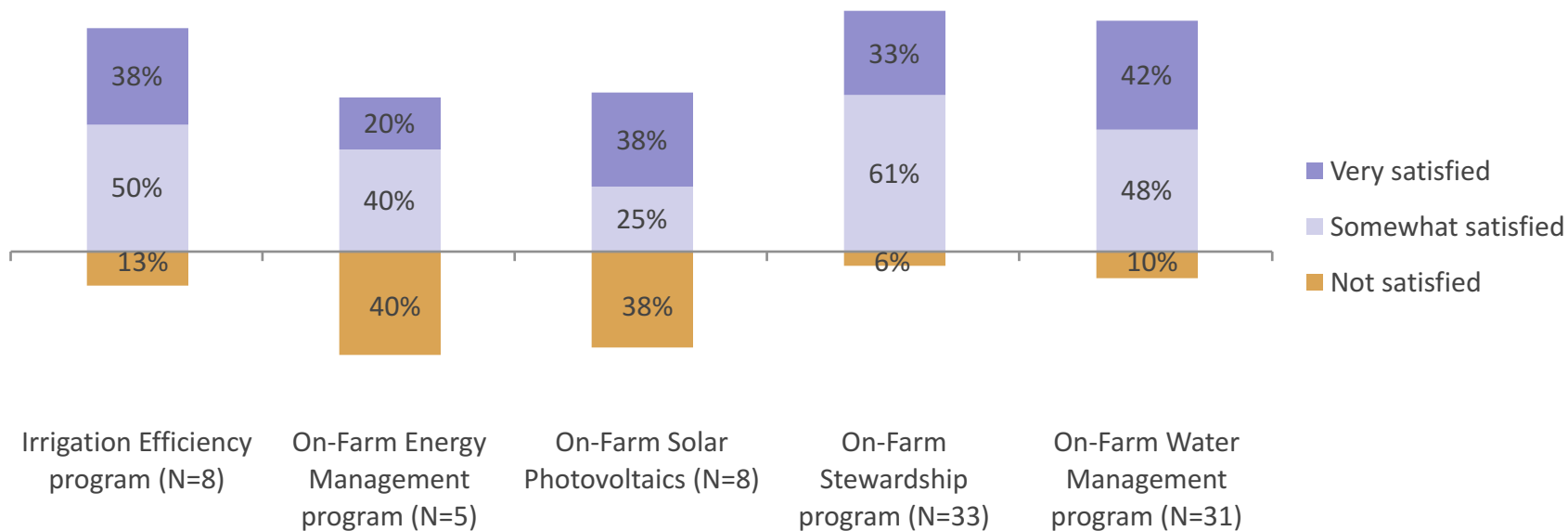
Base: Those who participated in each program. CAUTION: small sample sizes

Satisfaction With Growing Forward 2 – EASE OF PARTICIPATING



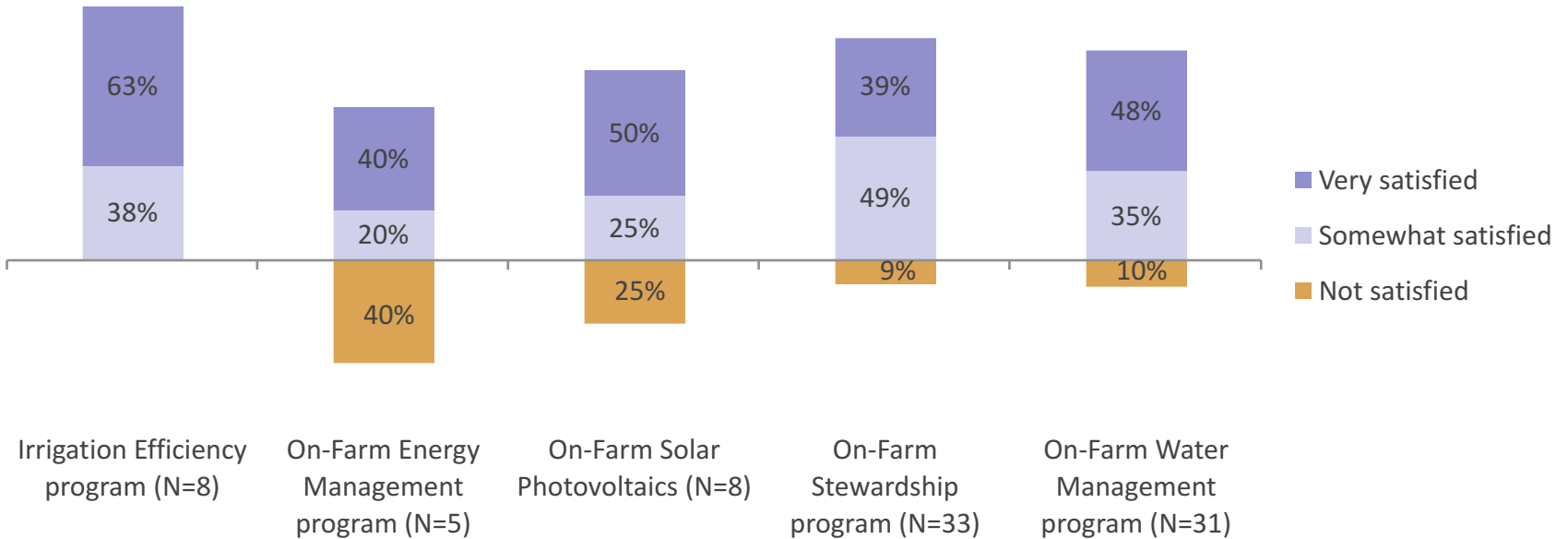
Base: Those who participated in each program. CAUTION: small sample sizes

Satisfaction With Growing Forward 2 Programs – COST-SHARING ALLOCATION



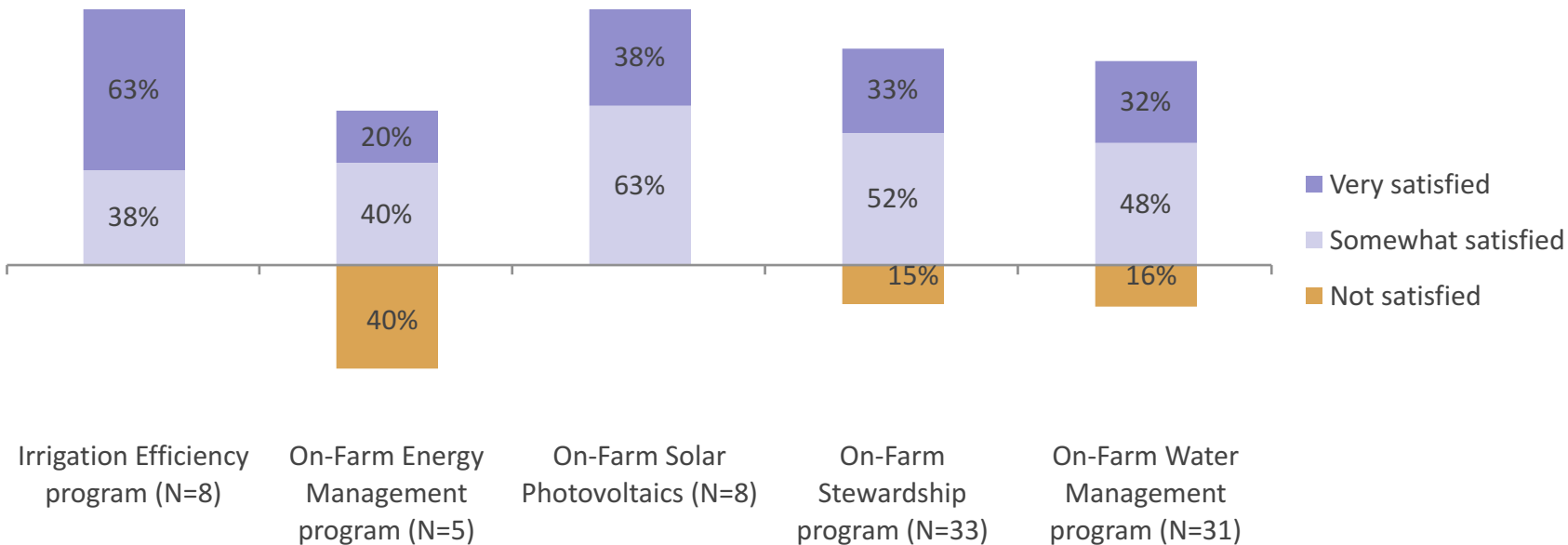
Base: Those who participated in each program. CAUTION: small sample sizes

Satisfaction With Growing Forward 2 Programs – OVERALL IMPACT OF THE PROGRAM ON YOUR FARM



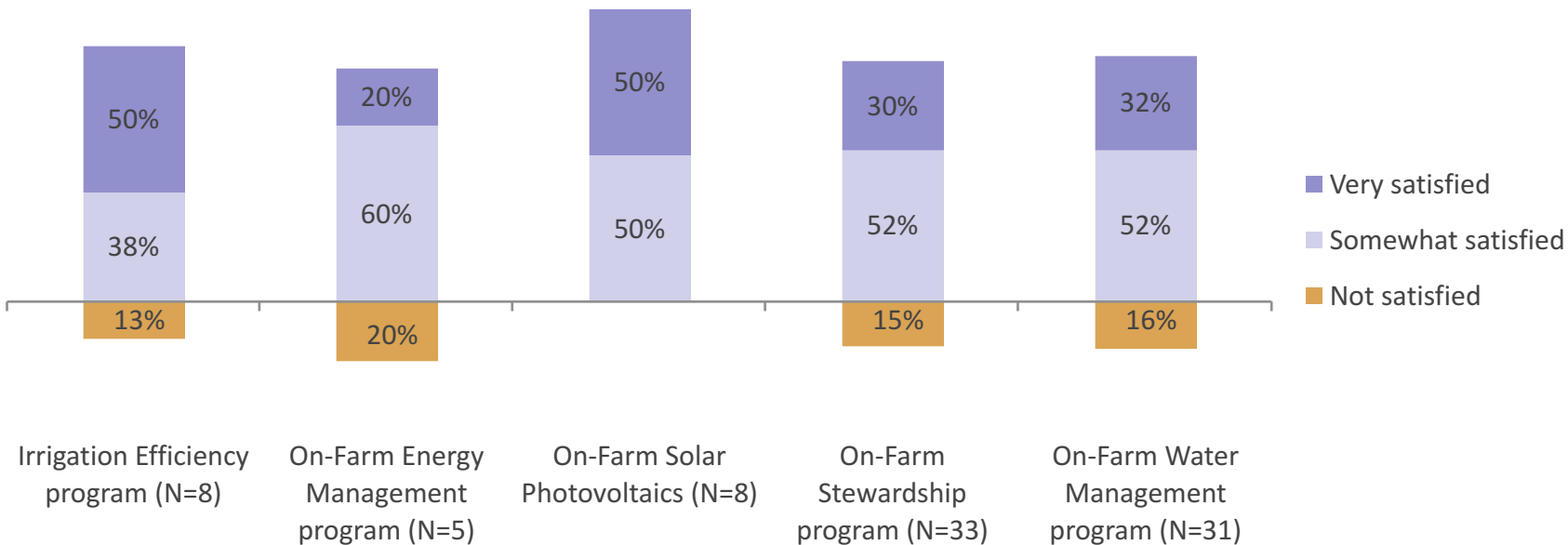
Base: Those who participated in each program. CAUTION: small sample sizes

Satisfaction With Growing Forward 2 Programs – ELIGIBILITY REQUIREMENTS TO ACCESS THE PROGRAM



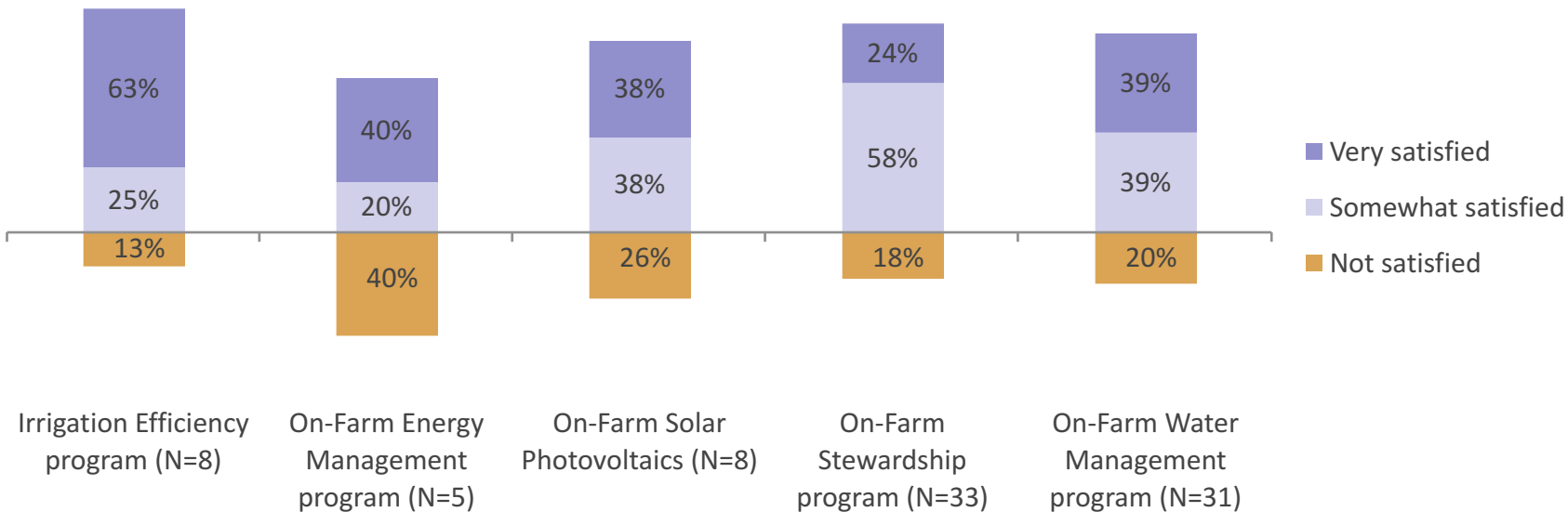
Base: Those who participated in each program. CAUTION: small sample sizes

Satisfaction With Growing Forward 2 Programs – PROGRAM TERMS AND CONDITIONS



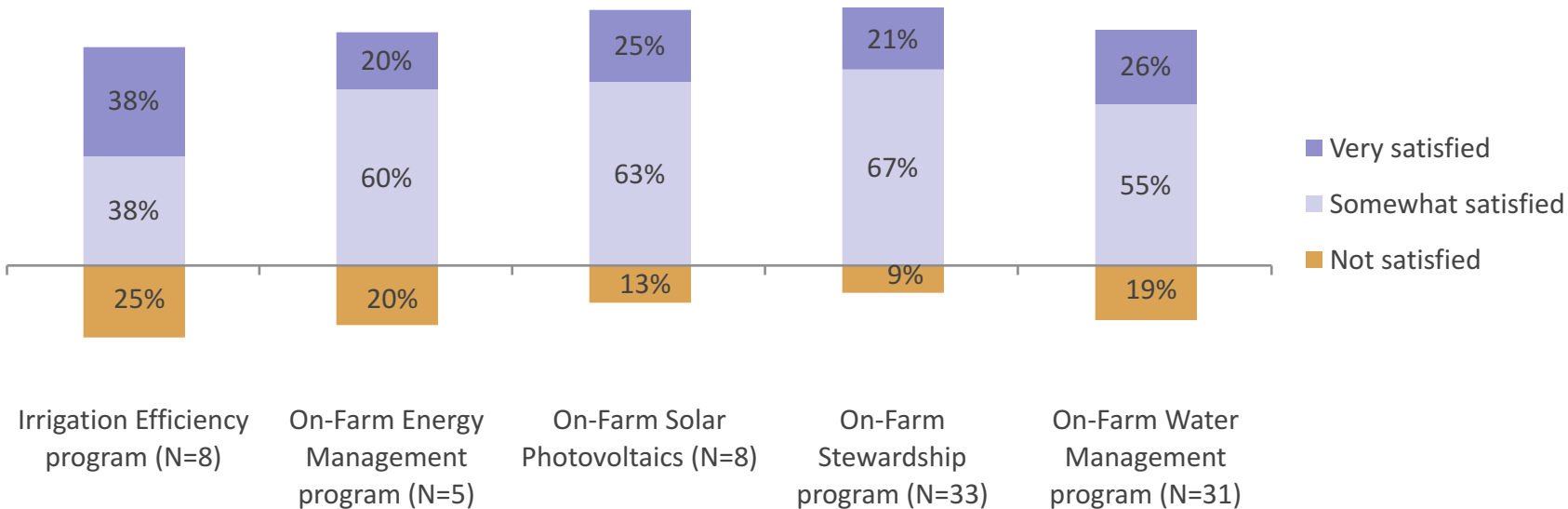
Base: Those who participated in each program. CAUTION: small sample sizes

Satisfaction With Growing Forward 2 Programs – APPLICATION AND PROCESSING TIME



Base: Those who participated in each program. CAUTION: small sample sizes

Satisfaction With Growing Forward 2 Programs – EASE OF UNDERSTANDING THE APPLICATION PROCESS



Base: Those who participated in each program. CAUTION: small sample sizes

Participant Suggestions for Improvement in Growing Forward 2 Program

Participants were asked if they have any suggestions for improvement of GF2. This was an open ended question, and responses were grouped into the categories shown here.

Among the 85 participants, only 31 offered suggestions. The most common response category was to simplify the process – less “red tape” and paperwork. Second most commonly, respondents suggested speeding up the processing time.

Other suggestions cover a range, all of which are worthwhile considerations for future programming.

For verbatim comments, please see Appendix A. Sample comments are provided on the following slide.

Suggestions for Improvement of GF2 Programs	
Simplify, less paperwork	N=8
Improve speed of processing	N=5
More information, clearer definitions and terms	N=3
Increase the maximum limit, cover a higher percentage	N=2
Make more accessible and relevant for smaller farms	N=2
More funding for oversubscribed programs	N=2
Timing of approval versus undertaking the project and spending the money	N=2
Specific program suggestions - types of projects, items covered	N=4
Other	N=6

Base: Participants in any of the five programs who provided comments (N=31). CAUTION: Small sample size

Sample Comments – Suggestions for Improvement in Growing Forward 2 Program

Keep the paperwork to a minimum and get the materials/approval process as fast as possible. Many if not all projects are time sensitive.

Need to streamline the application process.

Sometimes takes too long to know if any money will be left so you can do project.

A bit more detail when advertising .

Make definitions clearer - high pressure vs low pressure. Also extra funding for VRI would be valuable.

It would be nice if the water management had been a 50% program.

The basic programs are ok just don't make them too difficult for the small to medium sized farmers. Where the most change could occur.

Always seem to focus on large farms with lots of help and labour.

Continuation or new funds for some of the programs that got oversubscribed in GF2.

I do not think that full approval before starting is useful.

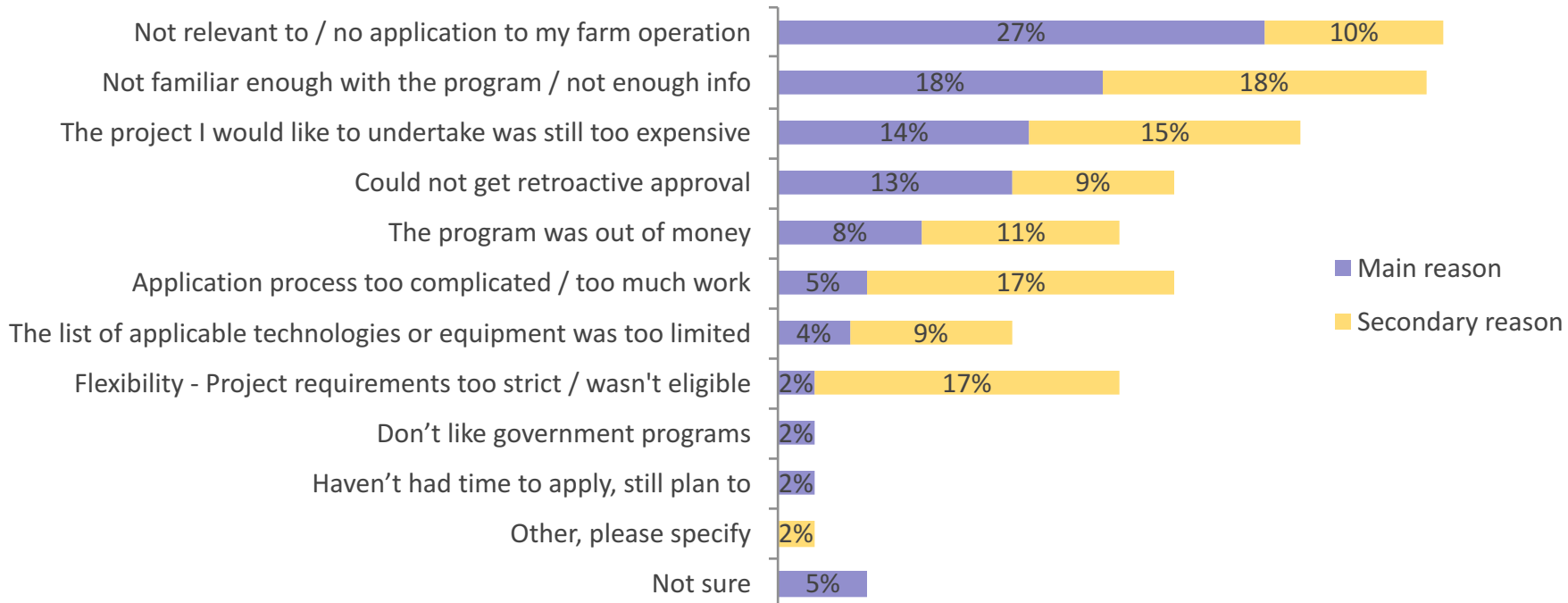
There should be a component in place where there would be credit available for upgrading business management courses which will allow the producer to manage his operation more efficiently. We concentrate so much on the external factors that quite often the internal and most often the most important parts, being business management aspects are ignored or forgotten. Other provinces subsidize these and I feel Alberta should as well.

Barriers to Participation in Growing Forward 2 Programs

Respondents who had heard of and knew something about each program, but hadn't participated, were asked to indicate, from a list, the main and secondary reasons they did not participate. From these, we can identify barriers to participation. These reasons are shown on the following slides, and the main reasons (given by more than 10%) are shown below.

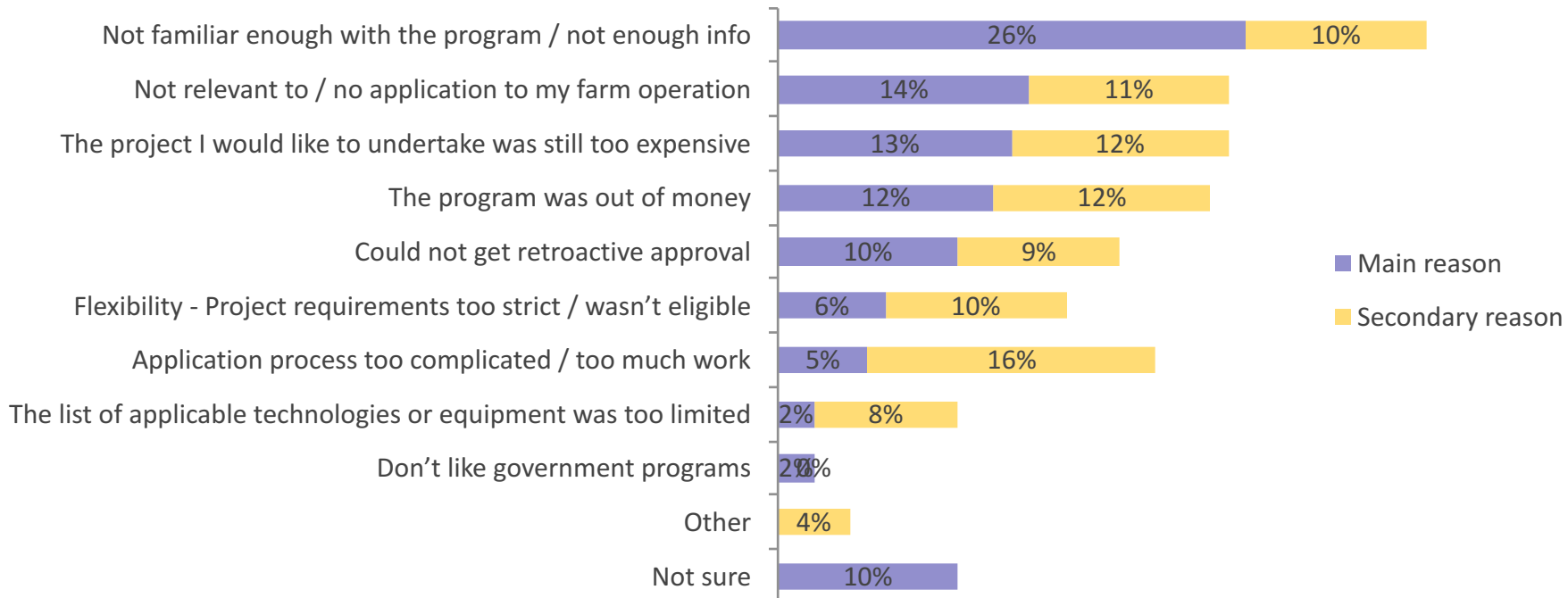
Reasons for Not Participating (Main Reason Given by >10%)	
On Farm Water Management	Not relevant to my operation (27%), Not familiar enough (18%), Project still too expensive (14%), Couldn't get retroactive approval (13%)
On Farm Stewardship	Not familiar enough (26%), Not relevant to my operation (14%), Project still too expensive (13%), Program out of money (12%)
On Farm Solar Photovoltaics	Project still too expensive (29%), Not relevant to my operation (20%), Not familiar enough (16%)
On Farm Energy Management	Not relevant to my operation (24%), Program out of money (18%), Project still too expensive (18%), Application process too complicated (14%)
Irrigation efficiency	Couldn't get retroactive approval (N=2)

Reasons for Not Participating in ON-FARM WATER MANAGEMENT



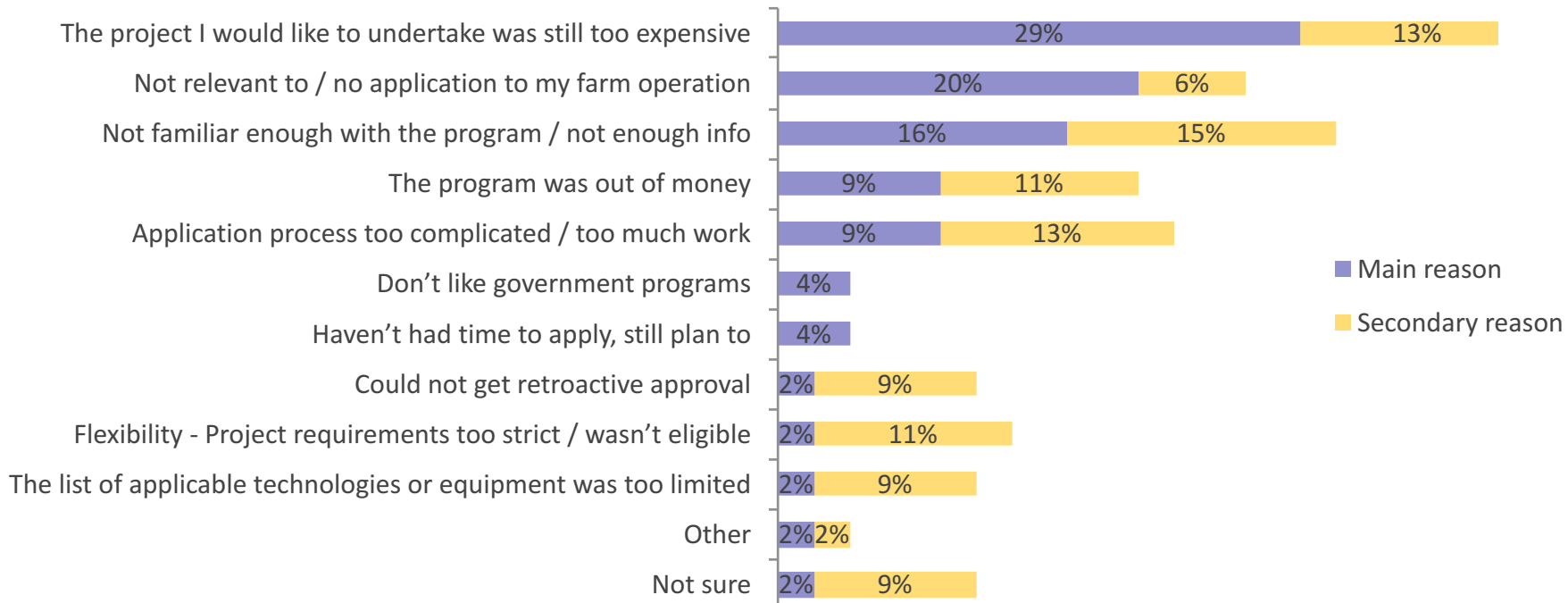
Base: Subset of respondents who know a little or a lot about this program but didn't use it (N=119)

Reasons for Not Participating in ON-FARM STEWARDSHIP PROGRAM



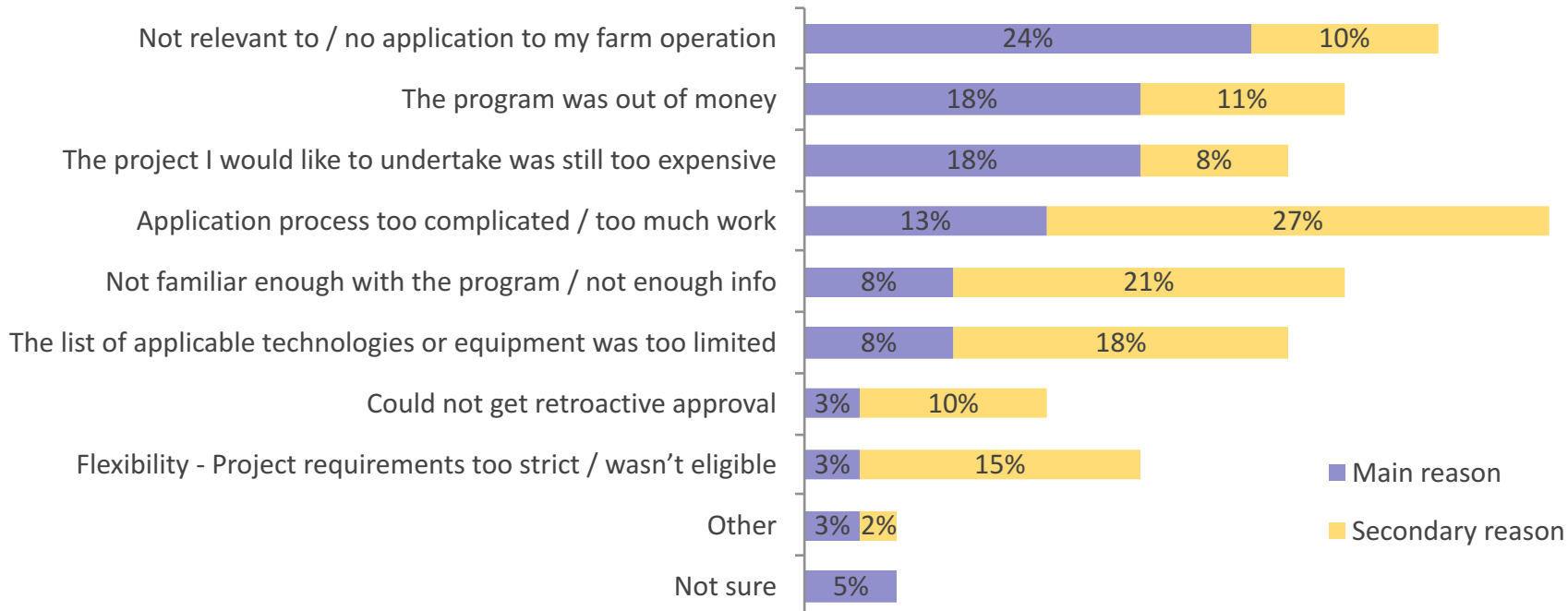
Base: Subset of respondents who know a little or a lot about this program but didn't use it (N=108)

Reasons for Not Participating in ON-FARM SOLAR PHOTOVOLTAICS PROGRAM



Base: Subset of respondents who know a little or a lot about this program but didn't use it (N=45)

Reasons for Not Participating in ON-FARM ENERGY MANAGEMENT PROGRAM



Base: Subset of respondents who know a little or a lot about this program but didn't use it (N=38)

Reasons for Not Participating in IRRIGATION EFFICIENCY PROGRAM

Reasons for not participating in Irrigation Efficiency Program	Main reason	Secondary reason
Not relevant to / no application to my farm operation	N=1	-
Not familiar enough with the program / not enough info	-	N=1
Could not get retroactive approval	N=2	-
The program was out of money	-	N=1
The project I would like to undertake was still too expensive	N=1	-
Flexibility - Project requirements too strict / wasn't eligible	-	N=1
The list of applicable technologies or equipment was too limited	-	N=2
Haven't had time to apply, still plan to	N=1	-
Other	-	N=1
Not sure	N=2	-

Base: Subset of respondents who have irrigation on their farm and who know a little or a lot about this program but didn't use it (N=8).
CAUTION: Small sample size.

Incentive Structure

Incentive Structure

Respondents were asked several questions about the most effective way to provide incentives through government programs. First, they were asked the following question:

“Growing Forward programs have used cost-sharing, with the program generally covering 50% - 70% of the costs of eligible projects, up to a specified maximum.

Do you feel that this cost-sharing system works well to encourage investment in innovative, energy efficient, or sustainable technologies and practices?”

As seen two slides forward, over half (57%) say yes, they do feel this system works well, while 12% do not. Almost one-third are not sure. There are few differences between segments, except that those under age 45 are even more likely to feel the system works well, with 76% indicating this.

Incentive Structure – Suggestions for Improvement

When asked for suggestions for improvement, the largest group of responses (27%) fell under the theme that the programs should cover more of the costs or have more realistic caps. Another theme was that there should be more information and advice (16%), and thirdly, that the process needs to be made simpler, with less “red tape” involved (16%). Many responses to this question were general suggestions, not not strictly related to incentive structure.

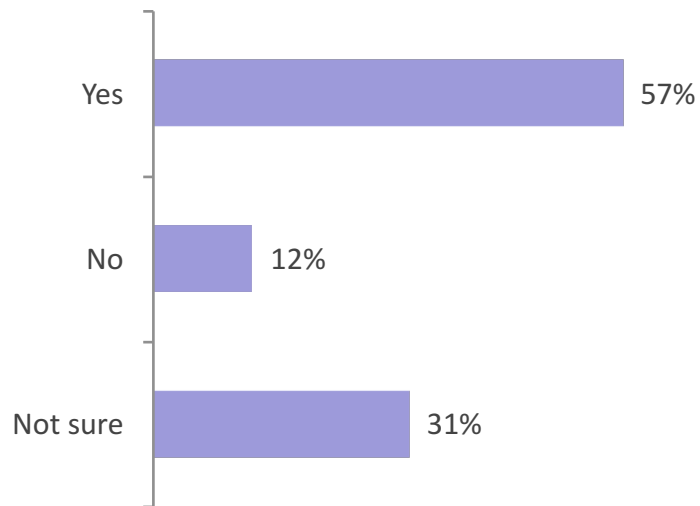
Other lesser-mentioned themes included timing and the need for the programs to allow for retroactive approvals, having more money in the programs or allocating funds better between programs. Some also felt that programs should be more available to different types of growers or that the list of actions / items be broadened, along with miscellaneous other suggestions (see chart on next slide). Appendix A provides the verbatim comments that fell into each category.

Those with under 1000 acres are much more likely that larger growers to see a need for more information, assistance and advice, with 42% making this suggestion versus 16% overall. Other than this, there are no segments that differ in their suggestions for improvement.

Sample comments are included two slides forward, and full verbatim comments are in Appendix A.

Incentive Structure

Do you feel that the cost-sharing system works well to encourage investment in innovative, energy efficient, or sustainable technologies and practices?



Base: All respondents (N=339)

What improvements would you suggest, specifically related to cost-sharing programs?	
Cover more of the cost, have realistic caps	27%
Need more information, clearer information, advice	16%
Paperwork cumbersome, red tape, complicated	16%
Be retroactive, different timing of budgeting, no time to wait for approvals	9%
Have more money in the program, allocate funds better	8%
Disagree with programs	6%
Seems targeted at larger farms, doesn't work everywhere	5%
Would rather receive tax credit	4%
Broaden items covered, less restrictions	4%
Suppliers inflate costs	3%
Other	13%

Base: Respondents who offered suggestions (N=110)

Sample Comments – Suggestions for Improvement of Cost-Sharing Aspect

Cost share portion by government should not be just a percentage, but should be set to ensure that there is a return on investment by the producer.

Don't limit the program to small amounts, a larger farm may qualify on one field but might be interested in upgrading multiple location in one year but then doesn't qualify for funding.

Higher cost share for slower ROI projects.

If the program boasts a percentage of the cost shared, it should not be capped to a dollar limit. One or the other but not both.

Develop teams of people to go out and do complete or partial audits of farms so that both parties know the best direction to go in.

Many of the improvements are still too expensive at 50%, need to be 70 to 75%.

Clearer information prior to application on what expenses are eligible.

Not enough information on what qualifies.

I feel that suppliers raise the cost simply because the government is footing the bill.

Should include some tax incentives.

Be retroactive if we have already been proactive in introduction.

I have done projects that would qualify. Some I did not know funding was available and there is no retroactive applications. And other times I just can't afford the time to do the applications and then wait for approval.

Funds should be re-allocated from low demand areas to high demand areas.

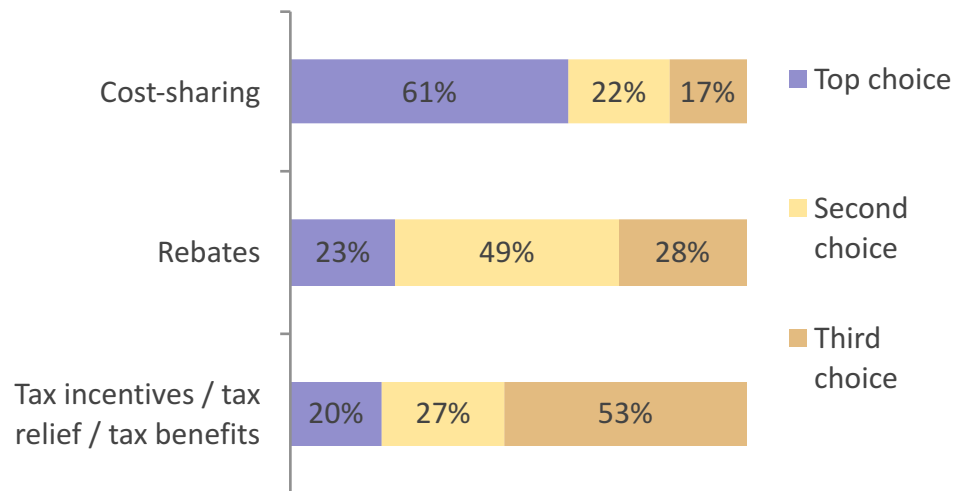
Preferences for Government Funding Programs

The largest portion of growers think that cost-sharing is the best format for incentives, with 6 in 10 choosing this as the top ranked-option. Rebates are next in order of preference, followed by tax incentives.

The trend to prefer cost-sharing is greater among 5000+ acre growers, with 78% opting for this as their top choice. Cost-sharing is also preferred by mixed crop and livestock farmers (69%).

Tax incentives were more likely to be chosen as number one by those aged 65+ (33%) or with under 1000 acres (29%).

What type of government funding program do you think works best to encourage adoption of technology or practices? Please rank the following from 1 to 3, with "1" being the option you feel is best.



Base: Respondents who gave an answer (N=273 - 282)

Changes Planned on Farm Related to Environmental Sustainability

Changes Planned – Unaided

This section of the survey started with an open-ended question about changes planned, with wording as follows:

“It is recognized that many producers already extensively implement best practices related to environmental stewardship. Government support (programs, funding, education) – will be available over the next five years to encourage even more adoption of or changes to practices, technology, equipment that contribute to the priority area of environmental sustainability. In the box below, please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.”

Just under half (44%) described specific changes they are looking at, while 56% declined to comment.

The open ended responses were coded into categories (similar categories to those asked in a subsequent aided question). It is notable that these changes span a wide range of practices, and no one type of change having more than 9% falling into that category, and most having in the range of 2% to 6%.

Verbatim comments in each category are provided in Appendix A.

Open-Ended Question – Changes Planned on Farm Related to Environmental Sustainability

Changes Planned	
Sectional controls, auto-steer, GPS-related improvements	9%
Improved fertilizer technologies, practices, equipment	6%
Variable rate application of fertilizer (GPS or sensor based)	5%
Better on-farm energy management	5%
Better management of on-farm water supply, drainage, wetlands management	4%
On-farm solar power, solar panels	4%
Livestock related	4%
Improved pesticide technologies, practices, equipment	3%
More efficient irrigation systems, solar, variable rate	3%
Improved or more efficient grain and pesticide storage, drying and aeration technology	3%

Changes Planned	
Less tillage / more direct seeding	2%
Improved waste management (e.g. plastic, oil, etc.)	2%
Emissions modifications to equipment, or use modern equipment, reduce fuel consumption	2%
Improved seeding technology	2%
Fuel storage	2%
Rotations, different crops, organic	1%
Better use of GPS data such as yield, soil, as-applied, topography, etc. (data management, use, analysis, storage)	1%
Improved harvesting equipment, improved harvest practices	1%
Other	8%
None / no comments	56%

Base: All respondents (N=339). Percentages add to more than 100 as multiple responses were allowed.

Open-Ended Question – Changes Planned on Farm Related to Environmental Sustainability – Sample Comments

Sectional control for drill to eliminate fertilizer overlap.

GPS installation on equipment.

I would like to adopt GPS and sectional control on my air seeder, but the cost is prohibitive for a small-medium sized operation like mine.

More efficient use of fertilizer.

Adapting some form of funding to offset the extra cost of nitrogen products that allow for nitrogen to be placed and utilized as needed, i.e. ESN etc.

VR fertilizing. Sectional control for fertilizer, Stabilized N sources.

Implementation of high efficiency lights, heating, and insulation to a farm shop.

Installed led yard lights for reduced energy use and greater safety and security.

Biological control options-methods for crop production.

Change from centrifugal to turbine pumps so that we can use Variable frequency drives and save energy costs of pumping.

Update burner on grain dryer for more efficient energy use using more foliar fertilizer.

Reduced tillage. Responsible management of pesticides and fertilizers.

Recycle grain bags.

Any equipment that would reduce carbon imprint on my farm...i.e. higher efficiency motors, lower emissions.

Upgrade seeding tool to reduce disturbance.

RTK baseline GPS, data logging and analyzing, liming to increase soil ph.

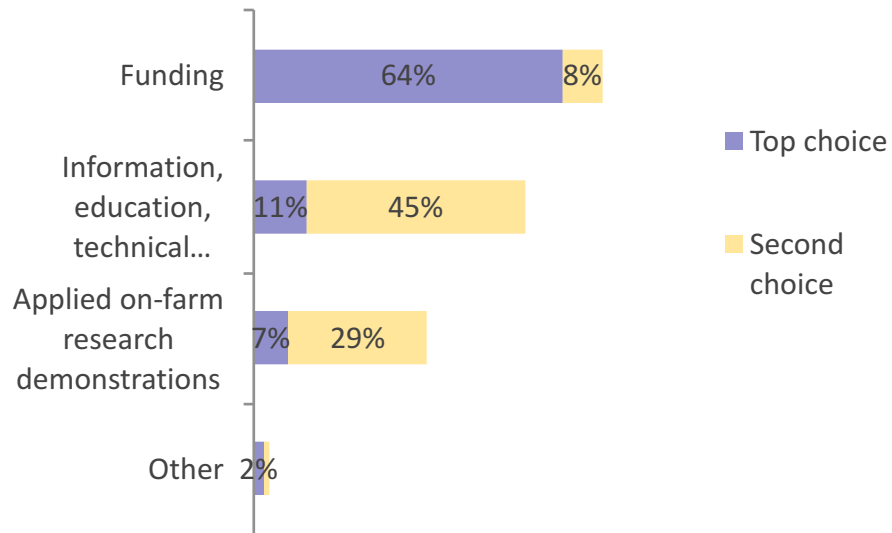
Environmental Farm Plan.

What Kind of Support is Needed, To Make Planned Changes

Given a choice of types of support to help them proceed with these changes, most chose funding as their first choice (64%) over information / support / advice (11%) or on-farm demonstrations (7%).

Those under age 45 were even stronger in their choice of funding (84%), as were mixed crop and livestock farmers (85%). There were no other notable segment differences.

*What kind of support would be most likely to make you proceed with these changes?
Please indicate your first and second choice.*



Changes Planned – Aided

Respondents were asked: *“If there were not any barriers (such as cost, information, time, complexity, etc.) which of the following practices / technologies, if any, would you be interested in adopting (or further implementing on your farm if you have already adopted) over the next five years?”*

Respondents could select as many items as they are interested in from a given list. The most common types of changes that growers are interested in, with over 50% selecting them, include: improved fertilizer technologies, practices, equipment; better use of GPS data such as yield, soil, as-applied, topography, etc. (data management, use, analysis, storage); and improved pesticide technologies, practices, equipment.

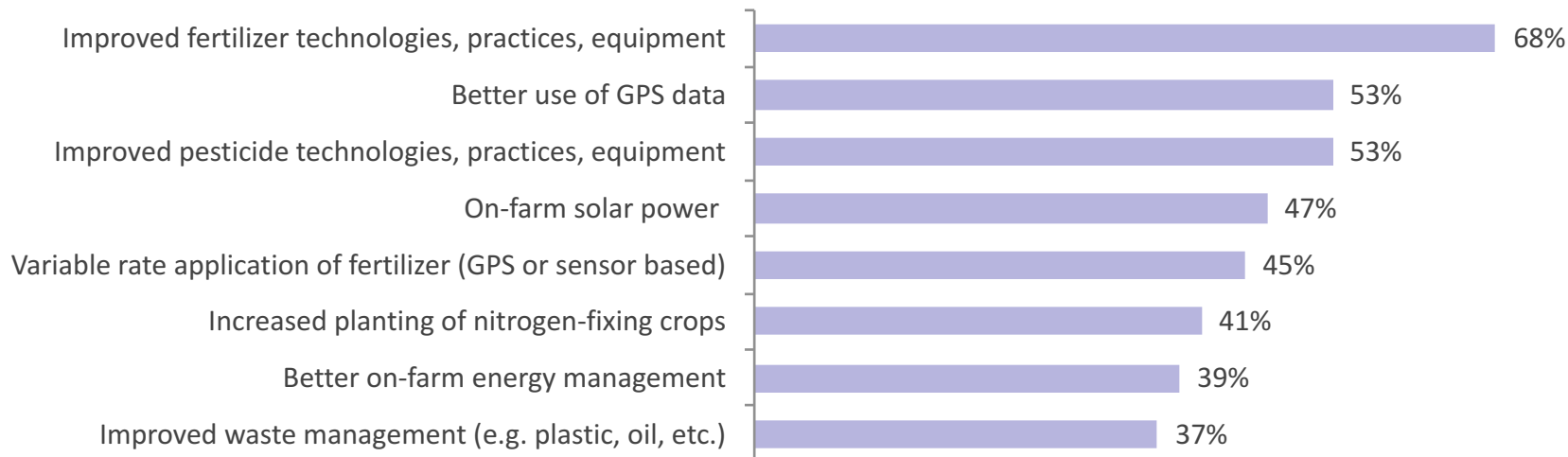
Also quite common (37% to 49%) were on-farm solar power, variable rate application of fertilizer, increased planting of nitrogen fixing crops, better on-farm energy management and improved waste management.

The least common changes indicated were emissions modifications to equipment and more efficient irrigation systems (each selected by 9%).

When asked to select just one practice they felt had the most interest or potential, the top choice was improved fertilizer technologies, practices, equipment. This was followed by on-farm solar power, better use of GPS data and improved pesticide technologies, practices and equipment.

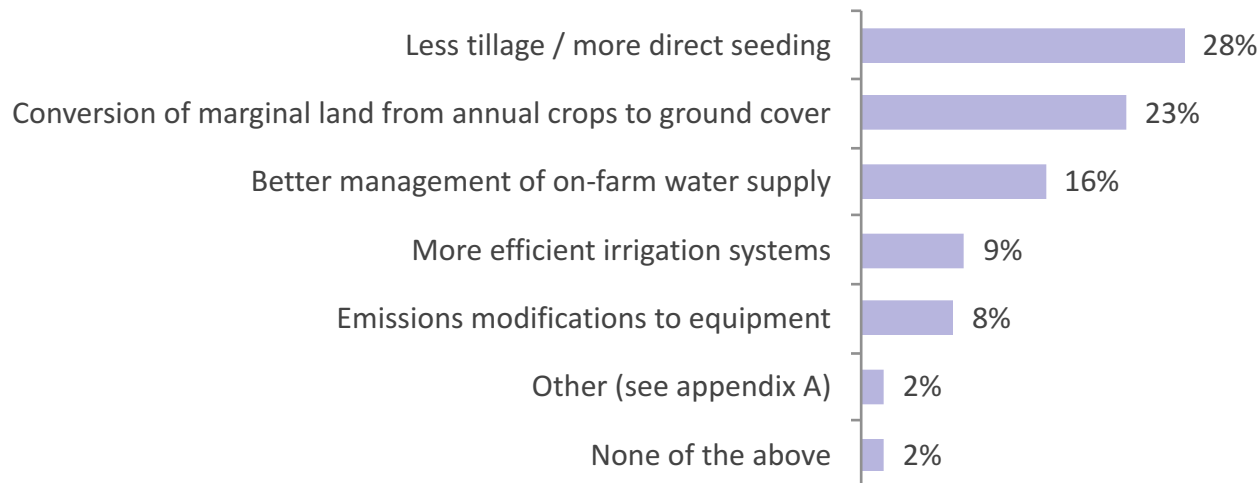
Aided Question: Interest in Adopting or Further Implementing Certain Practices or Technology (Slide 1 of 2)

If there were not any barriers (such as cost, information, time, complexity, etc.) which of the following practices / technologies, if any, would you be interested in adopting (or further implementing on your farm if you have already adopted) over the next five years?



Aided Question: Interest in Adopting or Further Implementing Certain Practices or Technology (Slide 2 of 2)

If there were not any barriers (such as cost, information, time, complexity, etc.) which of the following practices / technologies, if any, would you be interested in adopting (or further implementing on your farm if you have already adopted) over the next five years?

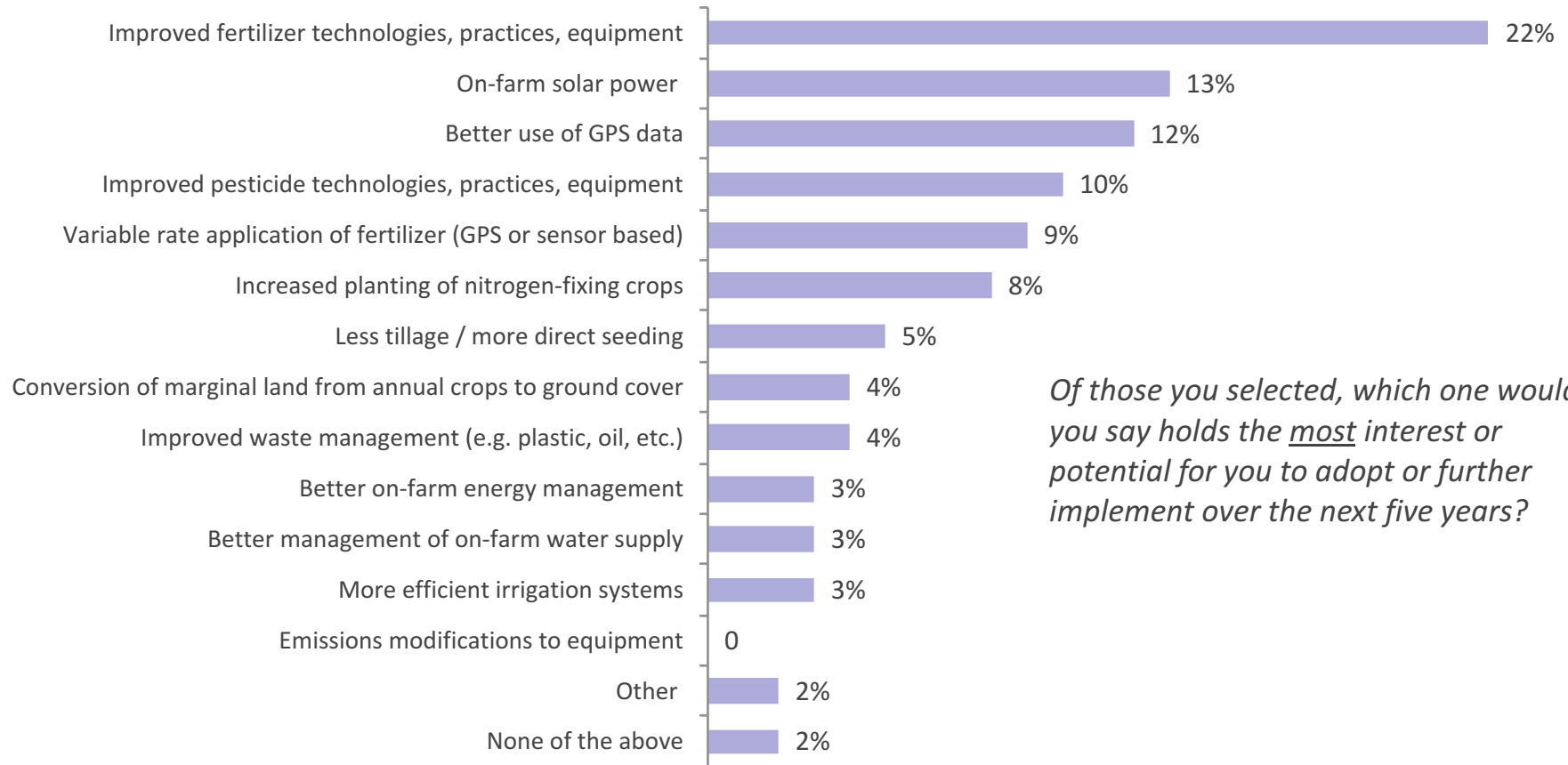


Base: All respondents (N=339)

Changes Planned – Aided – Segment Differences

- Lower revenue category farms are more likely to be interested in increased planting of N fixing crops (50% versus the 41% average).
- Mixed crop and livestock farms more likely to be interested in conversion of marginal land to ground cover (32% vs. 23% avg.), better management of on-farm water supply (26% vs. 16% avg.), and on-farm solar power (56% vs. 47% avg.).
- Those in the \$2M and over category are more interested in on-farm energy management (56% vs. 39% avg.), improved fertilizer practices and technology (83% vs. 68%), improved waste management (57% vs. 37%), more efficient irrigation systems (23% vs. 9%) and better use of GPS data (67% vs. 53%).
- Those in the lowest revenue and acre categories are more interested in on-farm solar power. This may correlate with livestock farms.
- Those with 5000+ acres are more interested in emissions reduction modifications to equipment (16% vs. 8% avg.).
- Those under age 45 are more interested in more efficient irrigation systems (17% vs. 9% avg.), better use of GPS data (63% vs. 53%) and emissions modifications to equipment (15% vs. 8%).

Practice or Technology with Most Interest or Potential



Of those you selected, which one would you say holds the most interest or potential for you to adopt or further implement over the next five years?

Barriers to Adopting Environmentally Sustainable Practices

Barriers to Adoption

For the practice they were most interested in adopting and one other practice they had chosen, respondents were asked to indicate the main barriers to adopting these practices.

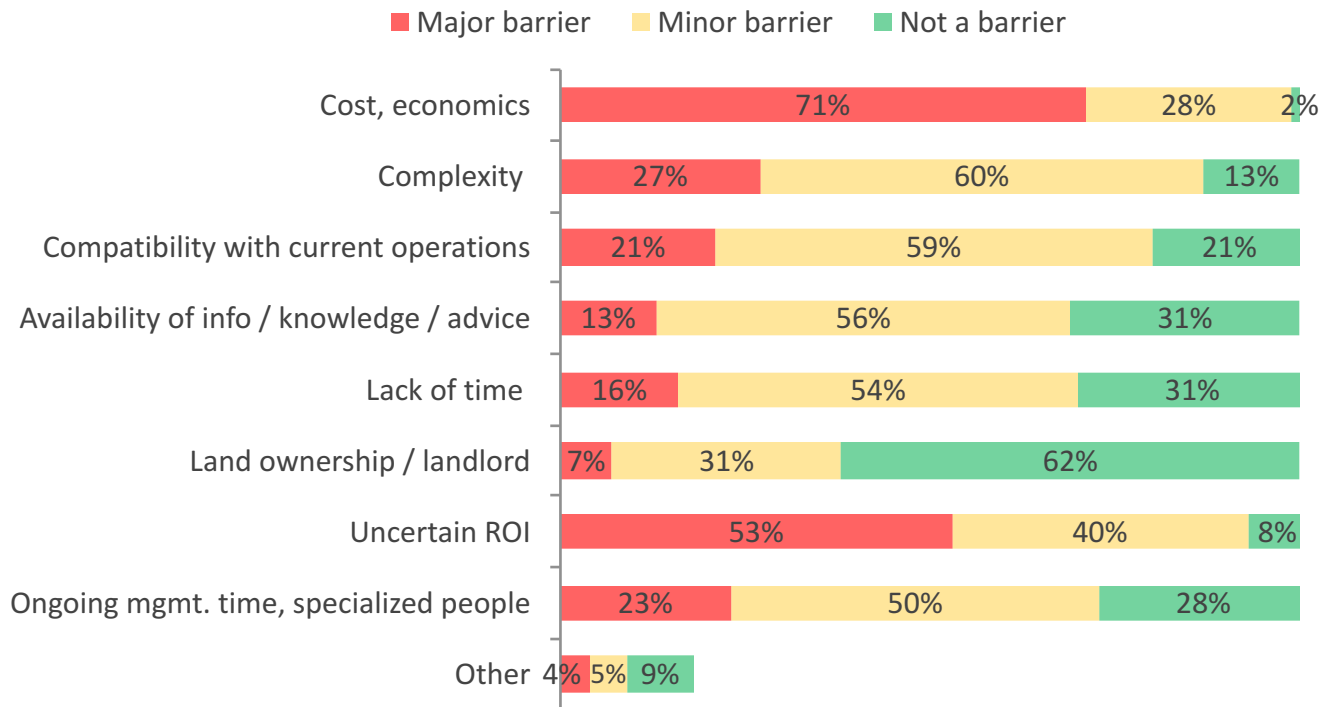
The following slides show the barriers to adoption for each practice; the slides / practices are sorted in order of the portion who selected them as their top choice of interest.

Some themes seen on the following slides:

- Cost or economic considerations are the most frequent barrier for every practice.
- The least severe barrier, of those listed, is related to land ownership or landlord considerations. The only practice where this appears to amount to any extent of barrier is conversion of marginal land from annual crops to ground cover.
- Three practices have consistently higher portions who see cost, uncertain ROI, and complexity as key barriers. These include: on-farm solar power, better use of GPS data and on-farm energy management. The first two are also high-priority changes for many.
- The practices with the lowest level of barriers include: increased planting of nitrogen fixing crops, less tillage / more direct seeding, and improved waste management.

Total who select: 68%
Portion selecting as top choice: 22%

Barriers to Adapting Improved Fertilizer Technologies, Practices, Equipment



Main barriers:
Cost, economics
Uncertain ROI
Complexity
Mgmt. time, people

Lesser barriers:
Operation compatibility
Info / knowledge / advice
Time

Not a problem:
Landlord issues

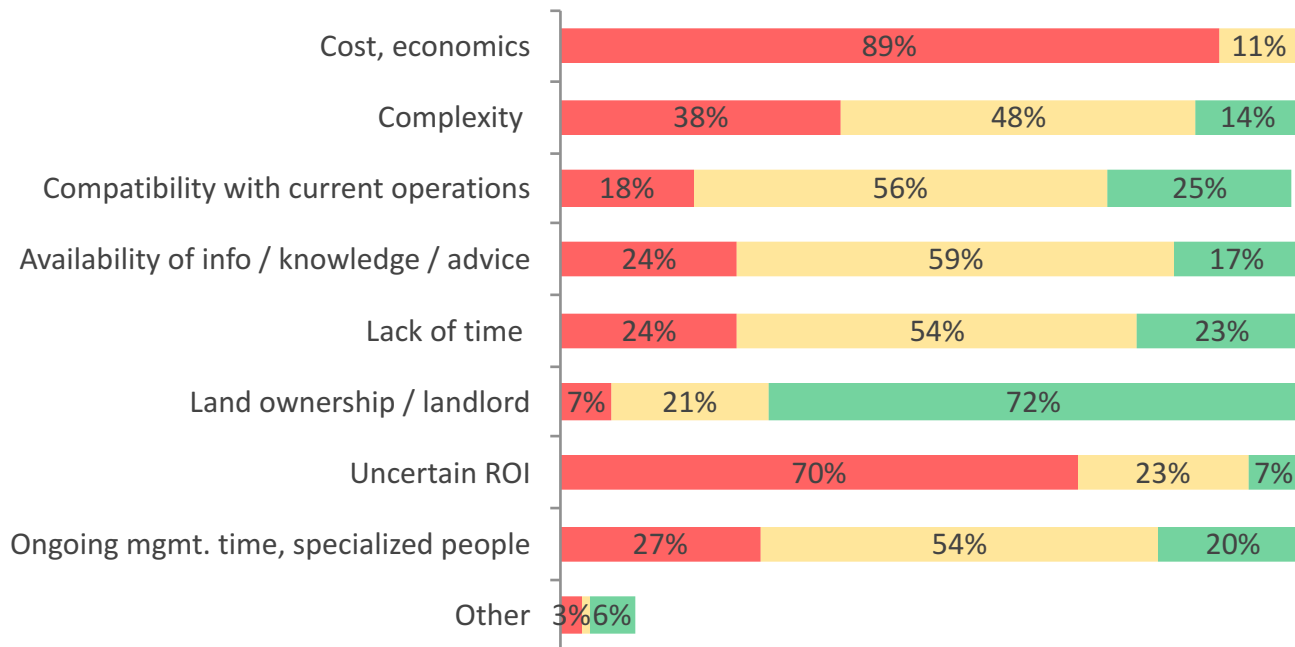
Base: Subset of those interested in adopting this practice (N=112)

Barriers to Adapting On-Farm Solar Power

Total who select: 47%

Portion selecting as top choice: 13%

■ Major barrier ■ Minor barrier ■ Not a barrier



Main barriers:

Cost, economics
Uncertain ROI
Complexity
Mgmt. time, people

Lesser barriers:

Operation compatibility
Info / knowledge / advice
Time

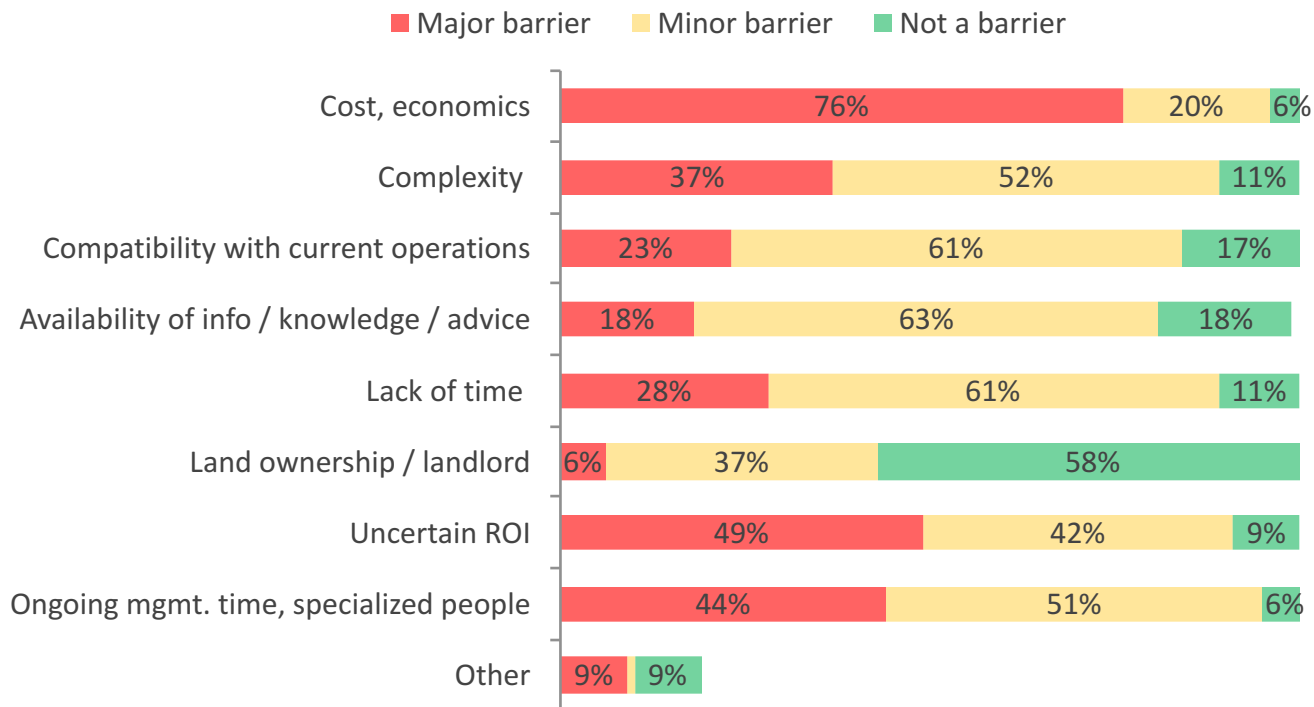
Not a problem:

Landlord issues

Base: Subset of those interested in adopting this practice (N=71)

Total who select: 53%
Portion selecting as top choice: 12%

Barriers to Adapting Better Use Of GPS Data (Data Management, Use, Analysis, Storage)



Main barriers:
 Cost, economics
 Uncertain ROI
 Mgmt. time, people
 Complexity
 Time

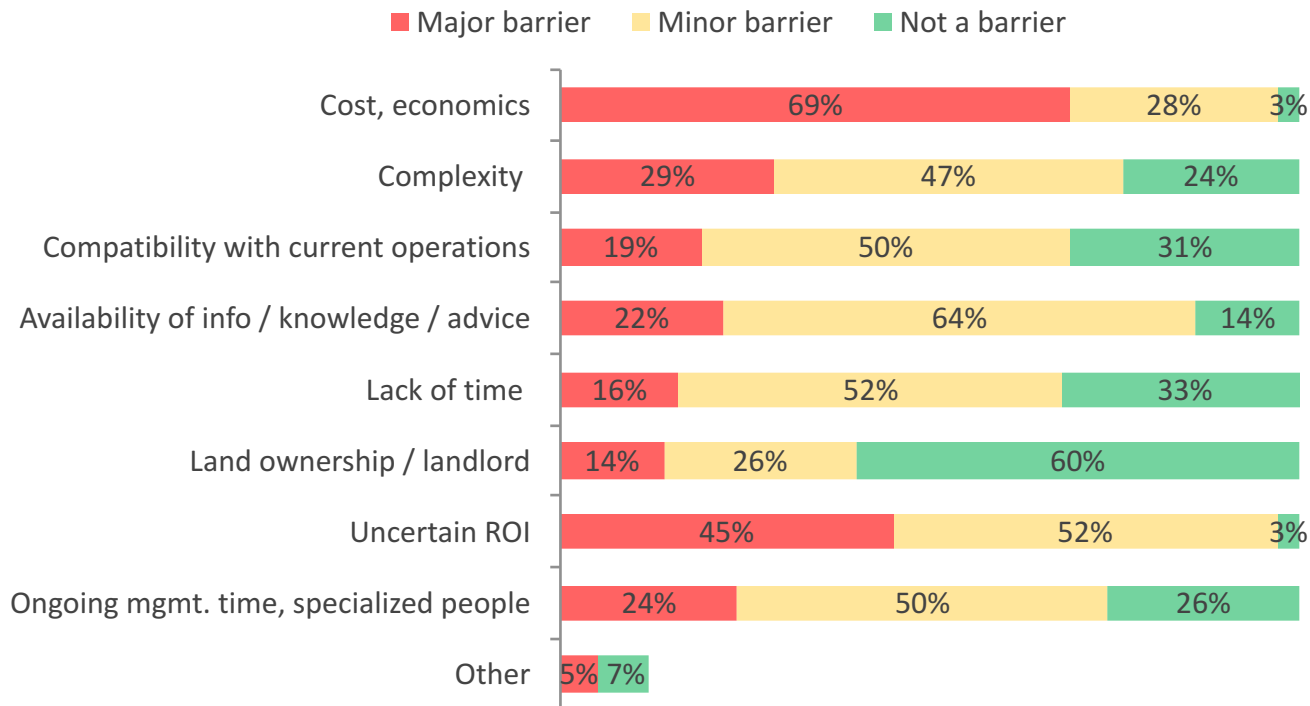
Lesser barriers:
 Operation compatibility
 Info / knowledge / advice

Not a problem:
 Landlord issues

Base: Subset of those interested in adopting this practice (N=71)

Total who select: 53%
Portion selecting as top choice: 10%

Barriers to Adapting Improved Pesticide Technologies, Practices, Equipment



Main barriers:

Cost, economics
Uncertain ROI
Complexity

Lesser barriers:

Operation compatibility
Info / knowledge / advice
Time
Mgmt. time, people

Not a problem:

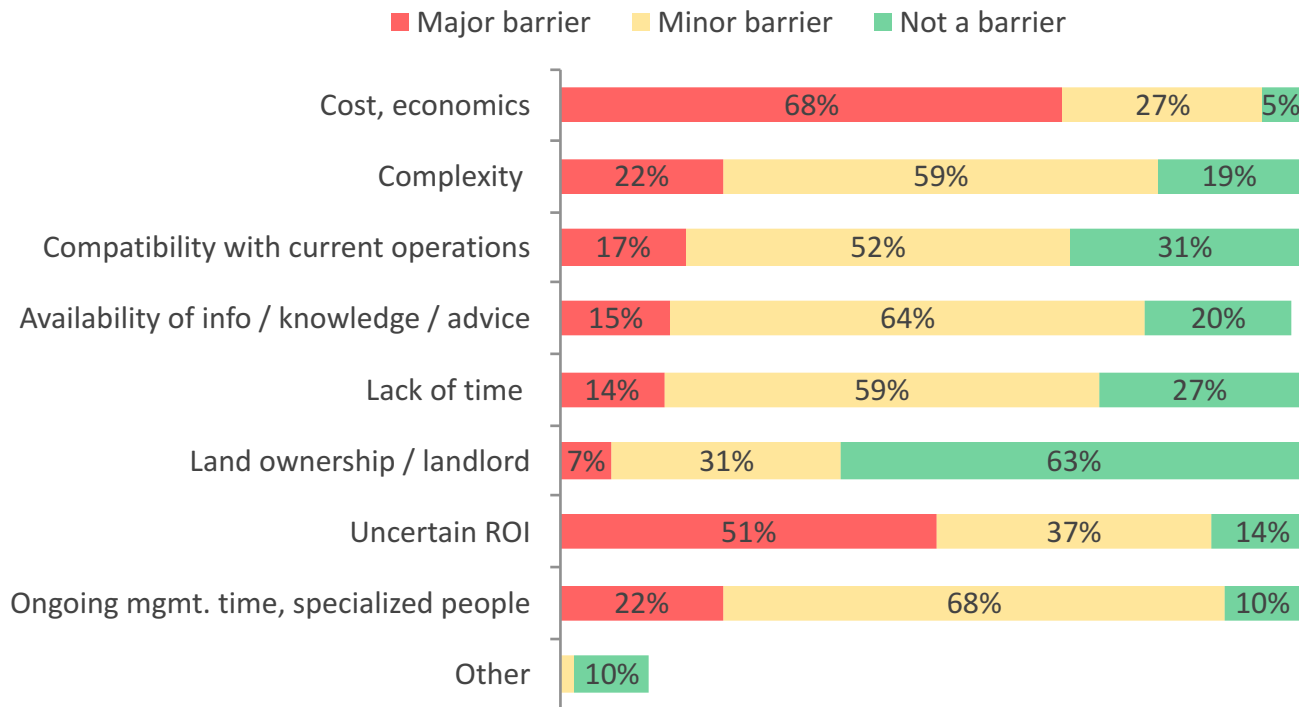
Landlord issues

Base: Subset of those interested in adopting this practice (N=58)

Barriers to Variable Rate Application of Fertilizer

Total who select: 45%

Portion selecting as top choice: 9%



Main barriers:

Cost, economics
Uncertain ROI

Lesser barriers:

Complexity
Operation compatibility
Info / knowledge / advice
Time
Mgmt. time, people

Not a problem:

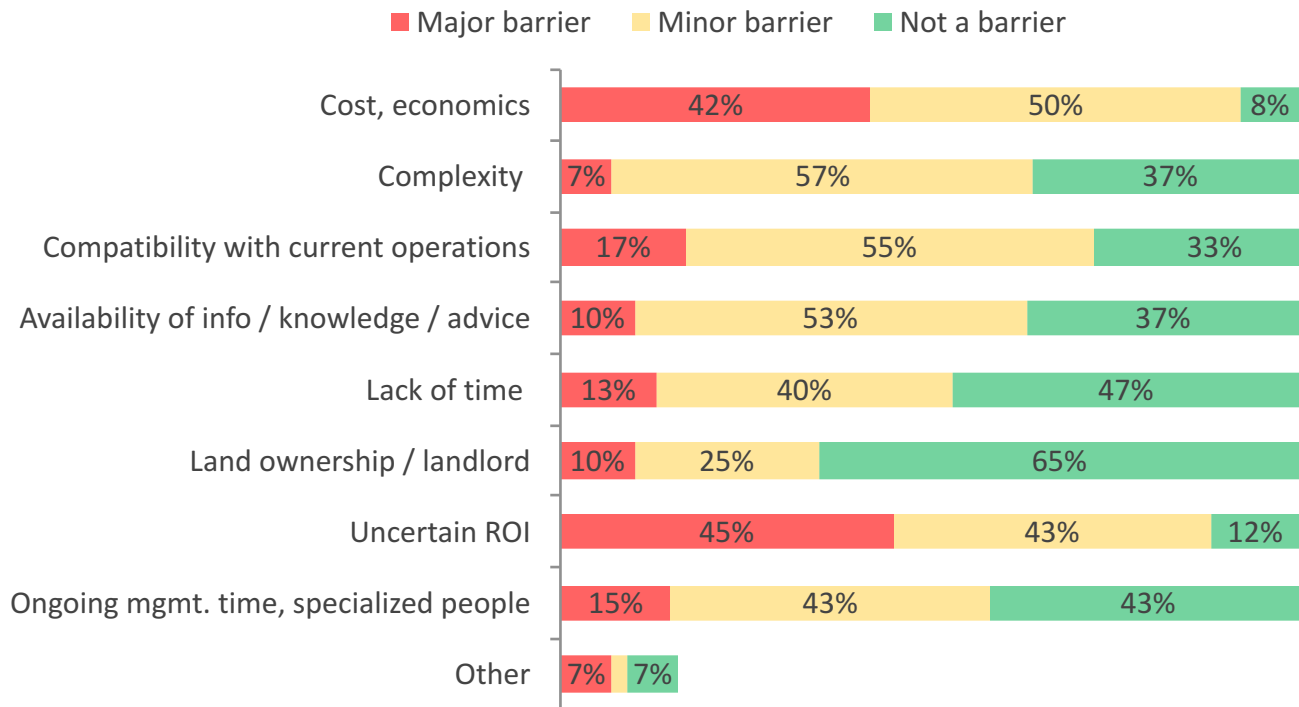
Landlord issues

Base: Subset of those interested in adopting this practice (N=59)

Barriers to Increased Planting of Nitrogen Fixing Crops

Total who select: 41%

Portion selecting as top choice: 8%



Main barriers:

Cost, economics
Uncertain ROI

Lesser barriers:

Complexity
Operation compatibility
Info / knowledge / advice
Mgmt. time, people

Not a problem:

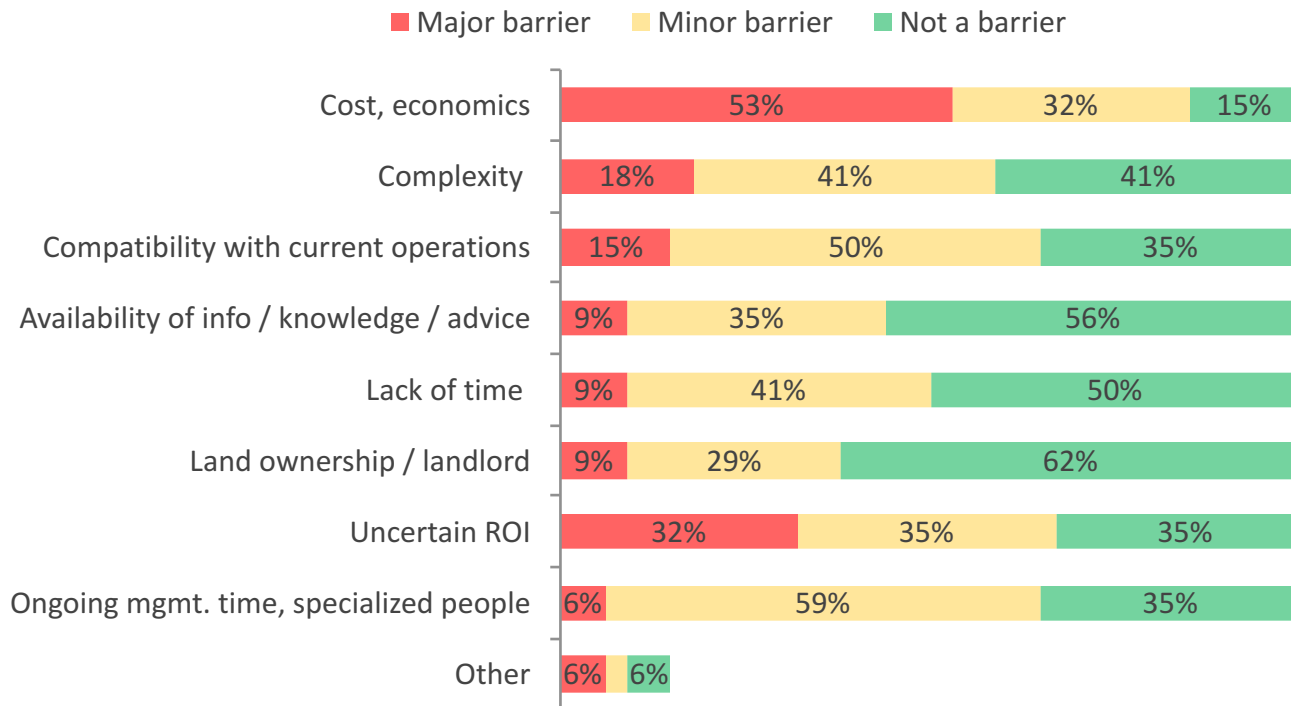
Landlord issues
Time

Base: Subset of those interested in adopting this practice (N=60)

Barriers – Less Tillage, More Direct Seeding

Total who select: 28%

Portion selecting as top choice: 5%



Main barriers:

Cost, economics
Uncertain ROI

Lesser barriers:

Complexity
Operation compatibility
Mgmt. time, people

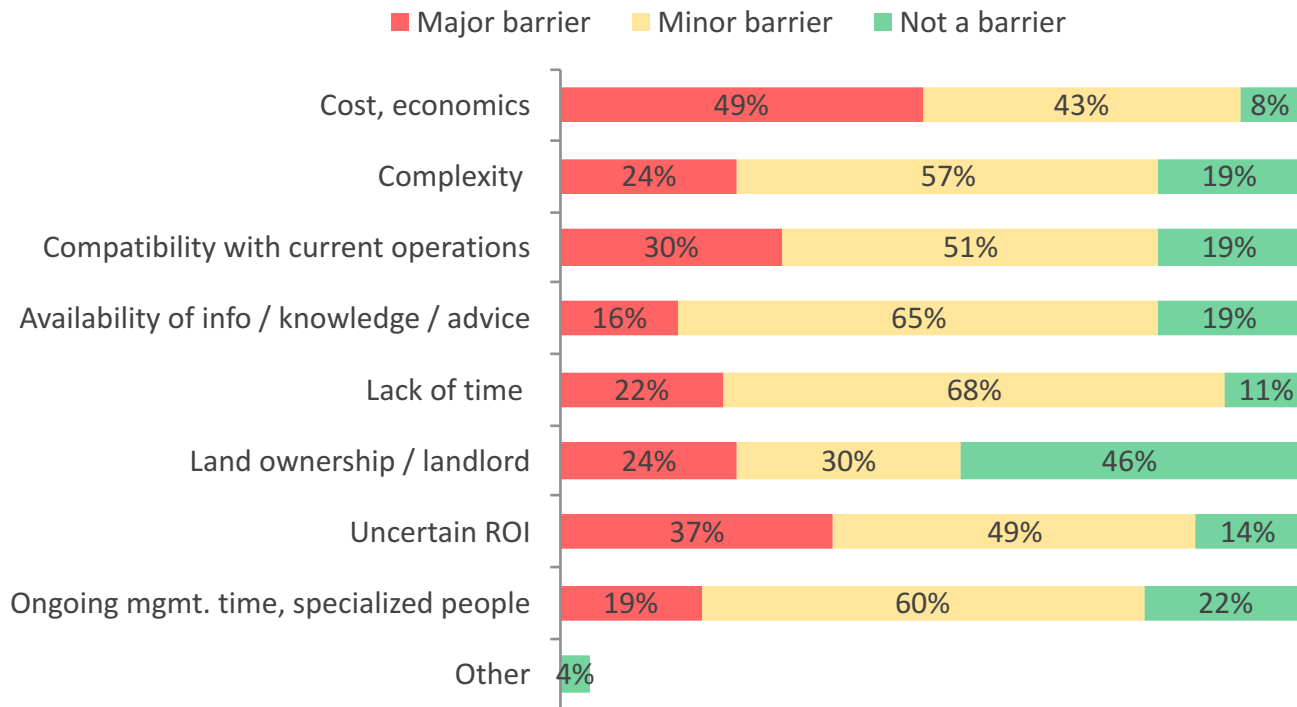
Not a problem:

Info / knowledge / advice
Landlord issues
Time

Base: Subset of those interested in adopting this practice (N=34)

Total who select: 23%
Portion selecting as top choice: 4%

Barriers to Conversion of Marginal Land from Annual Crops to Ground Cover



Main barriers:
Cost, economics
Uncertain ROI
Operation compatibility

Lesser barriers:
Complexity
Info / knowledge / advice
Mgmt. time, people
Time

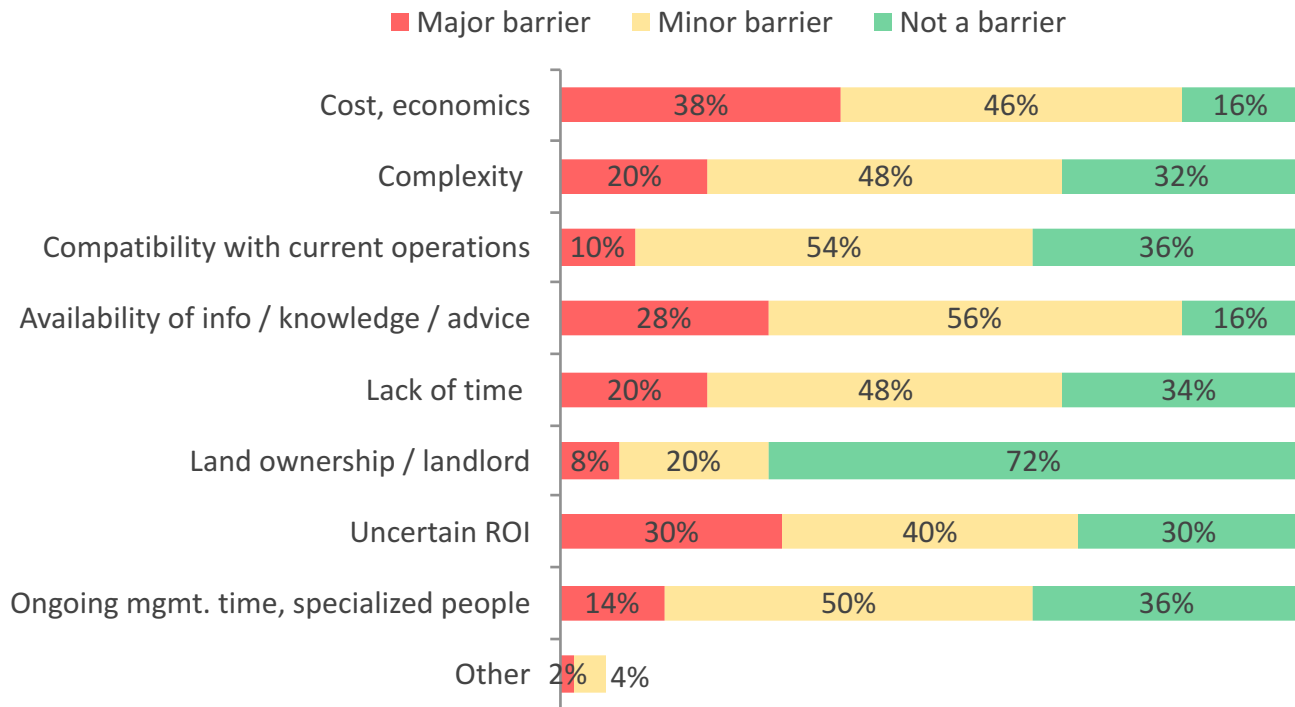
Not a problem:
Landlord issues (though a major barrier for some)

Base: Subset of those interested in adopting this practice (N=37)

Barriers to Adapting Improved Waste Management

Total who select: 37%

Portion selecting as top choice: 4%



Main barriers:

Cost, economics
Uncertain ROI
Info / knowledge / advice

Lesser barriers:

Operation compatibility
Complexity
Time
Mgmt. time, people

Not a problem:

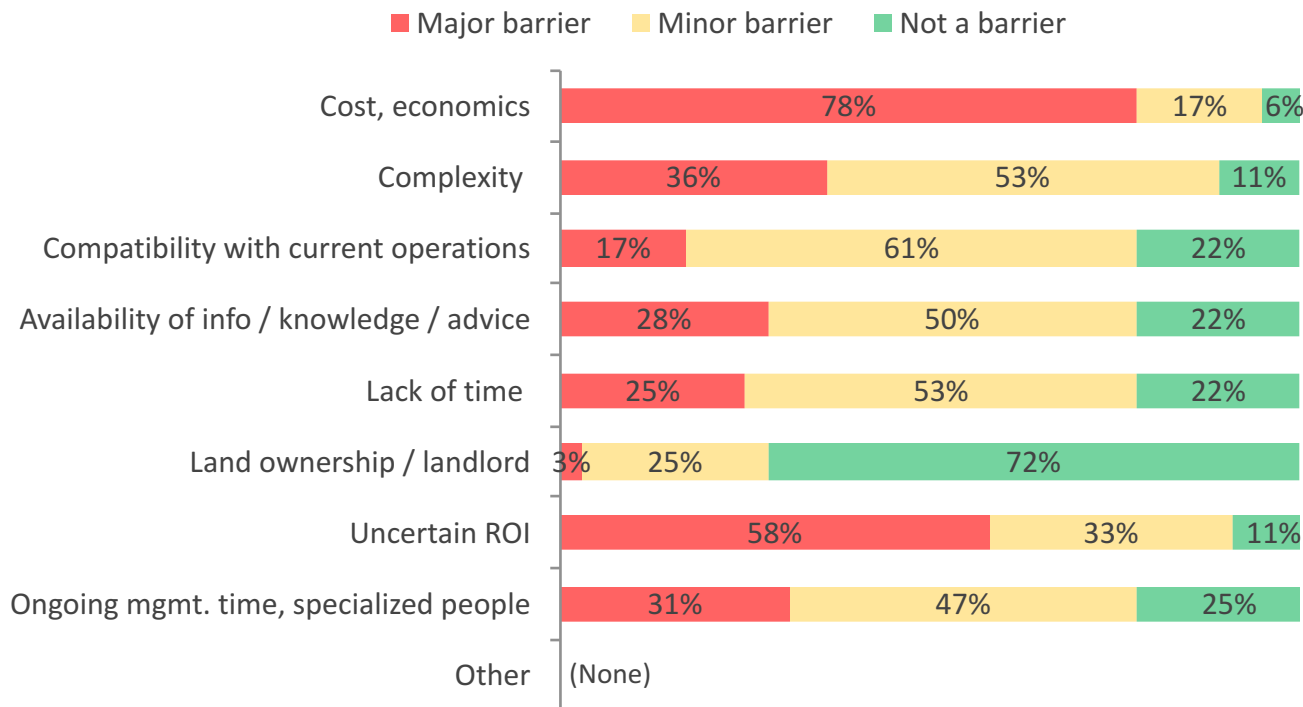
Landlord issues

Base: Subset of those interested in adopting this practice (N=50)

Barriers to Better On-Farm Energy Management

Total who select: 39%

Portion selecting as top choice: 3%



Main barriers:
 Cost, economics
 Uncertain ROI
 Complexity
 Mgmt. time, people

Lesser barriers:
 Operation compatibility
 Info / knowledge / advice
 Time

Not a problem:
 Landlord issues

Base: Subset of those interested in adopting this practice (N=36)

Total who select: 16%
Portion selecting as top choice: 3%

Barriers to Better Management Of On-Farm Water Supply

	Major Barrier	Minor Barrier	Not a Barrier
Cost / economic factors	N=14	N=2	N=1
Complexity	N=3	N=11	N=3
Compatibility with current operations / practices	-	N=13	N=4
Availability of information / knowledge / advice	N=3	N=9	N=5
Lack of time to adopt or make the change	N=6	N=9	N=2
Land ownership / landlord considerations	N=1	N=7	N=9
Uncertain about the return on investment	N=4	N=12	N=1
Ongoing need for a lot of management time or need for specialized people / expertise	N=1	N=13	N=3
Other	N=1	-	N=1

Main barriers:
Cost, economics
Time

Lesser barriers:
Operation compatibility
Info / knowledge / advice
Uncertain ROI
Mgmt. time, people
Complexity

Not a problem:
Landlord issues

Base: Subset of those interested in adopting this practice (N=17). CAUTION: Small sample size.

Total who select: 9%
Portion selecting as top choice: 3%

Barriers to More Efficient Irrigation Systems

	Major Barrier	Minor Barrier	Not a Barrier
Cost / economic factors	N=12	N=2	-
Complexity	N=5	N=4	N=6
Compatibility with current operations / practices	N=2	N=10	N=3
Availability of information / knowledge / advice	N=2	N=8	N=5
Lack of time to adopt or make the change	N=2	N=8	N=5
Land ownership / landlord considerations	N=2	N=4	N=9
Uncertain about the return on investment	N=5	N=6	N=4
Ongoing need for a lot of management time or need for specialized people / expertise	N=3	N=7	N=5
Other	-	-	N=2

Main barriers:
Cost, economics

Lesser barriers:
Operation compatibility
Info / knowledge / advice
Uncertain ROI
Mgmt. time, people
Complexity
Time

Not a problem:
Landlord issues

Base: Subset of those interested in adopting this practice (N=15). CAUTION: Small sample size.

Summary – Major Barriers to Adoption

Reading down each column, this is the portion who think each barrier is a major barrier to the practice	Cost, economics	Complexity	Compatibility with current operations	Availability of info / advice	Lack of time	Land ownership / landlord	Uncertain ROI	Ongoing mgmt. time, specialized people	Other
Improved fertilizer technologies, practices, equipment	71%	27%	21%	13%	16%	7%	53%	23%	4%
On-farm solar power	89%	38%	18%	24%	24%	7%	70%	27%	3%
Better use of GPS data	76%	37%	23%	18%	28%	6%	49%	44%	9%
Improved pesticide technologies, practices, equipment	69%	29%	19%	22%	16%	14%	45%	24%	5%
Variable rate application of fertilizer	68%	22%	17%	15%	14%	7%	51%	22%	-
Increased planting of N-fixing crops	42%	7%	17%	10%	13%	10%	45%	15%	7%
Less tillage, more direct seeding	53%	18%	15%	9%	9%	9%	32%	6%	6%
Conversion of marginal land from annual crops to ground cover	49%	24%	30%	16%	22%	24%	37%	19%	-
Improved waste management	38%	20%	10%	28%	20%	8%	30%	14%	2%
On-farm energy management	78%	36%	17%	28%	25%	3%	58%	31%	-
Better mgmt. of on-farm water supply	N=14	N=3	-	N=3	N=6	N=1	N=4	N=1	N=1
More efficient irrigation systems	N=12	N=5	N=2	N=2	N=2	N=2	N=5	N=3	-

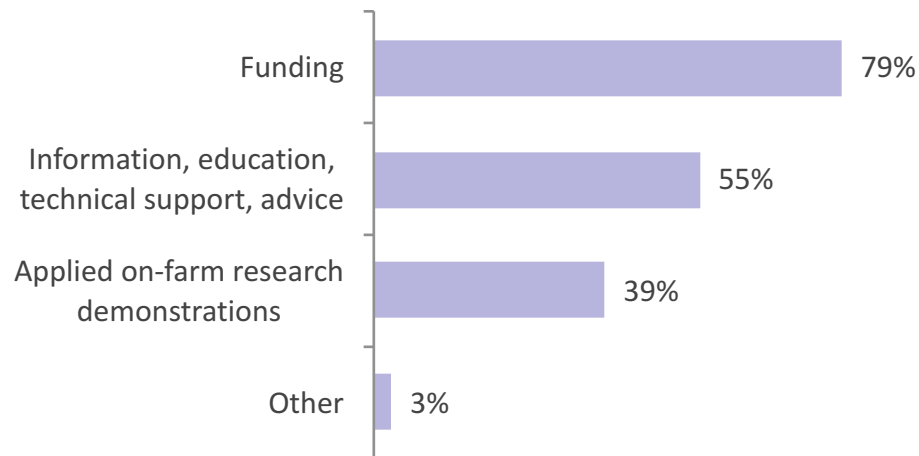
What Kind of Support is Needed, To Make Planned Changes

After the aided interest question, growers were again asked what kind of support they feel is needed. Similar to response for the unaided question, the theme of interest in funding is seen. However, there is also strong interest in information, support and advice, as well as applied on-farm research demonstrations.

Segment differences:

- As seen elsewhere, those under 45 years of age are more interested in funding (88%).
- Those 65 and over appear more interested in information and advice (68%).

For these practices you are most interested in adopting or further implementing, what type(s) of government support, if any, do you think is most needed? Please select any that apply.



Base: All respondents (N=339)

Program Design Input

Program Design Input

Respondents were asked the extent to which various factors are important to them, in program design. We see that all the factors asked about are important. For most factors, about half consider them to be very important and between 33% and 40% consider them somewhat important. Only a small portion consider any of the factors unimportant.

Application processing time stands out as the one factor with slightly higher importance ratings.

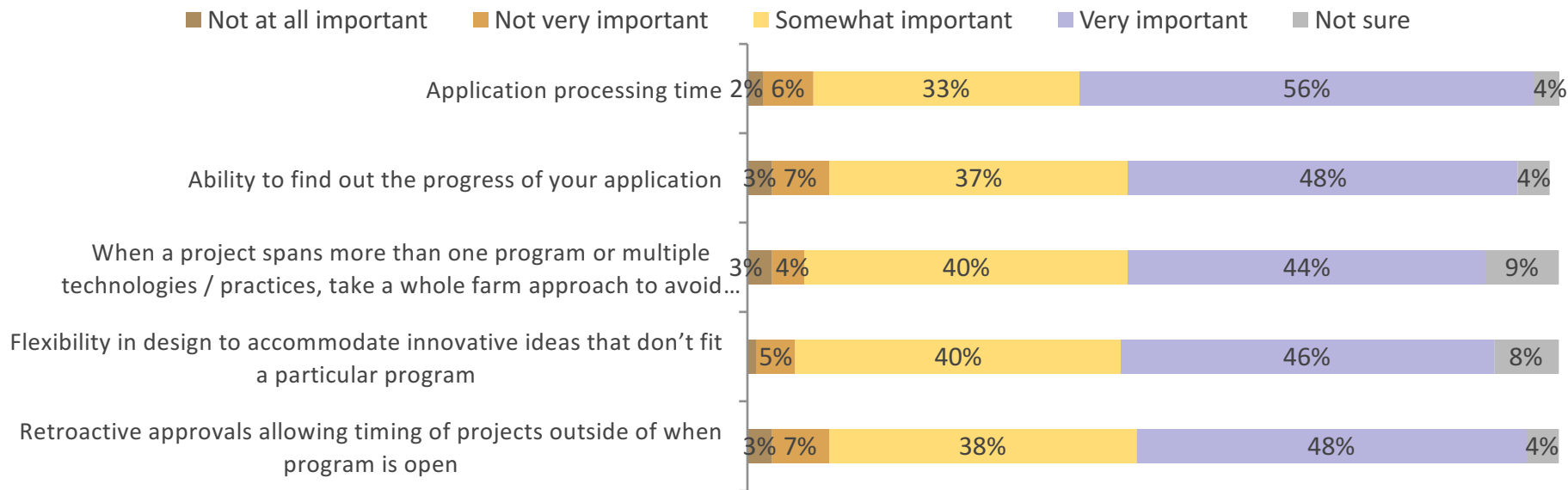
Segment differences:

- Application processing time is even more important to those in 3000 - 4999 acre category (69% indicate it is very important versus the 56% average), and medium-large income growers (67%).
- Ability to find out the progress of their application is even more important to those earning \$2M+ in gross revenue (70% indicate it is very important vs. the 48% average).
- Flexibility in design is also more important to those with \$2M + gross revenue (56% vs. 46% avg.).
- Retroactive approvals are more important to those under age 45 (59% vs. 48% avg.).

There were a small number of open-ended comments about other aspects important in program design; these are provided two slides forward.

Program Design Input

Some qualitative grower feedback from Alberta producers has indicated that the following are important in design of future government programs. Please indicate how important each aspect is to you personally.



Base: Those who have participated in the program (N=120)

Verbatim Comments About Program Design

Govt. people need to be open-minded about really out-there ideas i.e., completely eliminating use of glyphosate and foliar insecticides. This is where demonstration sites are so important.

Having a discussion with applicant before rejecting a claim. I had a claim rejected based on a error and now program is closed and I can't get funding.

Having a sufficient amount of funding so a program is available for several seasons. In the past by the time I was aware of a program it was no longer funded.

I can say the funding really advanced our project and after completing we saw huge benefits and wished they were completed sooner.

Inform producer, demonstrate, give time frame for producer to go home and do own decision, assist in application.

It would be nice if you knew you would get funding prior to expending a bunch of time and money. We have done a project before and then got rejected because program ran out of money.

Make programs info more out in the public, and not too complicated.

Make sure there is a lot of information.

Some of the programs offered. I am not sure if the admin is facing the reality or understands how each farm can adapt those ideas.

The whole farm approach is important. What plan fits my farm. What should be looked at and implemented first. How to get there. Steps.

Appendix A – Verbatim Comments

Suggestions for Improvement of Conservation Cropping Protocol

Additional inclusions, doesn't cover all the needs/practices

- 1. We should be compensated for our stands of trees & pasture. 2. Less administration fees. 3. More money going to the producer, less money going to aggregate.
- does not properly cover properly all the needs of good farming practices
- Hay land and seeded grass land as well as native pasture and brush land should be included in package for compensation.
- More work needs to be done on inter-row seeding with RTK guidance and the yield and soil/rhizosphere benefits.
- should be based on what a grower is growing not on tillage program
- Should be more credit given to those that use less disturbance seeding tools. Or shallow seeding tools versus anhydrous openers that move way more dirt.
- Should include all forage crops and improved pasture. Should be a simple formula for each cropping practice implemented. Aggregating on all records that are need to be supplied is time consuming and not worth the trouble.
- To include turf and forage seed acres in program
- We should get more for hay land and trees.
- Why is there no carbon credits for tame pasture and even more for native pasture.

Suggestions for Improvement of Conservation Cropping Protocol

Aggregators should take less of a cut, aggregators inefficient, make it easier for growers to apply themselves

- Give most off the money to 3rd party's to do the application
- Have mine done by a company seems to me they get a little more than a fair share
- Make it easier to apply direct rather than have to use third parties who are only in it for money
- The companies involved in aggregation are often slow and inefficient with their admin.
- The payment is not satisfactory as to the benefit for companies to use our carbon credits
- You should be able to fill in the application and other forms yourself instead of having to use a company which take part of your proceeds.

Better compensation, doesn't really pay, not worth the effort, price for carbon too low

- better compensation not having to renew every year
- Better price.
- carbon credit should be worth a lot more considering new taxes
- Current values for carbon
- For us as a larger farm it barley pays, for small farm it not worth the effort for few bucks
- Increase remuneration per acre. Create incentives to encourage non-conservation farmers to convert to conservation methods.
- More money for carbon credits?
- Need to pay more. Hardly worth the effort
- not adequately compensated

Suggestions for Improvement of Conservation Cropping Protocol

- not compensated very well for time spent in filling out all papers
- Paid one dollar per acre not sufficient Excessive paperwork Landlords wanted majority of payment Have not participated since that first
- pay more
- Program payment level barely worth the effort. Doesn't reward enough to change farming practices to reduce tillage. Smaller farmer so wasn't a lot of dollars coming out of the program to make it worth it
- The application process has become easier over the years but is still very time consuming for the amount paid for the reports.
- the carbon credits are not worth the time& effort to collect them.
- there is too much paperwork for the compensation received and i believe the third party doing the application may be making more than the producer

Onerous paperwork, difficult forms, simplify

- Be more user friendly
- Cut down paper work. Use crop insurance only..
- Difficult to participate, forage should be included, Chem fallow should be included , pro till not !!!!!
- Forms need to be easier to read with regard to land
- Have someone do it for us. They ask for a lot of information and pictures of equipment to qualify
- make verifications less onerous; make net returns worth the time for application
- paperwork

Suggestions for Improvement of Conservation Cropping Protocol

- Participating in the Carbon Program. It is a nightmare and very time consuming land owner signatures .
- Probably just the company I was dealing with but seemed to need to redo too many forms and photos. Otherwise the program was easy to make application for.
- Simplify it
- simplify the process
- Streamline process. Reduce redundant information gathering.
- The paperwork and time required to complete applications along with the commitment to conservation practices given extraordinary circumstances that come along in the course of changes in climate or field conditions made it not worth while for our operation. Those filling out the paper work were making more than us.

Redundant information gathering each year

- be able to carry equipment forward if no changes. every year the people in charge appear to try making it more difficult to participate, apparently creating job security for themselves
- continuity from year to year when tillage equipment has not changed
- Don't know why they need the serial number off the air seeder every year if it the same as the year before
- Equipment should stay on file and if there is no changes in equipment than we just fill in acres and good to go
- Keep asking fora lot of same information year after year drill specks etc.
- relax the requirements for photos of nh3 and seeding equipment every year. If there is one photo on file and I sign off that there is no change then that should be sufficient to establish the equipment still qualifies

Suggestions for Improvement of Conservation Cropping Protocol

- The government wants proof of equipment weather it was the same last year or not. Mine stays the same.
- too much redundant paper work
- We keep getting e-mails to submit information already requested & submitted, plus it's annoying that we're continually asked for land owners signatures when we got them to sign in previous years.

In a wet year more tillage is required

- 2017 was very wet for seeding. Therefore seeding concludes to some surface / structure damage. Need more room for tillage
- Due to extreme wet conditions more tillage was required to fill in ruts in fields and to blacken soil so would dry and warm up for spring planting so my openers were too wide and disturbed too much soil
- Should allow more tillage in wet years. Many fields have extensive ruts and weed issues to repair.

Landlord agreements are a hurdle

- getting landlord agreements signed are the only problem
- having the land owner sign off on the carbon credits is pointless. They can't collect any carbon credits. And as soon as they think I am getting any "free" money, they want to raise the rent. It is for this very reason that I refuse to even mention the program to about half my landlords
- I find it difficult and time consuming to get landlords signatures, and then is a presumption by them that they should share in the return
- It is a lot of hassle to get signatures from land lords
- landlords signatures - should not need this aggregators - keeping 1/3 or more of money
- too long ago to remember but do remember it's not worth the hassle with rented land

Suggestions for Improvement of Conservation Cropping Protocol

Working well, fine as it is

- All good
- it is progressing well
- It works great as is
- Just keep it running!
- Not really experiencing any problems
- The program works well not sure why we have to take pictures of our equipment every year even when it's the same.

Not effective, waste of time, don't agree with carbon credits

- I don't agree with the carbon program. Good farming practices should be profitable without subsidies.
- I really don't believe in the whole cap and trade nonsense...nobody...nobody at all in this area changed how we farm (single pass direct seeding), so nothing changes, and we get paid??...its just transfer of wealth...nothing more
- It seems like a waste of time for me and the Govt. It has no impact on the decision making on my farm. a waste of time.
- No suggestions Waste of time and resources Accomplishes nothing

Other

- I sold carbon credits via a 3rd party company that takes care of that aspect. Perhaps information could be more available to producers as to what there options are. I believe farmers in general don't go looking for information on the program. They just take it as it comes.
- I think farmers in general use practices that are best for maximizing production. Carbon credit programs are just a wee bonus for other companies that need offsets.

Suggestions for Improvement of Conservation Cropping Protocol

- I'm not too knowledgeable about the program as a crop input provider did the paper work for me.
- My answers may not be quite the answers requested. The Question is. "What is Conservation Cropping"? I have seeded all of my acres through Direct-One-Pass-Seeding for 20 plus years.
- needed more help and info in the early days of program
- Needs more consistency, less changes, more certainty/stability.
- Rain makes grain! Just because the land does not blow any more does not mean it has not been drier than the 30's
- takes a long time to get the money
- Us farmers use solar energy to grow crops, drying crops, we should be paid for every bushel and every pound of meat we produce. But the flip side we as Canadians don't have any impact on the worlds polluting problems. We need carbon dioxide for our plants to grow
- You never know the market price

Reasons for Not Participating in Conservation Tillage Protocol – “Other specify”

Other

- Aggregator did not return email or calls
- Does not take other changes in practice in to consideration, only pre-existing practices. Rewards an existing practice but no other evolving changes
- have not researched into it
- not all of the land is good for no till. Have to spray more then. You have to work in the manure
- talk with people at the farm show and there didn't want to talk with someone with only 800 acres
- We have participated in the past
- We will use tillage when necessary and grow some crops where we can not use zero till

GF2 – Suggestions for Improvement

Simplify, less paperwork

- Forms made a little clearer
- Keep the application forms as simple and straight forward as possible
- Keep the paperwork to a minimum and get the materials/approval process as fast as possible. Many if not all projects are time sensitive.
- less paper work and easier applications
- less paperwork
- Need to streamline the app process
- simplify applications and timing
- Too much paper work

More information, clearer definitions and terms

- A bit more detail when advertising .
- Make definitions clearer-high pressure vs low pressure. Also extra funding for VRI would be valuable.
- More specific definitions. I didn't realize some of our pivots were considered high pressure, and lost out on some funding.

Increase the maximum limit, cover a higher percentage

- Augment the allowable maximum limit for projects. Irrigation equipment and materials have increased in cost.
- It would be nice if the water management had been a 50% program. However because it was available we decommissioned two pit wells and dug a new well. It was well worth the effort.

GF2 – Suggestions for Improvement

Make more accessible and relevant for smaller farms

- always seem to focus on large farms with lots of help, labour.
- The basic programs are ok just don't make them too difficult for the small to medium sized farmers. Where the most change could occur.

More funding for oversubscribed programs

- Continuation or new funds for of some of the programs that got oversubscribed in GF2
- We recently applied for energy efficiency management, but were turned away as program has run out of funds. Program favours those with expendable cash.

Improve speed of processing

- extremely slow to process applications Needs to Be more timely
- faster turn around on applications
- some times takes to long to know if any money will be left so you can do project.

Timing of approval versus undertaking the project and spending the money

- I am building a farm shop using high efficiency lights, insulation, windows, heating etc. I spent considerable extra money for construction. Then was told the program was out of money. I am waiting for new funding for new program funding but have heard nothing yet.
- I do not think that full approval before starting is useful. Maybe more accountability would be better.. Also I missed a deadline one time .. not good.

GF2 – Suggestions for Improvement

Specific program suggestions - types of projects, items covered

- more options not much for new buildings
- need to expand items covered such as air exchangers
- There should be a component in place where there would be credit available for upgrading business management courses which will allow the producer to manage his operation more efficiently. We concentrate so much on the external factors that quite often the internal and most often the most important parts, being business management aspects are ignored or forgotten. Other provinces subsidize these and I feel Alberta should as well

Other

- I think there is some abuse of the system, which is disappointing.
- No specific input. It was easy to participate in.
- Rates are not set by the retailer but by the distributor. the application specifically asks for verification from the retailer. The perception is that the Ag administrators don't understand the system.
- stop changing the process to qualify.
- we rent a lot of land and if title is not in our name we don't qualify even though we are still upgrading systems. very cumbersome for us and landlord to do all the work in landlords name and then have to sort out costs after the fact
- Would be nice if the program rewarded early adopters of these technologies. Seems that so often these programs reward the followers, not the pioneers. Many of the qualifying projects were done on this farm 5-10 Year's before anyone thought of public funding.... retroactive compensation would be nice.

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

Cover more of the cost, realistic caps

- A lot of this stuff does not work in all areas. Than it still costs to much.
- Clearer estimates of overall costs.
- Cost share portion by government should not be just a percentage, but should be set to ensure that there is a return on investment by the producer
- cover more of the cost
- Doesn't matter how much cost sharing if there is still a cost. If you don't have the money no way you are participating.
- Don't know the details well enough to comment. Funding levels seem acceptable but depending on total project might still be too much of a risk.
- don't limit the program to small amounts, a larger farm may qualify on one field but might be interested in upgrading multiple location in one year but then doesn't qualify for funding
- farmers need more for their products to be able to afford
- Fund 100%!!
- generally covering the 50-70% percent is a stretch and in some cases the amount is such a small portion of the cost it has made adoption prohibitive
- Government can pay a larger share.
- Have a plan lay out and apply for more funding to do more cost sharing.
- Higher cost share for slower ROI projects
- If the program boasts a percentage of the cost shared, it should not be capped to a dollar limit. One or the other but not both

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

- If they want something done for the good of everyone, pay for it.
- Increase cost sharing to 80% and add tax incentives.
- Increased incentives for the energy efficiency and photovoltaic programs would make it more feasible to implement. Some of those technologies take quite a while to pay themselves off
- It has to be affordable to work.
- Many of the improvements are still too expensive at 50%, need to be 70 to 75%.
- maximum needs to be raised
- More funding. The county I'm in submits the application for funds for the constituent. Perhaps if people were made more aware of the programs they would pursue it more
- more money for participant
- More money for the programs and awareness.
- Place a realistic cap on individual/corporation eligibility
- Projects of any kind are just getting very expensive the govt may cover some of the cost but the balance can be so high
- Raise the caps
- the benefits are not sufficient to out weight investment
- The cap should be higher, so that we can get the best quality of equipment available
- The producer should have to put in less the program does to make it more of an incentive for people to have to fill out all the forms the go with the program

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

Need more information, clearer information, assistance, advice

- Advertise more
- Clearer information prior to application on what expenses are eligible
- Develop teams of people to go out and do complete or partial audits of farms so that both parties know the best direction to go in
- education for farmers
- Evolvement from the government side set out simply and plainly before the start of the program.
- Help completing applications and planning
- I haven't heard of any of the programs so advertising might need to be ramped up
- Increase awareness and amounts available
- Information regarding the availability of the programs and when to apply.
- let producers know about programs
- Making us more aware of what's out there
- More education
- More information about programs and assistance for producers!
- more informative about programs
- more publicity about the program would help
- not enough information on what qualifies

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

Suppliers inflate costs

- As soon as the company finds out you want to use growing forward, the costs go up 30 to 50%
- I feel that suppliers raise the cost simply because the government is footing the bill.
- They raise the price equivalent to the gov't subsidy and they make twice as much making it . Way to costly !!!

Would rather receive tax credit

- Basically I think these grant type of programs are unfair because not everyone can take advantage of them. I would rather receive a tax credit for implementing some of these measures.
- should include some tax incentives
- Taxable savings are an incentive. I do not believe Governments should be in the business of granting dollars to promote programs. I believe that private business investment should be encouraged through taxable saving programs. This would encourage more targeted projects that have real effective business plans.

Be retroactive, different timing of budgeting, no time to wait for approvals

- Be retroactive if we have already been proactive in introduction.
- I did not like the idea of having to show the whole budget before you get accepted. Sometimes deals come up and you can save money for you and the project.
- I have done projects that would qualify. Some I did not know funding was available and there is no retroactive applications. And other times I just can't afford the time to do the applications and then wait for approval

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

- Make it retroactive on large purchases like an air drill or self propelled sprayer with GPS sectional control. Variable rate etc... Sometimes farms get caught up in the purchase of these big ticket items and forget they may be eligible for some cost sharing.
- Provide more funding. I changed all my yard lights over to LED lighting and I was denied funding after work was completed b/c the program was out of funds and I completed the project without prior approval.
- That if you have spent the money you should be able to get the Max of the cost back not have to go through all pre apps.
- Too expensive an investment to be able to wait for govt participation-especially if one does not qualify-not willing to risk that kind of investment
- too long a time before you get the money. should apply and get the money first then get the project especially in the past year and this year when majority of crops were snowed under and crop insurance is not helping.
- When you need a new well its not a priority to have a bureaucrat ok it.

Broaden items covered, less restrictions

- broaden items covered. Labor is main issue
- less restrictions on the project
- wider scope of projects that can be approved/Qualify under the program
- Windows and doors in house

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

Disagree with programs

- broaden items covered. Labor is main issue
- less restrictions on the project
- wider scope of projects that can be approved/Qualify under the program
- Deregulation.....keep government small
- Do away with program
- Let people keep their own money and invest in things they want
- Remove all cost sharing. It is abused and not necessary.
- To be sustainable, they should not have to be subsidized at all.

Have more money in the program, allocate funds better

- Don't run out of money
- Funds should be re-allocated from low demand areas to high demand areas.
- lots of times money for these projects runs out before you can get approved.
- Most programs run out of money within days of opening.
- Program funds ran out before all who applied could use it. There needs to be more flexibility to allow transfer of funds from under-subscribed to over-subscribed programs
- The govt is cutting back in so many areas so this program should be better funded if they truly believed in it

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

Paperwork or requirements cumbersome, red tape, complicated

- Clarity and effectiveness/cost benefit
 - forms far too cumbersome program is out of money when you apply
 - Found the programs to be cumbersome in the past and sometime it seems the government is more interested in findings ways you don't qualify rather than encouraging participation.
 - I have found Growing Forward programs involve an incredible amount of red tape Therefore I quit looking at it Less red tape please
 - Keep it simple
 - less paperwork
 - Make it as user friendly as possible
 - Make it easier to access programs
- Make the application process easier
 - Make them simple
 - Overly complicated process
 - Project forms should all be electronic with ability to check on status. Should be able to start the project before paperwork is returned as long as all requirements are met.
 - Remove all the bureaucratic language from applications and make the programs accessible to farmers without having to hire accountants or lawyers to interpret the forms.
 - seems bit much hassle and long process
 - Simplicity
 - Simplify everything about all the programs.
 - Simplify the process.

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

Seems targeted at larger farms, doesn't work everywhere

- I feel the programs are generally for the well off farmers e.g. I do not have \$200,000 for a solar grid although it might be a good idea. I also find that the programs require that u buy brand new equipment which the large farmers can buy and I end up buying there used equipment. we also applied to buy a stock trailer but the funds were gone the same morning the Alberta government should not be buying trailers for the farmers
- interested in irrigation projects which would accommodate small individual farms on dry land projects.
- Maybe it benefits the large farm more. Should be more incentive for the smaller to medium farms.
- programs only for large producers
- Should be dependent on type of project and type of farm, colonies should be excluded.

Other

- Consistency in the application process, stop changing with every new program
- D8nt change amounts part way through program.
- Faster reimbursement
- Increase carbon credit level
- Infrastructure (base, stands, etc.) for my solar project was not covered which was a large portion of the project plus my rural county- is not supportive of solar projects. Also the majority of my power bill is not of the power used, it's all the extra fees added on so switching to solar power and staying on grid I still have big power bills even if I'm not using power.

Suggested Improvements to Cost-Sharing Aspect of GF2 Programs

- Inside of paying consultants and red tape pay direct to farmer who is making the actual investment
- More programs
- Paying the cost of a stock trailer supposedly for Biosecurity is just plain theft. Good accountant, good windfall, should be considered with cost justification
- Some of the programs don't make sense. I.e. solar is expensive a may not provide good ROI. Sun doesn't shine at night. No storage. Still need full back up if power. Water works best.
- The government should allow producers to install equipment themselves, by the time a third party installs it most of the funding is used up.
- The rules about labour costs by participant should be included. It was included in the fuel tank program but not the water management
- Water wells , and some decommission of wells

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

Less tillage / more direct seeding

- Buying a no till air drill.
- I have adopted no till to improve soil and save time and fuel. Others may be too expensive for the size of my farm. Ie sectional control etc.
- Minimal till Use GPS technology
- Reduced tillage. Responsible management of pesticides and fertilizers
- zero / minimum tillage systems

Variable rate application of fertilizer (GPS or sensor based)

- Continued work on making precision spraying and seeding more efficient in
- GPS based rate control, auto boom control, auto steer, mapping and data storage
- GPS for fertilizer application and seeding spraying. Try to farm the small low spots instead of going around them. Powerless aeration bins.
- green seeker
- Possibly variable rate technologies.
- Sprayers that target weeds so we can stop blanket spraying , they look just ahead of sprayer and turn nozzles on when weeds are detected
- Variable rate fertilizer

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

- Variable rate fertilizing Sectional control for fertilizer Stabilized Nitrogen sources
- Variable rate seeding/fertilizing & spraying. GPS Sectional control. Enhanced soil testing. Grain storage upgrades, I.e. Bigger bins with hoppers or central load out. Intercropping.
- VR and sectional seeding equipment
- We are trying out variable rate fertilizer on some of our land

Better management of on-farm water supply, drainage, wetlands management

- Land quality drainage of land with salinity issues (surface water bringing up salts)
- Riparian project could be done on my farm I think fencing is at least \$7000.00 a mile
- seed grass look after water
- water harvesting and wetland building
- Water management
- water management, GPS technology, fertilizer placement

On-farm solar power, solar panels

- Am considering installing solar panels
- Considering solar panels
- I would like solar or wind power and be able to sell electricity back to the company.
- solar energy grid connected

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

- Solar energy, energy management, nutrient utilization
- solar power
- Solar power, sectional controls on seed drill, pesticide container disposal
- Solar power, GPS guidance
- Solar power. Safe fuel storage.
- Solar voltaic installation. Perhaps the nitrate capture incentive once more information is released.
- Solar, split applications for fertility, water storage, grass/clover borders on fields, landscape specific micronutrient/macronutrients application.
- Thinking about solar power. Trying to use less pesticides herbicides etc.
- Want to put solar panels and geothermal heating .

Better on-farm energy management

- energy efficiency.
- energy efficient, water projects related to livestock, bio security
- energy efficient
- Energy saving technology.
- Implementation of high efficiency lights, heating, and insulation to a farm shop.
- Installed led yard lights for reduced energy use and greater safety and security.

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

- LED lighting in yard and shop. Expanding my solar PV system. Increasing my use of ESN vs urea. Reducing or eliminating pesticide use. Foliar insecticides must be eliminated Reduce diesel fuel consumption
- LED lighting. Less use of grid services(electric gas internet)
- looking at led conversion on the fixtures on our farm. Also the use of more Wireless technology to be able to remote monitor different aspects of the operation so we are not driving around all over physically checking things
- Making existing buildings more energy efficient, high efficiency grain dryers,
- More energy efficient
- Power and water up grades

Improved fertilizer technologies, practices, equipment

- Adapting some form of funding to offset the extra cost of nitrogen products that allow for nitrogen to be placed and utilized as needed, i.e. ESN etc.
- Amendments that can be added to soil so it can perform better, program to leave trees in the fields, to many are be taken out
- Already use some sectional control machines. Would be helpful to have help with slow release Nas that claims to have less leaching than urea
- Liquid fertilizer, sectional control for seeding and fertilizer placement.
- more efficient use of fertilizer
- nitrous oxide reductions
- Upgrading nitrogen application equipment.

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

Improved pesticide technologies, practices, equipment

- biological control options-methods for crop production
- Exact apply spray tips sectional control variable rate applications
- gluten free, proper chemical use, generation of a proper chemical disposal location for extra chem from spraying operations
- hiring my spraying done with a more efficient sprayer.
- Individual tip control sprayer nozzles
- low drift spraying equipment variable rate technology no till seeding equipment

Improved waste management (e.g. plastic, oil, etc.)

- Improved province wide collections system for recycling on Farm plastics. Bale twine, silage plastic, net wrap, plastic oil containers. An on Farm bin system.
- Recycle grain bags

More efficient irrigation systems, solar, variable rate

- adding solar systems to irrigation sites, upgrading irrigation systems to be more efficient. investment in VR technology, investment in more efficient grain aeration and potato ventilation technology
- Change from centrifugal to turbine pumps so that we can use Variable frequency drives and save energy costs of pumping.
- include sub surface irrigation in the irrigation efficiency program

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

- irrigation
- Irrigation efficiency enhancement projects
- Irrigation energy cost
- Irrigation changes
- Some solar watering systems on our farm
- VRI irrigation Spraying technology

Better use of GPS data such as yield, soil, as-applied, topography, etc. (data management, use, analysis, storage)

RTK baseline GPS, data logging and analyzing, liming to increase soil ph

Emissions modifications to equipment, or use modern equipment, reduce fuel consumption

- Any equipment that would reduce carbon imprint on my farm...i.e. higher efficiency motors, newer equipment that has lower emissions
- In my farming operation I am trying to keep modern equipment to reduce emissions, I work with neighbouring cattle farmers to spread manure on my land to reduce fertilizer, I leave wetland/forest areas around/within my fields for wildlife
- more efficient equipment
- offsets for the cost of tier 4 emissions on new units or some form of direct tax rebates or credits for extra costs to ag to recover some of the costs incurred by us to purchase machines to meet California standards not used else where in the world, which places us at a huge disadvantage to other countries and ag producers.
- the purchasing of tier four engines

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

Improved seeding technology

- Adding coulters to my air drill to increase tough residue handling situations so I can sell my stupid heavy harrows.
- Improving crop seeding equipment
- Upgrade seeding tool to reduce disturbance.
- We are changing our seeding tool and combine header. This will make our farm more fuel efficient and leave more stubble on the land to prevent erosion. These changes should be partially funded by the government.

Improved or more efficient grain and pesticide storage, drying and aeration technology

- Grain Drying Equipment,
- I would like to up grade my grain dryer to use less fuel and less operational costs to me. It would save me some carbon tax on the propane that I use for drying grain.
- purchase grain drier and electrical generator for bin yard
- update burner on grain dryer for more efficient energy use using more foliar fertilizer

Sectional controls, auto steer, GPS-related improvements

- Anything that shows a positive return on investment. Sectional Control Zero till Draining sloughs and wetlands
- Auto steer, variable rate control
- Considering sectional control for drill to eliminate fertilizer overlap
- GPS installation on equipment

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

- GPS related stuff
- I would like to adopt GPS and sectional control on my air seeder, but the cost is prohibitive for a small-medium sized operation like mine.
- removal of small brush patches and water drains which cause deviations in the straight line GPS farming patterns. This allows reduced overlap and less turning and duplication around obstacles. Need better (cheaper) technology to allow elevation control when draining water holes.
- Sectional control
- Sectional control and variable rate technology for seeding and spraying equipment
- sectional control of inputs, yield mapping to use for input application, aerial / satellite imaging , drone scouting technology
- Sectional control on Air Drills, Pesticide storage, More energy efficient Grain Dryers, Fuel storage, Solar power systems, On-farm Chemical handling, Water Management
- Sectional control on air seeder. New combines. Replace equipment as needed.
- sectional control on seed drills
- Sectional control on sprayers and seeders LED lighting on buildings
- Sectional control seeding
- Sectional control seeding, fertilizer and CPP products, and timed fertilizer applications to midi gate over applications

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

- Sectional control seeding, prescription farming
- Sectional NH3
- Upgrading to a sprayer with GPS sectional boom control

Improved harvesting equipment, improved harvest practices

- Considering updating the combines and part of the potential benefit is straw management ... incentives to adopt new harvesting equipment would be beneficial with environmental benefits.
- Straight cutting rather than swathing and then harvesting.

Fuel storage

- Different fuel storage
- fuel tank

Rotations, different crops, organic

- Better rotations.
- I'm transitioning to organic production
- We are transitioning to organic/regenerative farming but the decrease in income for a year or two hurts. As well some cost sharing for specific equipment would help.

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

Livestock related

- Better cattle handling facility, GPS guided equipment, zero till if ground dries up
- calving facilities , improving water quality from dugouts
- Cattle handling equipment
- Considering changing my watering practices in pastures for cattle. Also considering chem, fuel and used oil storage
- Corrals
- Digging some dugouts
- funding to help put solar pumps and water troughs to keep livestock away from water dug outs and sloughs
- Livestock handling facilities. Conservation tillage.
- possibly a nose pump for winter watering
- raising hogs outside
- We have made changes in our farming practices and equipment that are more efficient, such as zero till, straight combining, sectional control on seeding and spraying equipment, manure application, and return of used chemical containers and used oil.

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

Other

- Changing the way I do things on the farm to be more affective.
- crop insurance should only be available every fourth year on canola growing on any particular field
- depends on our funds
- don't want any funding, Growing forward has become a program that supports a secondary industry that provides no support to ag industry
- Environmental Farm Plan
- Environmental sustainability is a very broad term to to speak on.
- expanding the size of equipment
- Farmers have always been good stewards of our land. We realize that it is important for the sustainability of our farms that we must adapt to our changing environment. Governments are just starting to understand this. Farmers are way out in front on this and we don't need Government telling us how to do this. We have made the investments on our farms to adapt without Government incentives. My advice, we don't need your help. We are already doing it.
- Government support should not be required to do the sustainable thing. Education should be the extent of their contribution to sustainability.
- I find conventional tillage conserves more energy than anything else and produces more for less
- I need to upgrade all my equipment!

Please describe any changes that you are making or considering on your farm, or practices, technologies or equipment you might adopt, that you think would be good candidates for this kind of support and funding.

- I will fund my own changes in practices based on market decisions and real world returns not on some bureaucrat's decision to spend money on some questionable or uneconomic practice. If it makes sense I will do it on my own.
- Keeping bad weeds down, maintain existing natural habitat fertilizer management
- More gov funding
- New technology
- Numeric acid trials
- Promoting agricultural education to the younger population. Maybe even education courses for all ages in agriculture.
- the way I farm
- time
- Tired of ridiculous programs put on through Alberta agriculture reps! They are behind the times and redundant and tired of paying their wages just like Alberta beef producers! Get your hands out of our pockets-we pay way too much tax and follow too many programs as it is
- We are always looking for ways to be more cost effective, better stewards of the land, efficient in both crop and cattle production.
- We have bison and anything that adds safety to staff and animals when handling Proper facilities makes a huge difference for us the program moved us to complete a lot fencing and upgrades all through the feed lot
- we strive to be environmentally friendly always and throwing money at will not necessarily help
- Will be retiring

Aided – Practices or Technologies Interested in Adopting – “Other specify”

Other

- Drain more sloughs and get rid of extreme numbers of waterfowl
- Farm Safety Cattle Handling
- Improve tillage technique to enrich land seed base - remove hard pan layer.
- More efficient Grain Dryers
- Trees
- wind power,

Barriers to Adopting Practices – “Other specify”

- Good information that verifies results
- Government regulation
- Government regulations regarding drainage
- High clearance sprayers make it somewhat easier
- international market
- long time effect
- Many of our family members are not experts in the technology area and that combined with the cost of buying the equipment and the technology would result in a loss of time and money.
- marketing of other nitrogen-fixing crops
- The ability to pick good products, and not good
- being charged carbon tax
- discretionary tillage
- Efficiency
- I do not use or plan to incorporate GMO plants
- I have already invested in and implemented nearly all of them at my own expense. If they make sense managers will do it themselves. Quit taxing us and let us do it!
- Is the technology reliable
- More efficient
- Short growing season, not enough global warming yet
- Short season in the north
- The India tariffs on Peas and our inability to grow soybeans in Alberta
- To get power company to pay on over products

For the practices that you want to adopt, what types of support are needed? "Other Specify"

- centralized support to access program, time saving
- erosion control (water, runoff) support
- Land leases
- Land subsidy
- Less regulations
- limit crop insurance on tight crop rotations
- rebates that are easy to apply for with a maximum so big farms don't use up all available funding
- research into new products and innovations

Final Comments

Keep it Simple

- Advertising or providing updates regarding the programs to producers who can qualify for the programs but don't necessarily get out of the daily grind of farming to be made aware of the programs.
- Ease of use, flexibility, and PRACTICALITY
- Keep government programs simple and easy to participate.
- Keep it simple (5)
- keep them simple and informative
- KEEP THINGS SIMPLE AND EASY FOR FARMERS TO DO AND UNDERSTAND.
- Make it clean and crisp, and actually happen, not lots promises (looks like lots free money to non farmers) then piles red tape and minor cash at the end.
- programming should be simple to understand, relevant to mixed farming operations.

- Simplify the process
- To make it easy to use.

Awareness, promotion

- get new info out to me
- more information
- Please get the information out in a timely matter. Often we don't know about the programs available as they seem to get out when it's the busiest times of the year.
- Require increased communication with farmers.
- We do not hear about programs before they are expired-ie different communication

Final Comments

Don't like funding programs

- Do not trade it for anything. I would prefer more freedom to getting a few dollars for projects which do not make any sense without government funding.
- Good farming practices are a benefit, both environmentally and financially and don't need to be subsidized.
- I have very little faith that anything team Alberta comes up with will be listened to ,by our current government in Alberta
- I would rather you all quit catering to government bureaucrats and tell them to take away the carbon tax, the fuel taxes and all other manipulative taxes and just educate us on best practices and trust us to be good stewards of the environment. I do realize this would seriously decrease the civil service but they would soon adjust and find productive jobs.
- Let us farm, we know what's best for our land.
- Please concentrate your efforts on encouraging less government interference with farming, not additional programs with associated restrictions and regulations.
- The whole idea of carbon credits is the governments' way of increasing taxation without meaningful environmental results. We live in a global economy, market our products globally, and are penalized by our government, ensuring Canadian farmers are not competitive!
- These groups steal money from farmers and help no one that needs it ! We want our money back . They should require signup to get funding !!!
- To be self sustaining, the program must be of benefit to the grower's operation without government funding.
- we should not be forced to pay into these programs if government wants these programs they should fund them on their own

Final Comments

Positive re programs

- Cost shared funding has worked very well in the past. The adoption of new technologies i.e.: GPS was a definite success in past GF programming. This can happen again with todays new tech. On-farm energy efficiency has huge potential, more efficient grain dryers, solar power. On Farm environmental projects such as Fuel or Pesticide storage would be beneficial.
- Good
- It is always nice when something can be done and it works for everyone
- Keep offering programs
- Keep up the fight
- Twas fun.....
- Very interesting and it will be nice to see what the future holds for all of us. Thank you
- We received a grant from Growing .Forward in 2012 under On Farm Food Safety Producer Program purchasing a Silencer hydraulic squeeze. This has been a great asset for our cattle operation.

Specific program suggestions

- drainage programs to cure salt build up
- I am a gluten free farm as I am highly allergic to gluten based processed products, any help available for me to further this cause
- I'm experimenting with green manure techniques to improve the land base quality.
- Make sure programs apply to smaller farmers i.e. those under 1000 acres.
- More funding/subsidies. Farm is becoming very hard to make a living, the cost of equipment and inputs is ridiculous.

Final Comments

- need to have lower priced GPS Elevation equipment to accommodate drainage. Need to have low cost irrigation systems to utilize water collected by drainage systems to provide water irrigation during prolonged dry periods in dry land farming.
- Not all land is good for no till. Neighbours who tried it stopped with it again. Your land warms easier when you do a spring till and you can work in your fertilizer. You also work up the early emerging weeds, so you don't have to spray. No till is mostly more spraying. There will be times, that esp. spraying with Roundup will be forbidden
- Please ensure that government friendly firms like KPMG and MNP do not have applications loaded in the system ready to submit all at once. This happened with Biodiversity programs, where everyone that had any livestock got an aluminum stock trailer because the criteria was well understood and all the early applications fit the same pattern and used up the money allocated in the first grouping.
- Programs to help producers deal with management of incoming diseases like clubroot, blackleg, fusarium, and weed resistance. Also look at multi cropping as a way to build soil health and productivity.
- Section control on sprayer nozzle wise ,small units on seeding equipment are important as VR
- Solar power would be my top priority- please lobby government to change regulations regarding micro-generation so that we can generate more than we consume!
- Yield mapping technology

Final Comments

Tax incentives rather than cost-sharing

- Government programs lead to government bureaucracy which is highly inefficient and has negligible effects. Encourage practices though tax incentives but quit spending other taxpayers money to give to farmers so they can farm programs.
- I would rather not have government funding or involvement as it will require vast amounts of record keeping, inspections and time to just get a few if any dollars (which will be taxed back) and is viewed by the public as a hand out. A substantive tax credit on investments related to GHG's and energy efficiency would be the least intrusive into the farm operations and provide the most benefit to encourage upgrading and investing in equipment and technology to improve best farming practices. Tax incentives provide the farmer the greatest advantage with the least government involvement, is not viewed as a government hand out, is not an expense on the government budget, and encourages upgrading equipment and technology which is great for the economy.
- Important: Keep Government granting of money]out of the plan. As I stated earlier, tax incentives work well. Government grants create inequalities in our agriculture communities. We have seen this happen for example in grants for grain storage expansion. Some farmers received grants and some did not because the grant dollars for the program ran out. Governments should not be in the business for granting money for capital investments. That is what tax incentives are for.

Make programs attainable, practical

- Make sure programs are realistic and attainable and don't restrict farming practices so they aren't viable
- Programs need to work for the majority of operations. They should work for the way farms work and not have to change majorly to qualify

Final Comments

Make available and accessible to all

- Will it benefit the large farmers only? How about things for the small ?
- work for all producers not just the special interest groups

Other

- Agristability program has helped us a lot
- Canadian farmers want to lead the world in nutrient-dense/super food production along with Canadian plant breeders and crop nutritionists.
- Cost
- cost of carbon levies on farm net return
- Get Bill 6 repealed
- Herbicide company loyalty programs are not in the best interest of environmental considerations, herbicide resistance concerns or overall long term sustainably goals and should be done away with. The lowest possible purchase price for performance pesticides is the best "loyalty program " available. Use it
- I did not know the commission's were in charge of the government money? I am in a area that has been forgotten about. I need to drive at least 2 hours to a meeting but have livestock to tend to every day. I have no help and with Bill 6, I guess I will never get any more hired help.
- more help with new laws ex tax changes bill 6 etc lobby more for producers to stop and improve some of the new leg we are facing

Final Comments

- NAFTA and other trade agreements are very important to be able to market our crops more freely around the world.
- Need a consistent funding for crops research and breeding.
- Our farm is min till and is needed for our high organic peat soils
- Over regulation kills efficiency
- Program has never fit me. They were either out of money or by the time a reply was available the season I had to do the job had passed so I just bought what I needed on my own.
- pulse development
- ROI is difficult to spread over future years when I don't have enough cash to pay up front.
- take into consideration the economic challenges young producers face in this time where land prices and equipment have sky rocketed and many current programs to access funding have not changed in 10 years and are essentially pointless in todays economic reality
- The consideration that best practices are not universal; that areas that have experienced excessive moisture for the last three years are having to cope with conditions that caused us to return to more conventional methods from what we would otherwise.
- The impact of overuse of chemicals on our food (spraying up to five times) has yet to be determined. No-till is a myopic practice that is championed and lobbied by big pharma which in turn directs governments.
- The no till idea works great until you meet up with weed resistance and end up having to make a tillage pass to work on ending the resistance. Then of course, we add in the concept of deep tillage and heavy harrowing and suddenly the no till idea/carbon credit programs seem a lot like the emperors new clothes.
- There needs to be accountability in using these programs if they are partial funded by the govt.
- To get grain sold faster. The world is starving. Sell the grain.

