

**Impact of Changes in Regulatory Requirements and
Societal Expectations on Nova Scotia Farmers**

Producer Survey Summary

ENVIRONMENTAL COMPONENT

Prepared for

Nova Scotia Federation of Agriculture

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Bruce Roberts, Ph.D., P.Ag.
Thomas McGuire, MA (Econ)
Corinne MacLellan BPR (Communications)

Acknowledgements

We would like to acknowledge and thank the many survey participants, some of whom spent time with us in person, to share their views on the issues affecting the agriculture sector in Nova Scotia.

We would also like to recognize and thank Mr. Laurence Nason, Executive Director of the Nova Scotia Federation of Agriculture; steering committee members Dela Erith, Henry Vissers, Herman Berfelo and Fraser Hunter; Mike Langmann of the Nova Scotia Department of Agriculture; and NSFA staff for their assistance during this survey process.

- The Consulting Team

Bruce Roberts
Thomas McGuire
Corinne MacLellan

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Survey Highlights

During the period from February 8 to April 17, 2006, Kelco Consulting conducted a survey of the membership for the Nova Scotia Federation of Agriculture (NSFA). The purpose of the study was to identify perspectives on a variety of issues affecting the farming community in this province.

The approach taken in the survey process consisted of the development and circulation of a survey that was designed to collect data on a number of issues related to farm practices in food safety, food security, food quality, and environmental goods and services.

The survey was developed in close consultation with the NSFA and developed so that it could be circulated in hardcopy format as well as electronically through a web-link from the Federation's homepage.

Several stakeholders offered comments on an earlier draft version of the survey which resulted in a fairly length survey which took respondents an estimated 20 minutes to complete. The length of the survey was the most significant challenge to the process.

Strategies to bolster awareness of the survey process included a direct mailing to NSFA membership as well as several references to the survey process through the NSFA's newsletter and their website.

By the end of the survey process, we had collected 377 completed surveys had been collected, with an error rate of +/- 4.64%, 19 times out of 20 (95% confidence). The 377 response were generated through a combination of mail-in hardcopy responses (84%) and on-line responses (16%).

The major findings include:

- *The majority of participants categorized themselves as part-time farmers (64%) while full time framers made up the rest (36%).*
- *Among the farms represented, there was a total of 1,878 full time workers (average of 6.1 per farm based on 309 responses) and a total of 508 part-time workers (average of 2.5 per farm based on 20 responses).*
- *The largest share (40%) of farmers had farm sales of less that \$25,000 based on their most recent annual statistics. 7% had sales of more than \$1 million. It is interesting to note that nearly all survey participants answered this question (N=365).*
- *The largest share of farms surveyed fell into the "livestock" category, followed by "other" (18% with self reported categories listed below), Dairy (18%), Vegetable (8%), Soft Fruit (8%), and Field Crops (7%). Tree Fruit (5%) and "Poultry and Egg" represented 5% each.*

- *Those farms with income from Dairy farming tend to have the highest share of income from that category (i.e., they are more specialized).*
- *A large majority of farmers have completed, or are on a waiting list for, an environmental management plan (95% of 300 farms responding) and the majority have completed, or are on a waiting list for, a nutrient management plan (60% of 290 farms responding).*
- *The majority of farmers responding indicate that they “restrict manure/fertilizer” use and “time of year” for spreading in an effort to protect the environment or out of consideration for neighbours (60% and 54%) respectively. Setbacks were also reported by 42% of respondents and plant cover crops were used by 36% of farmers.*
- *The largest share of farmers (46% of 361 farmers) indicated that environmental regulations have caused them to “pay more for certain activities”. A nearly equally large share indicated “there has been no change” while 30% indicated they spend more time in the office and 20% indicated they have reduced the area planted.*
- *Changes in governmental or societal expectations had “no change” for 40% of respondents, resulted in upgrading of ‘other facilities’ for 38%, and resulted in upgrading manure facilities for 32% of respondents. ‘Other’ activities were identified by 12% of respondents.*
- *One hundred and thirty one farmers spent a total of \$4,698,527 on upgrading manure handling facilities. The average for those reporting was \$35,867.*
- *One hundred and thirty two farmers spent a total of \$4,496,038 on upgrading ‘other facilities and equipment such as chemical storage’. The average for those reporting was \$34,061.*
- *Seventy-four farmers spent a total of \$2,308,849 on ‘other upgrades’. The average for those reporting was \$31,201.*
- *The largest group of farmers (47%) has used the Provincial Government’s Farm Investment Fund to assist with the costs associated with addressing compliance issues. A similar proportion (41%) indicated that they have not used a fund or program to assist with these costs.*
- *Only 3% of farmers indicated that programming covered 100% of their costs. The largest share (30%) indicated that programs covered between 50% and 75% of their costs. The next largest share (26%) indicated they did not use programs.*
- *Where there were funding shortfalls associated with compliance, 45% of farmers indicated that they financed the difference out of pocket and 23% used debt financing. Others indicated that they “Didn’t do” their project or that the “Program ran out of funds before we applied.”*
- *The largest share of farmers (40%) indicated that changes in environmental regulations/expectations did not change their cost of production in the last ten years. A share nearly as large (38%) indicated that changes in environmental regulations/expectations did change their cost of production and 23% did not know or were not sure.*

- *Most farmers indicated that they did not know or were not sure (79%) about the operating cost increase of environmental regulations/expectations. Those that felt it did increase operating costs (21%) indicated a total expenditure of \$397,070 and an average of \$7,786 for the 51 farms indicating an increase.*
- *Most farmers did not know or were not sure if environmental regulations/expectations had an associated cost decrease (97%). The few that felt there was a decrease (3%) indicated a range between \$500 and \$2,000 per farm.*
- *The majority of farmers participating in this survey were farming 'food crops' (46%) or both food crops and non-food crops (18%). Thirty-six percent were farming non-food crops.*
- *ENVIRONMENTAL REGULATIONS impacts are summarized as follows:*
 - *42% agree that they pay more for labour,*
 - *55% agree that they pay more for capital,*
 - *56% agree that they pay more for production inputs, and*
 - *51% agree that they pay more for management and administration.*
 - *73% indicated they are not able to recover costs through their product's market price.*
- *Farmers identified 1,418 beneficiaries from environmental regulations that impact farm operations. Nova Scotian residents were cited most often (79%), followed by consumers (74%) and farmers themselves (62%).*
- *Most farmers (52%) felt that their operations had been unchanged by regulations (52%), 12% felt their operations had been expanded, and 24% felt their operation had been constrained.*
- *Slightly more than 1/3rd of farmers (36%) felt that environmental changes had a negative impact on their farm's viability. Nearly half (47%) felt there was no impact on their farm viability and 16% felt the changes were beneficial.*
- *The majority of farmers (63%) felt that environmental changes had beneficial impact on the environment. Nearly one third (31%) felt that the impact on the environment was neutral.*
- *For those farmers that experienced negative impacts to farm viability or stability, the majority (83%) absorbed the impacts into their expenses and relatively few of them (18%) improved their efficiencies to compensate.*
- *Farmers identified 1,033 drivers of environmental compliance. The government was cited most often (74%) followed by Consumers (54%), urban residents (43%) and rural residences (37%).*

Primary Value Chain Recovery Study

In December of 2005, Kelco Consulting Ltd. submitted a report to the NSFA Annual General Meeting (copy available from NSFA office) that outlined a number of options to support the Nova Scotia Agricultural industry in addressing fundamental changes in the global production of food.

Collectively, environmental and government regulations, along with the requirements of processors, retailers and consumers, have placed a number of demands on farmers.

As indicated in the Phase I Primary Value Chain Recovery report, Nova Scotia Farmers needed to be consulted so that they had an opportunity to provide their perspective on the impacts and experiences they face as a result of the changes in the industry over the past number of years. The survey was designed to address this issue.

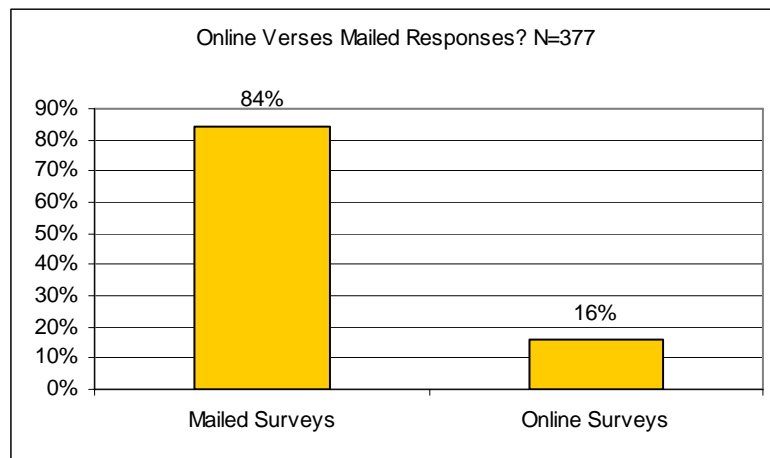
SURVEY OBJECTIVE

The purpose of this NSFA Membership survey was to offer an opportunity to farmers and focus their responses on environmental and regulatory issues that may have affected their farming operations. Questions were designed around a mix of open and closed ended questions and explored changes to farm costs, management, and/or other processes on the farm in an effort to define the nature of their impact.

The results of this survey will help the NSFA identify the impact on Nova Scotian farms from society's changed regulations and expectations around environmental, food quality, and safety issues. This report provides a high-level analysis of the environmental component of the survey.

SAMPLE SIZE

The survey was mailed to 2,402 registered members of the Federation and the process was managed by Krista Vroegh, of the NSFA. Responses were returned to the NSFA office in Truro in pre-paid self addressed envelopes and subsequently turned over to Kelco Consulting, unopened, for data entry and analysis, or were completed on-line.



Of the 2,402 surveys that were sent out during March 2006, a total of 377 were completed. This provided a response rate of 15.7% and with an error rate of +/- 4.64%, 19 times out of 20 (95% confidence).

Survey participants were given two options for participating. The mailed survey (hardcopy format) was used most often (84%) while the online survey option was considerably less popular (16% completed surveys using the online response form).

DEVELOPMENT OF QUESTIONNAIRE

Following committee approval of this survey process we began to develop a survey that would be administered to Nova Scotian Farmers who were members of the Federation of Agriculture.

Questions for the survey were constructed in consultation with the steering committee following a review of:

- Study objectives to identify topics of relevance for questioning;
- Our research on the Phase 1 Competitiveness Report;
- Survey forms from previous work (2001 ATi Study); and
- With input from a variety of stakeholders outside the committee structure, including the Nova Scotia Department of Agriculture and Fisheries.

In the development of the survey we considered many factors, from formatting and ease of readability in both on-line and hardcopy versions. The prevailing consensus was that it would be necessary to have a broad range of survey formats, e.g. online, print-ready PDF (hardcopy for hand-outs, and faxing) to accommodate preferences of survey participants.

In partnership with the Federation our consulting team designed a survey tool that could be completed by farmers in 10 to 20 minutes.

Following several rounds of drafts and reviews, the final survey format was developed and posted from a link on the Federation's web site and a printed version was mailed to Federation Membership. The surveys were made available on February 8, 2006

Due to the depth of the subject matter, the final survey contained over 61 questions and resulted in as many as 213 individual data points for each respondent.

INCENTIVE

A small incentive was offered to participants of the survey. At the end of the survey participants were given an option to enter their name for one of three random draws for a prize valued at \$100. Only those who provided contact information could be considered for the draw and prize winners were announced at the Council of Leaders session on April 20, 2006.

REPORT ORGANIZATION

The balance of this report presents the survey results. The following section presents the summary in a tabular format. The table is organized with the following information:

- The wording from each question is presented as it appeared in the survey;
- A graphical representation of the results (if appropriate) for each question, and
- A narrative discussion of the findings for each question (written in italics).

Open-ended comments (if received) are presented following the narrative analysis of the results. Where important for context participant comments are reproduced verbatim so that the essence of the response is not altered. Similar comments were group the frequency of their occurrence reported in brackets.

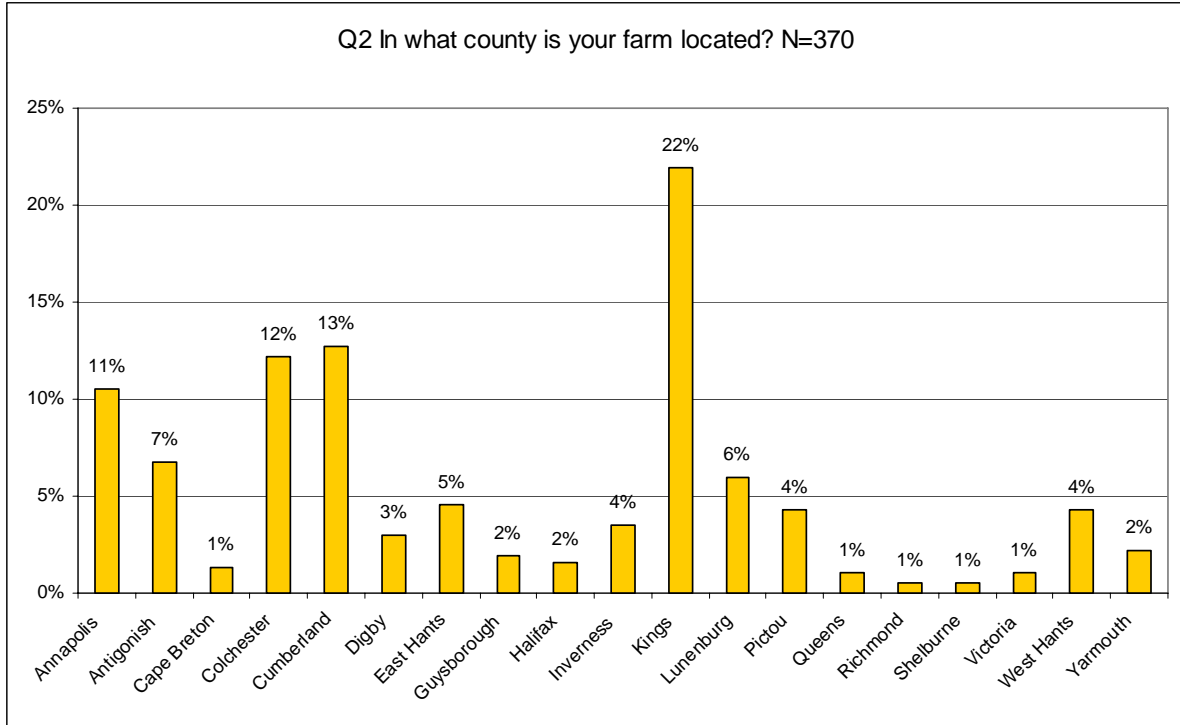
Survey Summary

This section presents a summary of the NSFA Survey Findings.

1.	We must ask if we can use your confidential responses, pooled with others, for the purpose of evaluating the impact of environmental goods and services on the farming industry in Nova Scotia.	May we use your confidential survey responses to assess trends in the Nova Scotia Farming industry and support the Federation in formulating policy recommendations? <i>[Select only one]</i> <input type="checkbox"/> Yes <input type="checkbox"/> No
<p><i>All but one (0.3%) of the survey participants agreed to allow us to use their results. Accordingly, data pertaining to this observation was deleted from the data set and the analysis was carried out on the remaining observations (377).</i></p>		

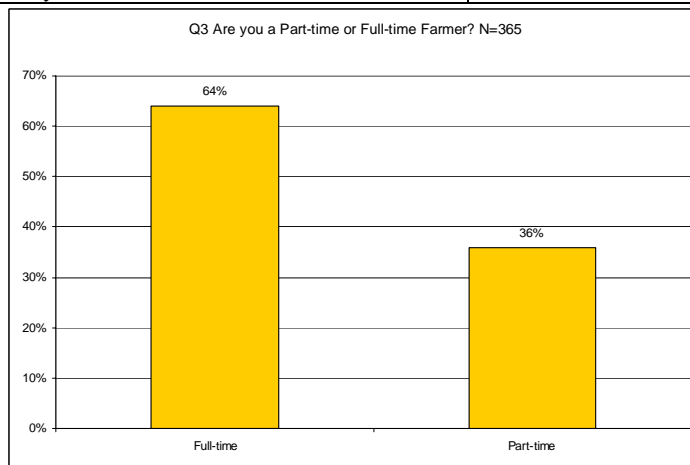
C: Farm Profile

2.	In what county is your farm located? <i>[Specify]</i>	<input type="checkbox"/> Annapolis <input type="checkbox"/> Antigonish <input type="checkbox"/> Cape Breton <input type="checkbox"/> Colchester <input type="checkbox"/> Cumberland <input type="checkbox"/> Digby <input type="checkbox"/> East Hants <input type="checkbox"/> Guysborough <input type="checkbox"/> Halifax <input type="checkbox"/> Inverness	<input type="checkbox"/> Kings <input type="checkbox"/> Lunenburg <input type="checkbox"/> Pictou <input type="checkbox"/> Queens <input type="checkbox"/> Richmond <input type="checkbox"/> Shelburne <input type="checkbox"/> Victoria <input type="checkbox"/> West Hants <input type="checkbox"/> Yarmouth
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The distribution of responses reflects the distribution of farms across Nova Scotia. The majority of responses came from Kings County (22%), followed by Cumberland (13%), Colchester (12%), and Annapolis (11%). The fewest responses came from Richmond and Shelburne Counties (less than 1% each).

3. Are you a Part-time or Full-time Farmer? Part-time
[Select only one] Full-time

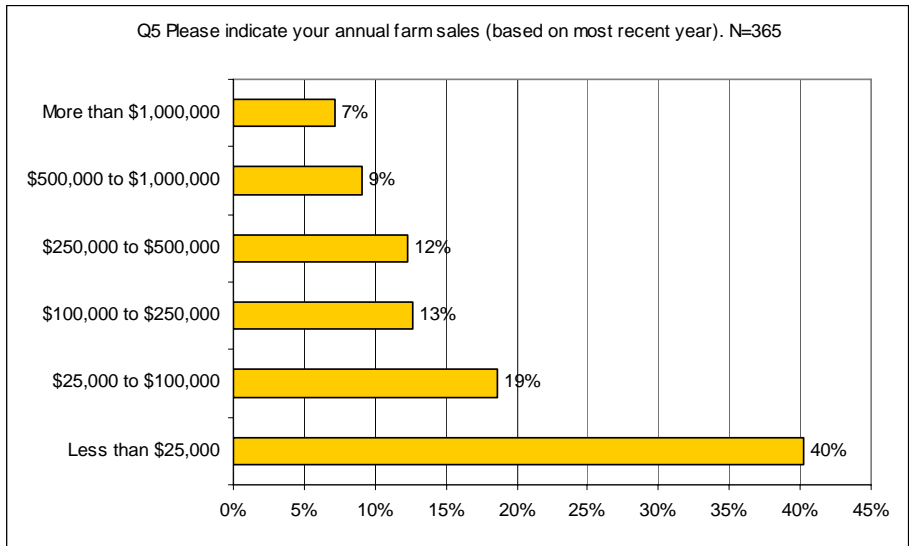


The majority of participants categorized themselves as part-time farmers (64%) while full time framers made up the rest (36%). A total of 365 participants answered this question.

4.	Including you, how many Part-time or Full-time workers do you employ? <i>[Please specify number of Full Time and Part]</i>	Number of Part-time workers: Number of Full-time workers:
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Among the farms represented, there was a total of 1,878 full time workers (average of 6.1 per farm based on 309 responses) and a total of 508 part-time workers (average of 2.5 per farm based on 20 responses).

5.	Please indicate your annual farm sales (based on most recent year). <i>[Please select only one]</i>	<input type="checkbox"/> Less than \$25,000 <input type="checkbox"/> \$25,000 to \$100,000 <input type="checkbox"/> \$100,000 to \$250,000 <input type="checkbox"/> \$250,000 to \$500,000 <input type="checkbox"/> \$500,000 to \$1,000,000 <input type="checkbox"/> More than \$1,000,000
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The largest share (40%) of farmers had farm sales of less than \$25,000 based on their most recent annual statistics. 7% had sales of more than \$1 million. It is interesting to note that nearly all survey participants answered this question (N=365).

6.	Please indicate the sources of your farm sales by product type. <i>[Please select all that are appropriate and indicate % of sales by type. Percentages must add to 100% of sales.]</i>	Please Check Sources	Percent of Sales
		<input type="checkbox"/> Livestock (cattle, sheep, hog, or combination)	_____ %
		<input type="checkbox"/> Poultry and Egg	_____ %
		<input type="checkbox"/> Dairy	_____ %
		<input type="checkbox"/> Vegetable	_____ %
	<input type="checkbox"/> Soft fruit	_____ %	

<input type="checkbox"/>	Tree fruit	%
<input type="checkbox"/>	Field Crop	%
<input type="checkbox"/>	Other	%
Total Sources		100%



The largest share of farms surveyed fell into the “livestock” category, followed by “other” (18%) with self reported categories listed below, Dairy (18%), Vegetable (8%), Soft Fruit (8%), and Field Crops (7%). Tree Fruit and “Poultry and Egg” represented 5% each. A total of 366 farms responded to this question. Looking at only those farms who have sales in a particular category, those who have income from Dairy farming tend to have the highest share of income from that category (i.e., they are more specialized).

7.	If you indicated "Other" as a source of your farm sales by product type, please name the product type.	(Please Specify) _____
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A total of 141 ‘other’ sources of income, or combinations, were identified

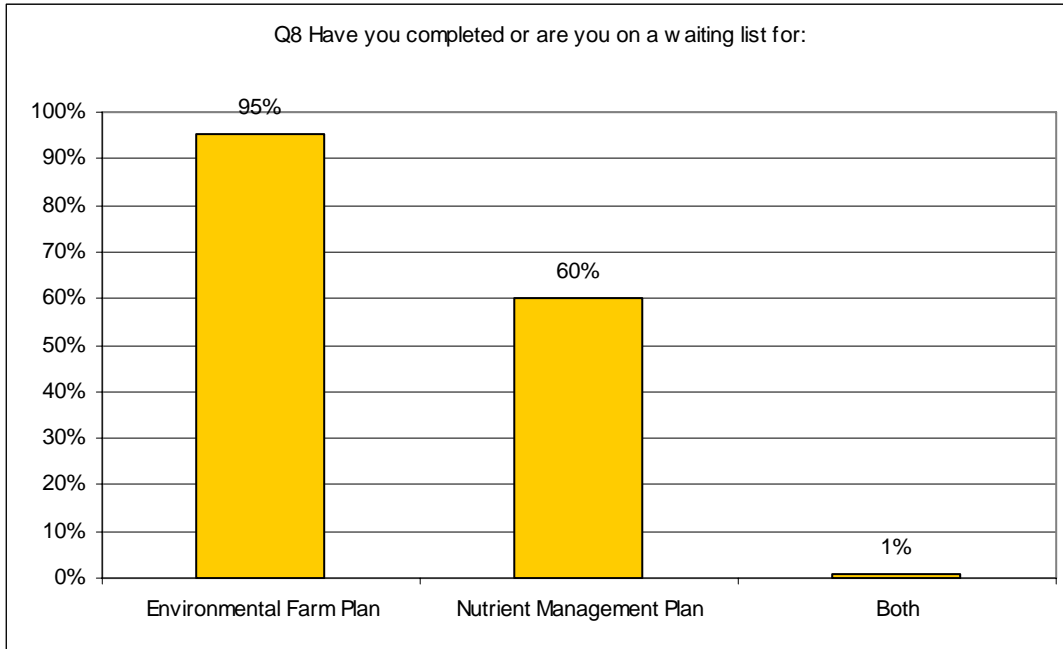
- 20% hay, 50% forestry 1
- 20% perennial flowers & plants, 20% woodlot 1
- 3% herbs, 2% potted plants 1
- 40% maple syrup, 20% furnace wood sales 1
- Aquaculture trout 1
- Baled hay 1
- Balsam Fir Christmas Trees, wreaths & brush 1
- Baskets & Gladiolas 1
- Bees 1
- Berries 1
- Blankets made of our sheep's wool 1

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- *Blueberries (8)*
 - *Butchering, wood, custom work 1*
 - *CAIS PROGRAM AND NS BSE PMT 1*
 - *Chicken breeding, pullet growing 1*
 - *Woodlot Products (2)*
 - *Christmas Trees (8)*
 - *Compost (2)*
 - *Container Nursery stock (i.e., Trees & shrubs) (1)*
 - *Custom harvest (7)*
 - *Cut flowers (2)*
 - *Dairy Heifers 1*
 - *Dozing - land clearing, landscaping, land levelling ditch spoil 1*
 - *Draft horses 1*
 - *Dry Beans/Farm Market (1)*
 - *U-pick, tours, special events. (1)*
 - *Flowers & shrubs 1*
 - *Forage 1*
 - *Forage, forestry 1*
 - *Forage, grain 1*
 - *Forestry (7)*
 - *Foxes 1*
 - *Freezer beef, wood sales 1*
 - *Fur farming 1*
 - *Government moneys, hay, custom work 1*
 - *Greenhouse (3)*
 - *Hay (4)*
 - *Honey and Wool Products 1*
 - *Honey, pollination services, logs & firewood. 1*
 - *Horse breeding (foals) 1*
 - *Horses 1*
 - *Horses/custom feeding/training (adding value) 1*
 - *Logging (5)*
 - *Low bush blueberries, honey bee pollination 1*
 - *Lumber - we have a small mill and saw some lumber and sell it. 1*
 - *Maple 2*
 - *Maple syrup 1*
 - *Maple syrup & wood fiber, fire wood etc. 1*
 - *Maple, Xmas trees, woodlot 1*
 - *Mink- Fur (7)*
 - *Non edible, greenhouse nursery 1*
 - *Nursery plants 1*
-

- *Nursery Plants 1*
- *Nursery stock 1*
- *Pasture rental 1*
- *Perennial nursery plants 1*
- *Pollination and honey 1*
- *Primary forest products 1*
- *Program assistance, rebates, manure sales 1*
- *Pulp wood & logs 1*
- *Rabbits, ducks, geese, meat birds 1*
- *Rental 1*
- *Rental income 1*
- *Sale of wood, pulpwood, logs etc 1*
- *Silver & mutation fox., Pelts 90%, Livestock 10% 1*
- *Studwood, pulpwood custom work 1*
- *Timber or logs 1*
- *Transplants, veg and herb 1*
- *Tree farming 1*
- *Value-added juices, preserves 1*
- *Wild blueberries 3*
- *Wood - logs, studwood, firewood (9)*
- *Woodlot (4)*
- *xmas trees (5)*

D. Farm Based Environmental Goods and Services

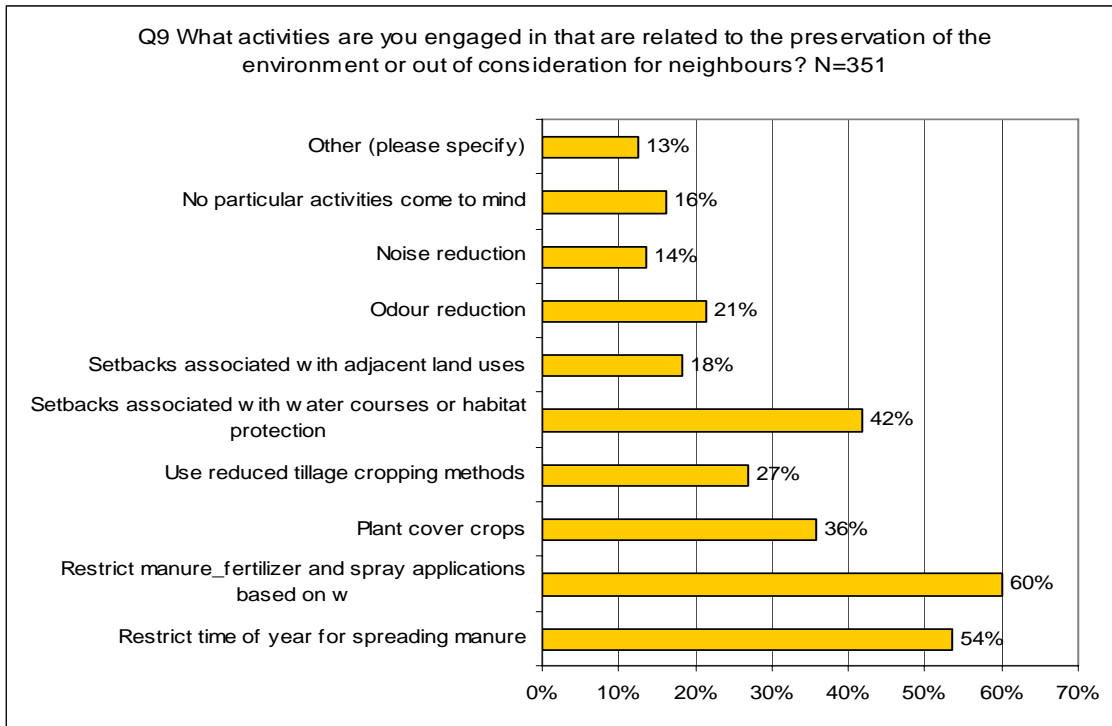
8.	Have you completed or are you on a waiting list for: <i>[please select all that are appropriate]</i>	<input type="checkbox"/> Environmental Farm Plan <input type="checkbox"/> Nutrient Management Plan
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A large majority of farmers have completed, or are on a waiting list for, an environmental management plan (95% of 300 farms responding) and the majority have also completed, or are on a waiting list for, a nutrient management plan (60% of 290 farms responding).

9. What activities are you engaged in that are related to the preservation of the **environment** or out of consideration for neighbours? *[Please select all that are appropriate]*

- Restrict time of year for spreading manure
- Restrict manure/fertilizer and spray applications based on weather conditions
- Plant cover crops
- Use reduced tillage cropping methods
- Setbacks associated with water courses or habitat protection
- Setbacks associated with adjacent land uses
- Odour reduction
- Noise reduction
- No particular activities come to mind
- Other (please specify)

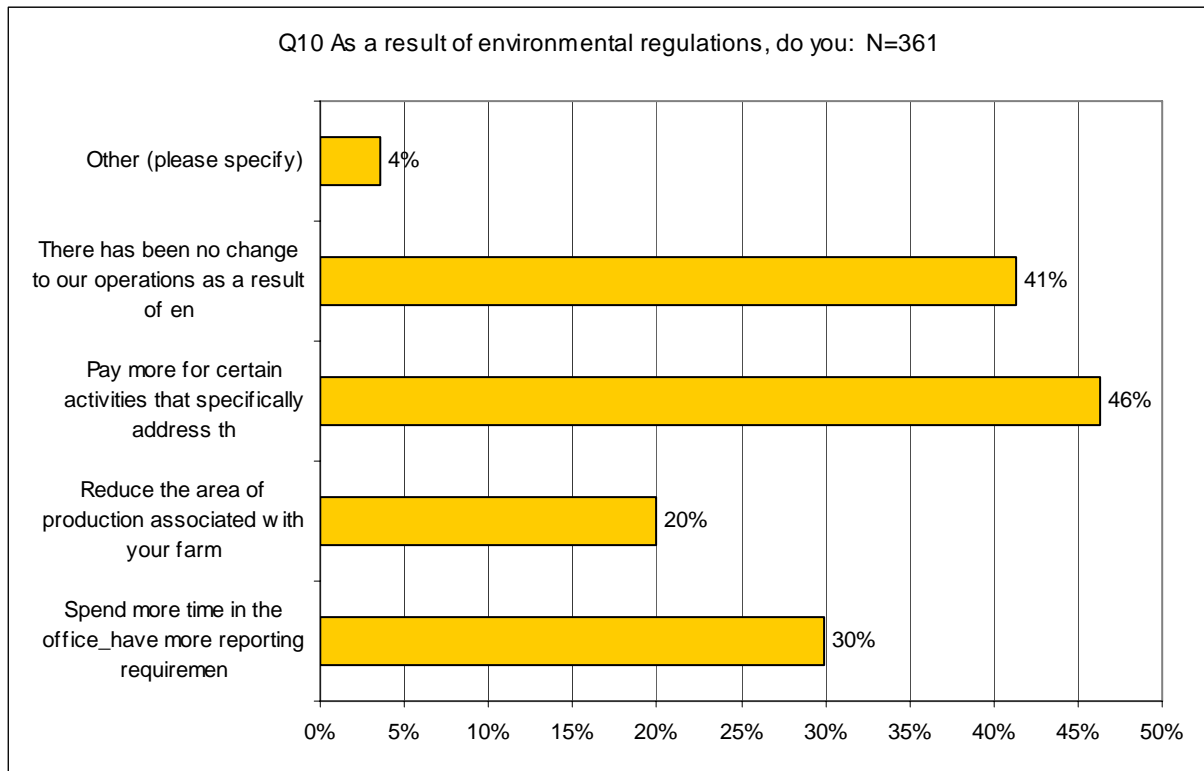


The majority of the 351 farmers responding to this question indicate that they restrict manure/fertilizer use depending on weather and time of year for spreading in an effort to protect the environment or out of consideration for neighbours (60% and 54%) respectively. Setbacks were also reported by 42% of respondents and plant cover crops were reported by 36% of farmers.

'Other activities' included:

- *All manure is composted(2)*
- *Buffer Zones for runoff. Limit pesticides/herbicides to only absolutely necessary.*
- *Building farm ponds(2)*
- *Burn pasture grass*
- *CARP (Clean Annapolis River Project) Fencing off river to cattle.*
- *Certified organic production (4)*
- *Crop rotation (2)*
- *Disposal of poultry Produced on Poultry plant at plant.*
- *Fuel Storage*
- *Grass buffered head lands*
- *Installed a bio-mass furnace have eliminated ill use.*
- *Invite - Open Farm Day - provide and educate neighbours.*
- *Lead in maple products*
- *Manure Storage (2)*

	<ul style="list-style-type: none"> • <i>Most don't apply to our farming</i> • <i>Most of the above do not apply to greenhouse production.</i> • <i>No neighbours to worry about.</i> • <i>No pesticides (2)</i> • <i>No use of animal manures</i> • <i>Only cut every second year</i> • <i>Permaculture approach</i> • <i>Planting diversified tree species, and maintaining hardwood species(2)</i> • <i>Protected birds</i> • <i>Provincial trail row, flood plain maintenance, archaic site - Special Places Act.</i> • <i>Quiet means of predator control</i> • <i>Riparian (watercourse) fence line management.</i> • <i>Rotational grazing</i> • <i>Silver culture woods</i> • <i>Spread straw on bare land (soil)</i> • <i>Use as little pesticides as possible</i> • <i>Vegetation barrier</i> • <i>Waste water</i> • <i>Windbreaks</i> 	
10.	As a result of environmental regulations, do you: [Please select all that are appropriate]	<ul style="list-style-type: none"> <input type="checkbox"/> Spend more time in the office/have more reporting requirements. <input type="checkbox"/> Reduce the area of production associated with your farm. <input type="checkbox"/> Pay more for certain activities that specifically address the requirements of environmental regulations/requirements <input type="checkbox"/> There has been no change to our operations as a result of environmental regulations. <input type="checkbox"/> Other (please specify) _____

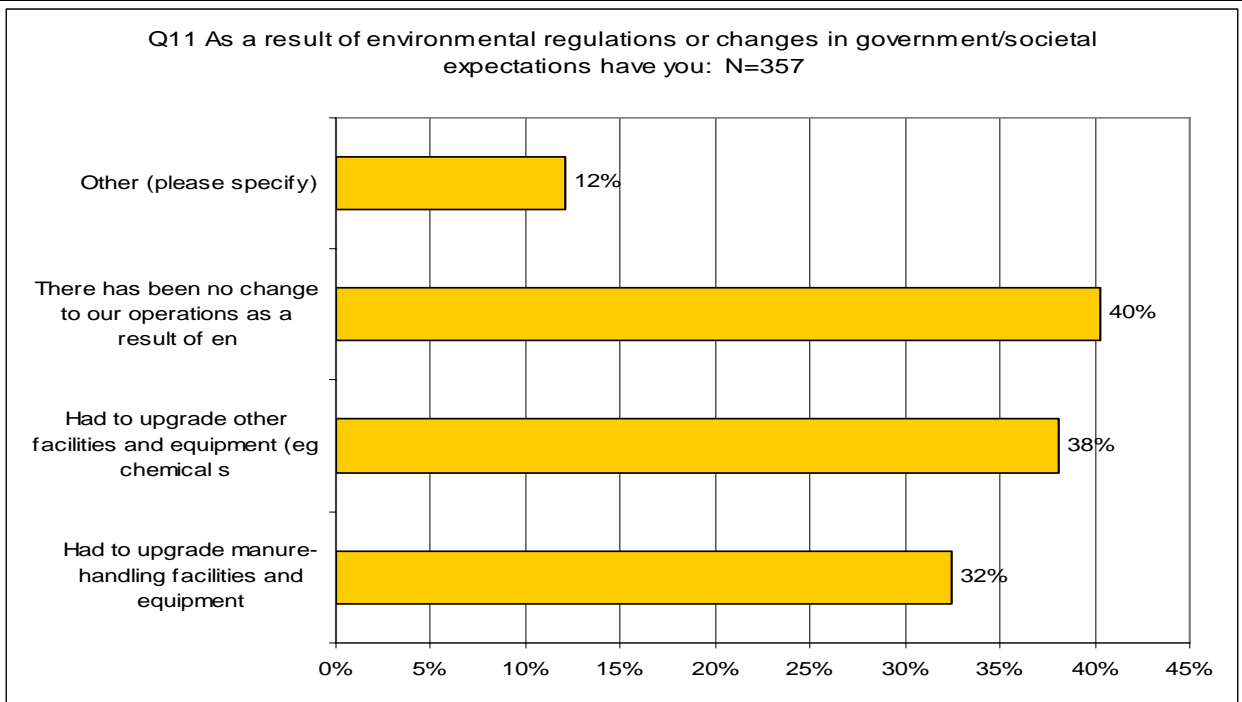


The largest group of farmers (46% of 361 farmers) indicated that environmental regulations have caused them to “pay more for certain activities”. A large group (41%) indicated “there has been no change” while 30% indicated they spend more time in the office and 20% indicated they have reduced the area of their planting.

Thirteen ‘other’ comments were provided as follows:

- *Bridges for cattle*
- *Certified organic restricts certain farm pastures*
- *Chemical sprays are done by hired contractor*
- *Conserve well water used for irrigation.*
- *Contractor looks after these*
- *Don't know, don't care*
- *Environmental Impact Assessment*
- *In future - manure handling, water course, etc, etc.*
- *May not be keeping things?? as well because of expense.*
- *New blueberry field development*
- *Play politician*
- *Spend too much time...*
- *Worry*

11.	<p>As a result of environmental regulations or changes in government/societal expectations have you: <i>[Please select all that are appropriate and indicate approximate cost]</i></p>	<p><input type="checkbox"/> Had to upgrade manure-handling facilities and equipment?</p> <p><input type="checkbox"/> Had to upgrade other facilities and equipment (e.g. chemical storage and equipment)?</p> <p><input type="checkbox"/> There has been no change to our operations as a result of environmental regulations or changes in government/societal expectations.</p> <p><input type="checkbox"/> Other (please specify)</p> <p>_____</p>
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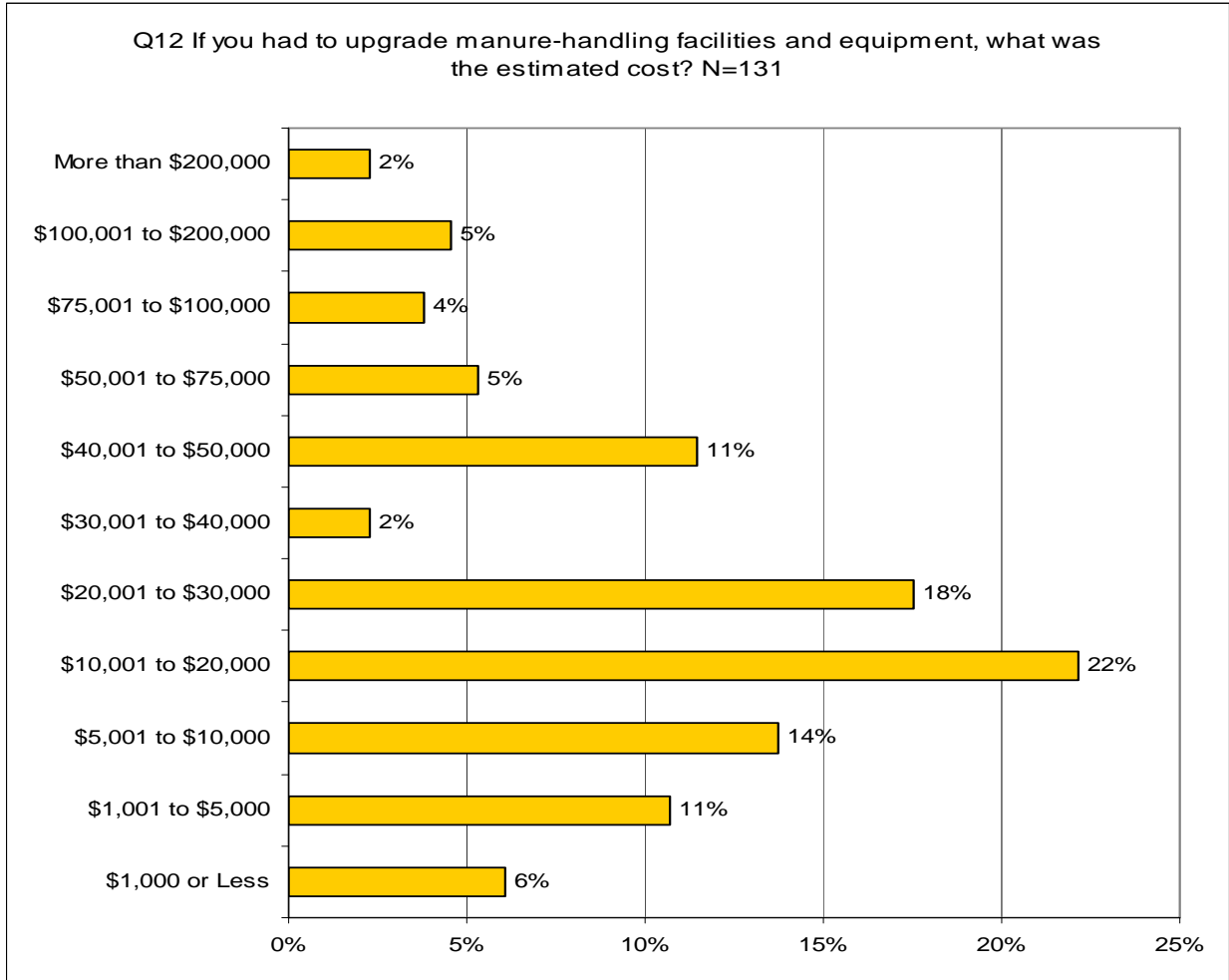


Changes in governmental or societal expectations had led to “no change” for 40% of respondents, resulted in upgrading of ‘other facilities’ for 38%, and resulted in upgrading manure facilities for 32% of respondents. ‘Other’ activities were identified by 12% of respondents.

Other activities identified included:

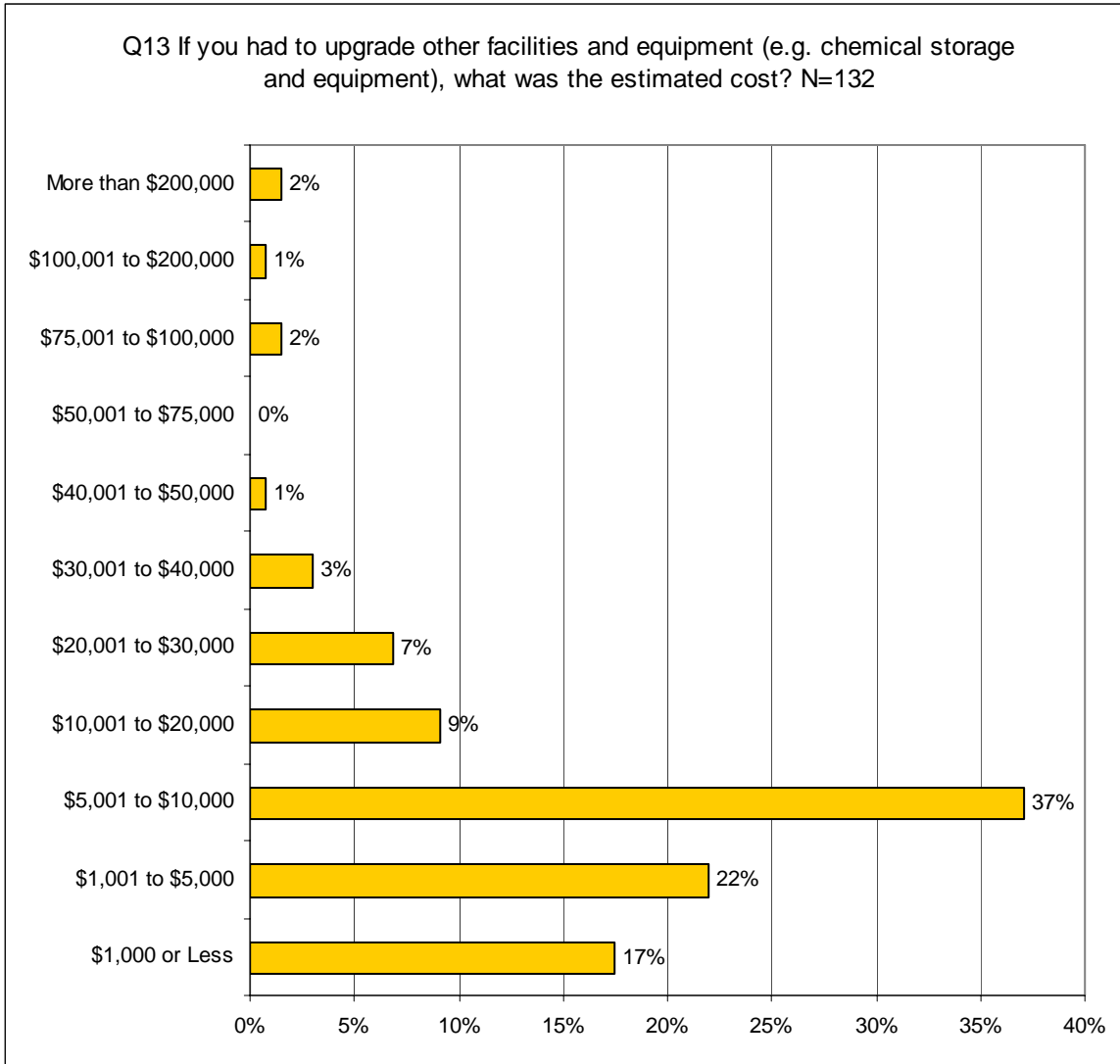
- *Bank erosion protection*
- *Built a composting facility*
- *Built manure storage larger than normal to allow for future storage (2)*
- *CAN NOT BUY DIESEL FUEL IN BULK*
- *Complete fuel storage (3)*
- *Compliance to withdraw irrigation water (2)*
- *Compost site construction for poultry abattoir waste & meat shop waste - future*

	<p><i>requirement, not yet constructed.</i></p> <ul style="list-style-type: none"> • <i>Contractor looks after these</i> • <i>Don't use chemicals (3)</i> • <i>Easing out of farming</i> • <i>Environmental Farm Plan/ Nutrient Management Plan (3)</i> • <i>Fence out water courses and construct limited access areas (3)</i> • <i>Prepared expensive Environmental Approval application.</i> • <i>Purchased manure injectors on our own initiative.</i> • <i>Quality milk program</i> • <i>Sap Holding Tanks</i> • <i>Still waiting</i> • <i>Time temp, recorder, fuel tanks, 2 water treatment.</i> • <i>Upgrade processing facilities</i> • <i>Waste water treatment system.</i> • <i>Water flow management</i> • <i>Will have to upgrade etc, etc, but who Pays</i> • <i>Hire spraying done</i> • <i>I contract out work, the extra cost is reflected there.</i> • <i>I would have to do anyway for storage space.</i> • <i>Increased cost of gravel delivery</i> • <i>ust bought new equipment to do everything ourselves</i> • <i>Minor tweaks. Exhaust and gasoline covers.</i> • <i>Modified wood harvesting methods and size of equipment used (smaller now)</i> • <i>Pesticide training</i> 	
12.	If you had to upgrade manure-handling facilities and equipment, what was the estimated cost?	[Enter Dollar Amount] _____



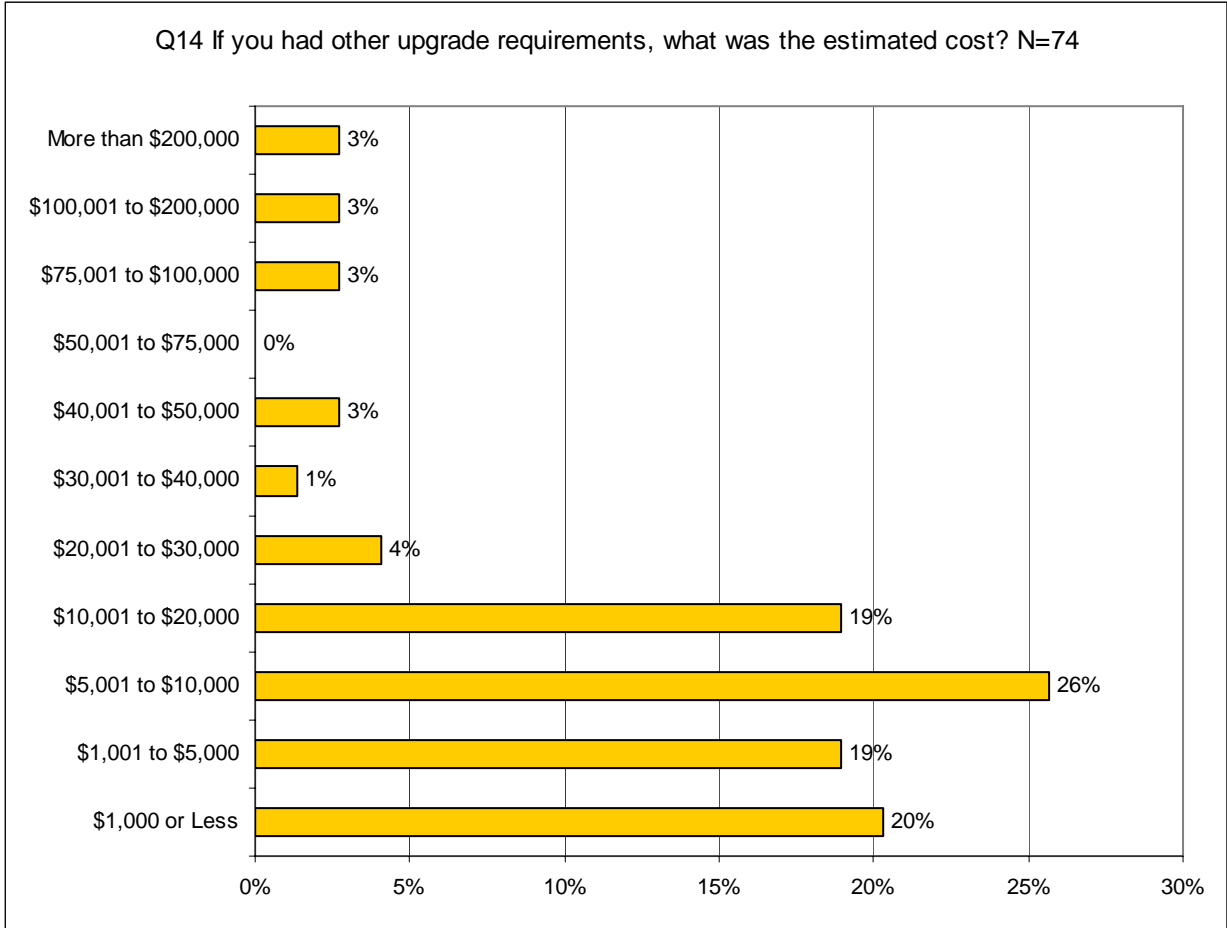
One hundred and thirty one farmers spent a total of \$4,698,527 on upgrading manure handling facilities. The average for those reporting was \$35,867.

13.	If you had to upgrade other facilities and equipment (e.g. chemical storage and equipment), what was the estimated cost?	<input type="text" value="[Enter Dollar Amount]"/> <hr/>
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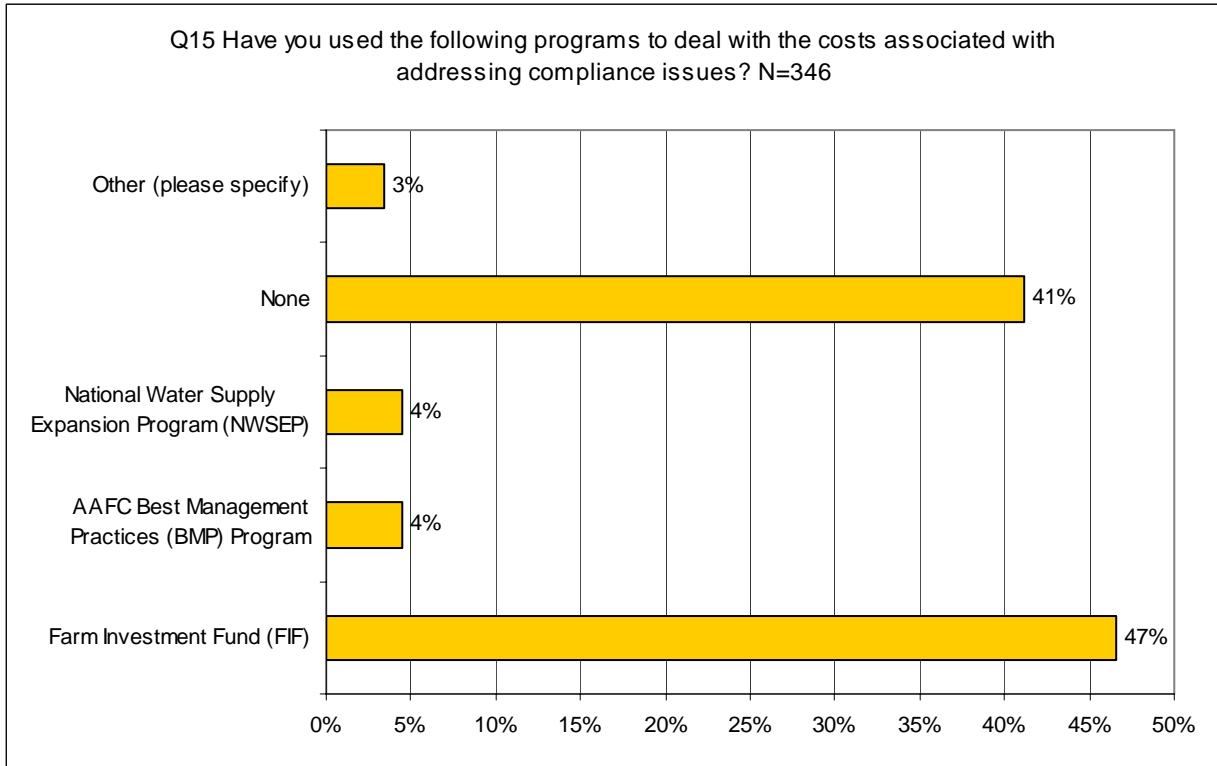
One hundred and thirty two farmers spent a total of \$4,496,038 on upgrading 'other facilities and equipment such as chemical storage'. The average for those reporting was \$34,061.

14.	If you had other upgrade requirements, what was the estimated cost?	[Enter Dollar Amount]
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Seventy-four farmers spent a total of \$2,308,849 on upgrading 'other upgrades'. The average for those reporting was \$31,201.

15.	<p>Have you used the following programs to deal with the costs associated with addressing compliance issues?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Farm Investment Fund (FIF) <input type="checkbox"/> AAFC Best Management Practices (BMP) Program\ <input type="checkbox"/> National Water Supply Expansion Program (NWSEP) <input type="checkbox"/> None <input type="checkbox"/> Other (please specify) _____
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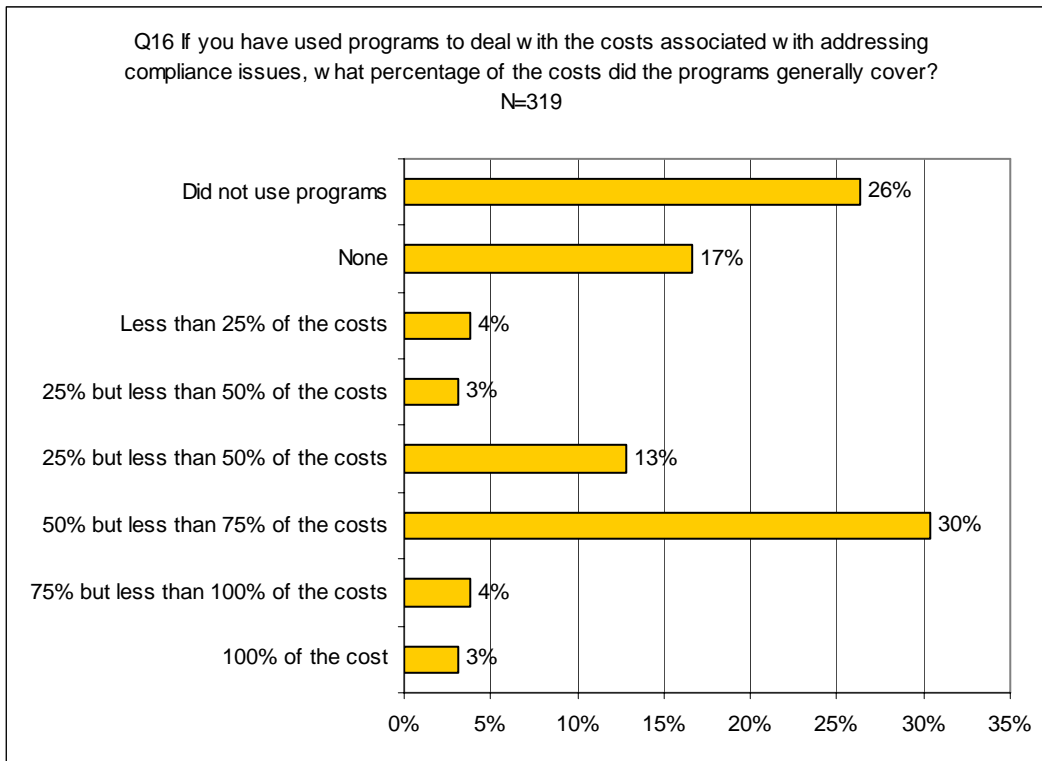


The largest group of farmers (47%) has used the Farm Investment Fund to deal with the costs associated with addressing compliance issues. A large share (41%) indicated they have not used a fund or program to deal with these costs.

Thirteen other comments included:

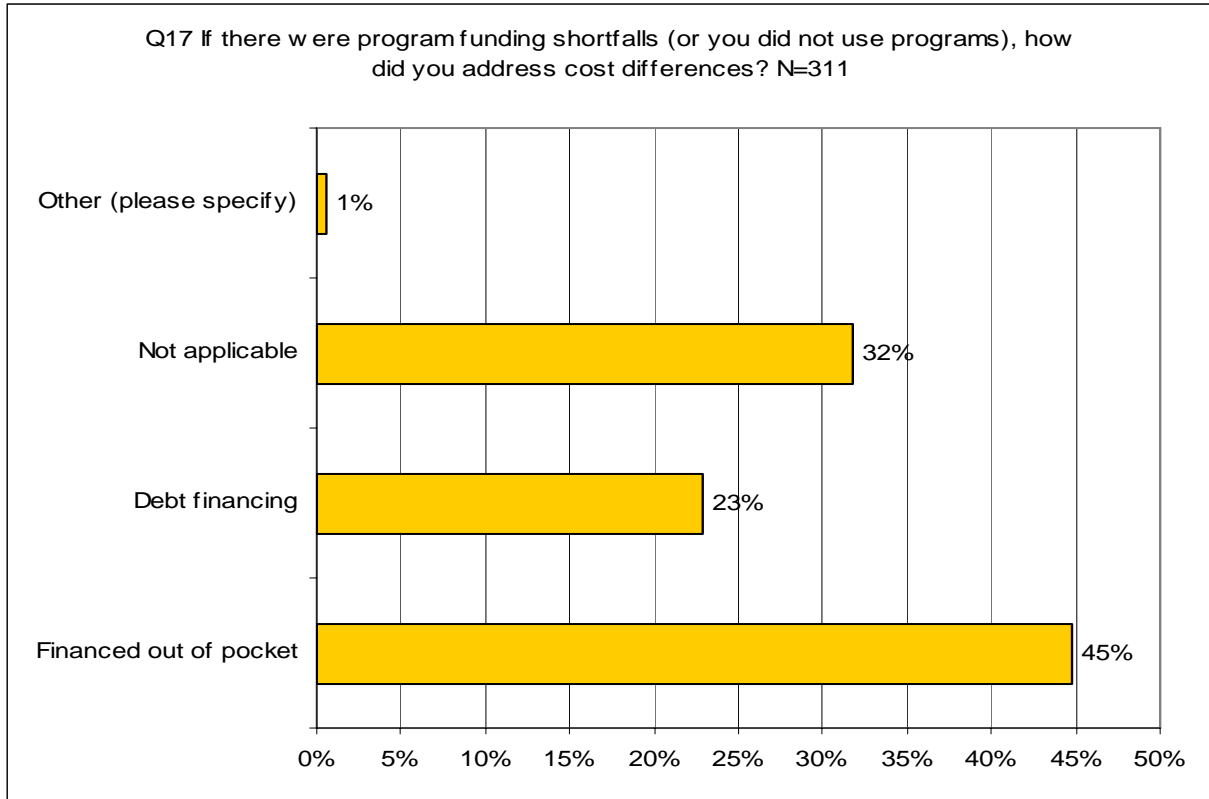
- *CARP bank protection program*
- *Could not get any money, too small a farm.*
- *Department of Environment*
- *Ducks Unlimited*
- *Farm Nutrient Plan*
- *Horse farm doesn't qualify as a farm.*
- *Incorporated within FCC loan/paid our own way.*
- *manure pad in 1992, can't remember if it was called FIF then*
- *New farm, not yet had the chance to take advantage of the programs*
- *nothing on survey*
- *Nova Scotia Farm Loan Board*
- *Used my own money.*
- *Wetlands Fencing policy*

16. If you have used programs to deal with the costs associated with addressing compliance issues, what percentage of the costs did the programs generally cover?
- 100% of the cost
 - 75% but less than 100% of the costs
 - 50% but less than 75% of the costs
 - 25% but less than 50% of the costs
 - 25% but less than 50% of the costs
 - Less than 25% of the costs
 - None
 - Did not use programs



Only 3% of farmers indicated that programming covered 100% of their costs. The largest share (30%) indicated that programs covered between 50% and 75% of their costs. The next largest share (26%) indicated they did not use programs.

17. If there were program funding shortfalls, how did you address cost differences?
- Financed out of pocket
 - Debt financing
 - Not applicable
 - Other (please specify) _____



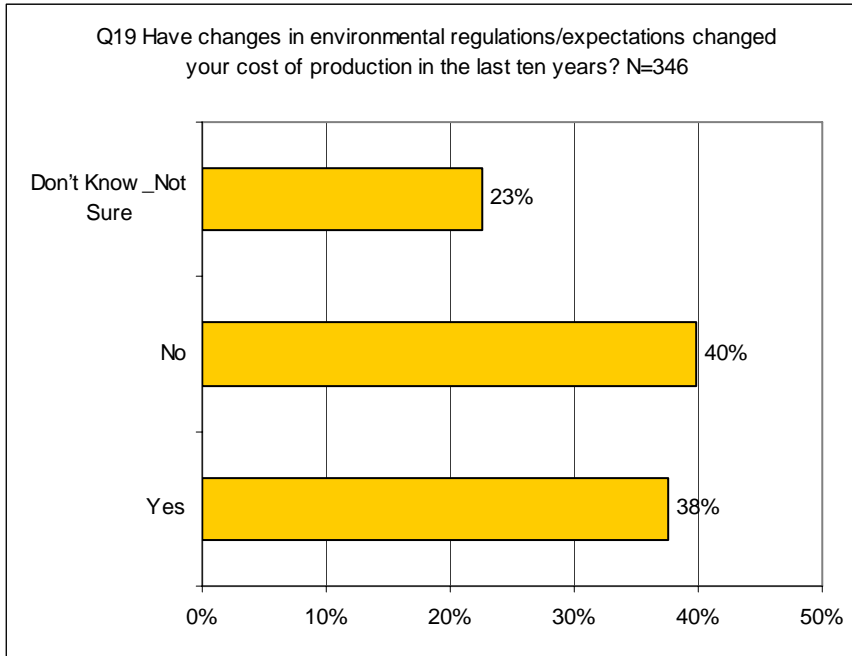
Where there were funding shortfalls associated with compliance, 45% of farmers indicated that they financed the difference out of pocket and 23% used debt financing. Others indicated that they “Didn’t do” their project or that the “Program ran out of funding before we applied.”

18.	Can you provide specific examples of where regulatory or compliance conditions have necessitated changes to your on-farm environmental management program/plan?	<input type="checkbox"/> No <input type="checkbox"/> Yes (please specify) _____ _____ _____
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Farmers provided examples of changes to farm operations necessitated by regulatory or compliance conditions. These included:

- *Upgrade manure storage and handling (22)*
- *Improve fuel storages (17)*
- *Improve water management (12)*
- *Upgrade chemical and pesticide storages (6)*
- *Pesticide applicators licence (2)*
- *Canadian Quality Milk (2)*
- *Increased record keeping (2)*
- *20m buffers have been extended to 30m*
- *54/ton for natural waste*
- *debris removal, cost, unable to burn changes*
- *Discontinued fuel storage for tractors and trucks.*
- *Environmental assessment for poultry processing plant on farm*
- *Farm Nutrient Plan*
- *HA will be required this year with increased record keeping*
- *Had to receive environmental approval for livestock ponds.*
- *Had to withdraw produce from market.*
- *Modify woodlot harvesting along small waterways.*
- *Must spread lobster shells as soon as they are dumped.*
- *Potable water*
- *Purchase of new fork lift, put in place fall protection around all areas above the floor.*
- *Repair Vacuum Pump Oil Reclaimer*
- *Required certified organic compliances*
- *Set backs from ditches*
- *Soil sampling*
- *Spraying - re-entry time/neighbourhood concern.*
- *U.V. Light & Filter*
- *Use of common sense.*
- *We are on a long waiting list for an EFP*
- *We don't burn plastic twine.*
- *We feel we have to upgrade a lot of practices.*
- *Well water, wildlife*

19.	<p>Have changes in environmental regulations/expectations changed your cost of production in the last ten years? [Select only one] [Select only one]</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know/Not Sure</p>
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The largest share (40%) indicated that changes in environmental regulations/expectations did not change their cost of production in the last ten years. A share nearly as large (38%) indicated that changes in environmental regulations/expectations did change their cost of production and 23% did not know or were not sure.

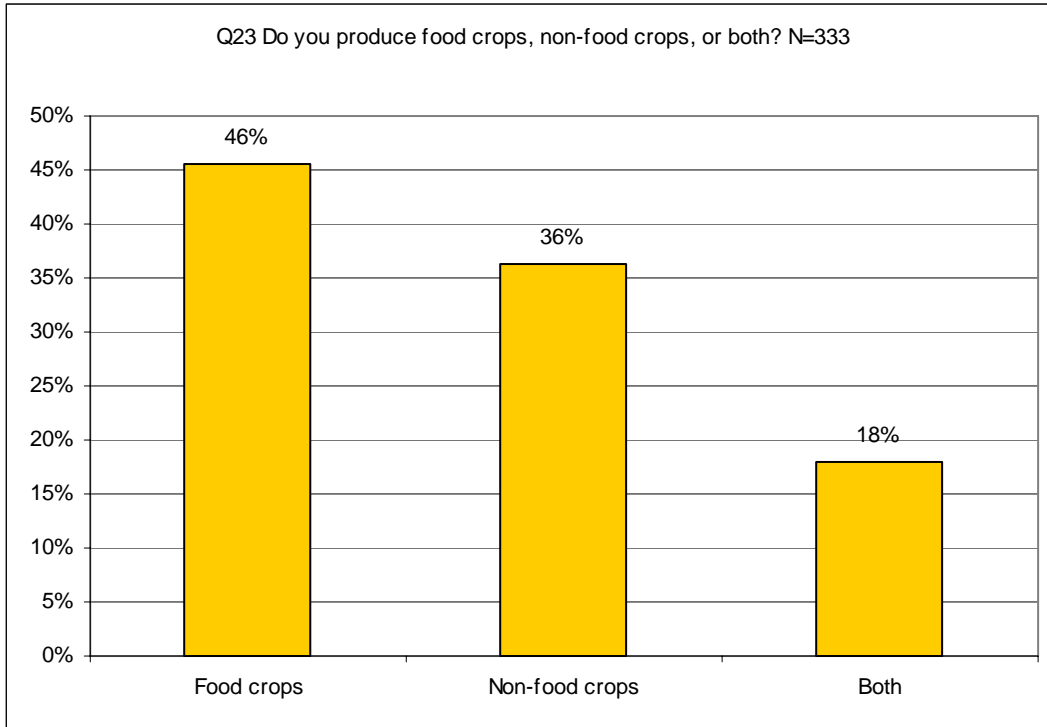
20.	If Yes to "Have changes in environmental regulations/expectations changed your cost of production in the last ten years?" please explain how your costs have changed.	(Please Explain) _____ _____ _____ _____
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Respondents offered comments to explain how costs of production have changed.

- Increased costs associated with manure storage and handling (23)
- Increased capital costs (14)
- Pesticide management and certification (12)
- Decreased acreage due to loss in riparian areas and buffer zones (11)
- Increased labour costs (7)
- Time and record keeping increases (5)
- Had to purchase new equipment (2)
- 1) I used to trade manure for straw. Now manure seems to have less value because of NMP's and so I have to buy straw. This also means I soon have to build a manure storage facility that will cost approximately \$70,000. 2) Have already built a fuel storage facility. 3) In orchard we are using more expensive chemicals because others are being phased out by environmental regulations.

- 2500 for an environmental assessment to poultry processing plant on my farm.
- Additional H.R. to provide necessary regulation change. ex. Boiler room supervision
- Any expenditure for environmental changes increases costs on farms.
- Basically due to start up costs
- Burning, land clearing and access over brooks.
- Caused to exit dairy operation in 2004
- Changed evaporators e.g. cost of maple syrup as gone up.
- COP have increased in some areas 30% yet price back to farm have decreased by as much.
- Cost of spray down instead of ploughing Cost of better manure handling equipment
- Cost of water in the HRM went from 3000/year to 12-14000/year for watering crops in greenhouse and nursery.
- Costs of fuel and chemical storage plus paperwork involved with maintaining records.
- Costs related to drilling well and pest storage.
- Don't plough in fall
- Employment of more competent employees to maintain proper records.
- Environmental fees on tires and oil filters.
- Every change in management increases the cost of production. More money, more time, more interest.
- Had to pump water greater distance because of registered pump sites.
- Higher harvesting costs and lower yields.
- I purchased a U.V. Light (\$2500)
- Implementation would have cost and no way to pass on additional expense.
- It has cost. I'm not sure how to put that into COP when it is more cost of project rather than a daily-added cost.
- Less subsidy.
- Most of our changes were made in advance of changes to the regulations. We have added concrete floors to allow us to collect runoff, if required at a later date (\$60,000), although we allow the flow into a monitored ditch.
- My blueberries are cared for by an outside company. Training and upgrades to equipment are passed on in cost.
- My costs have increased.
- Need to recover costs associated with water treatment, milk regulations.
- Now seed forage seed without grain nurse crop and control weeds mechanically.
- Our cost of production has increased on every front.
- Paid for impact assessment. Costs for providing baseline information and water tests for next 10 years or more.
- Purchase more feed.
- Quality milk program (I.E.)
- Record keeping Land out of production due to waterways, setbacks
- Red tape handling. loss of government funding from other items to support environment

	<p><i>projects.</i></p> <ul style="list-style-type: none"> • <i>Spending more to achieve the same.</i> • <i>The costs associated with manure handling have risen because of NMP and the need to spread during the busy season. The costs with hauling manure farther from the barn are quite expensive.</i> • <i>Too many requests that can't be fulfilled i.e., fuel storage, chemo. storage, silage bunker, additional manure storage.</i> • <i>Traceability - huge cost in time and management. Regulations - too much time and money into permits and jumping through regulation hoops that do nothing but protect the backsides of the gov't. NMP - next to impossible to make use of in our own situation yet required as we are cut off from gov't programs & then at a disadvantage.</i> • <i>Tree planting, manure covers, pit additives.</i> • <i>Used Contractor.</i> • <i>We chose to change location due to land restrictions the municipality imposes 100% increase because we now have a mortgage.</i> • <i>Without NM (nut management I cannot get assurance on limestone and other assistance in connected with the Environment Farm Plan.</i>
21.	<p>If changes in environmental regulations/expectations had an associated cost INCREASE, please estimate that annual increase?</p> <p><input type="checkbox"/> Don't Know/Not Sure <input type="checkbox"/> Dollar Estimate (please specify)_____</p>
	<p><i>Most farmers indicated that did not know or were not sure (79%) about the cost increase of environmental regulations/expectations. Those that felt it did increase costs (21%) indicated a total expenditure of \$397,070 and an average of \$7,786 for the 51 indicating an increase.</i></p>
22.	<p>If changes in environmental regulations/expectations had an associated cost DECREASE, please estimate that annual decrease?</p> <p><input type="checkbox"/> Don't Know/Not Sure <input type="checkbox"/> Dollar Estimate (please specify)_____</p>
	<p><i>Most farmers did not know or were not sure if environmental regulations/expectations had an associated cost decrease (97%). The few that felt there was a decrease (3%) indicated a range between \$500 and \$2,000 per farm.</i></p>
E. Food or Non-Food Producing	
23.	<p>Do you produce food crops, non-food crops, or both?</p> <p><input type="checkbox"/> Food crops [GO TO Q 24] <input type="checkbox"/> Non-food crops [GO TO Q 49] <input type="checkbox"/> Both [GO TO Q 24]</p>

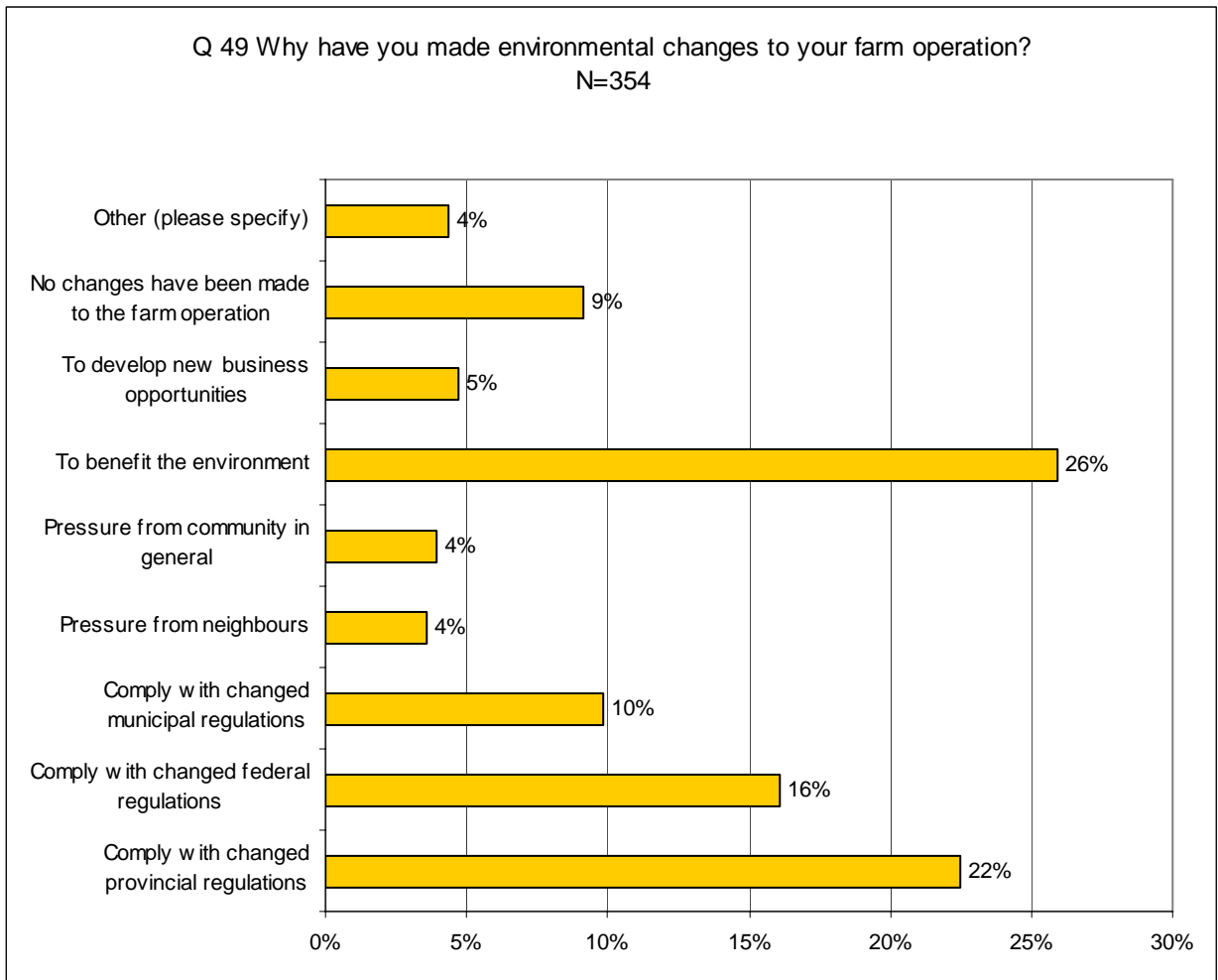


The majority of farmers participating in this survey were farming 'food crops' (46%) or both food crops and non-food crops. Thirty-six percent were farming non-food crops.

N. Role of Environmental Compliance

49. Why have you made environmental changes to your farm operation? [Select all that apply]

- Comply with changed provincial regulations
 - Comply with changed federal regulations
 - Comply with changed municipal regulations
 - Pressure from neighbours
 - Pressure from community in general
 - To benefit the environment
 - To develop new business opportunities
 - No changes have been made to the farm operation
 - Other (please specify)
- _____



Farmers identified 833 reasons why they have made environmental changes to their farm operation. “to benefit the environment was cited most often (26%) followed by ‘complying with provincial regulations’ (22%) and ‘complying with federal regulations’ (16%). Other comments included:

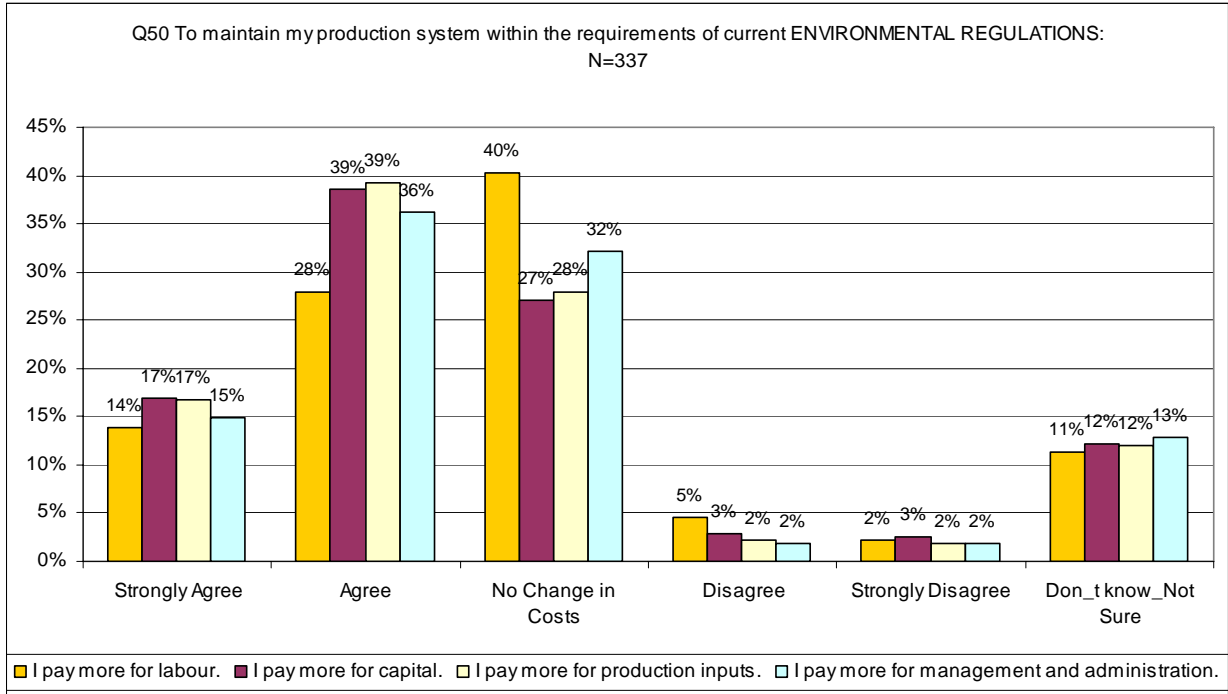
- A desire to take pride in producing safe and environmentally safe food and land
- Advertising
- Awaiting farm plan which will be done very shortly
- Because it is the right thing to do.
- Certified organic
- Certified organic regulations
- Changes to prevent environmental problems in future.
- Complying ...only way to access government funding - quite often the regulations do nothing to help the environment.
- Contractor is in charge of this.

- *Cost reduction*
- *Cut organic*
- *Don't know*
- *For the overall good.*
- *Introduce new methods/procedures as they become known/available.*
- *Keep friendly neighbours*
- *No animal manures, only plant residues incorporated into double dug raised beds (goodbye flies)*
- *Packer/marketer*
- *Peace of mind*
- *Pressure not the right word. Doing it avoid problems down the road. Due Diligence.*
- *recommendation of environmental farm plan*
- *Retiring age 71*
- *Right thing to do, good environmental stewardship is good production practice, less wasteful, why does this survey make it seem like it compliance is just a cost?*
- *So we can sell our products to retailers who pay us less for our product.*
- *To be proactive in neighbourly relations.*
- *To build health in every human being. Pressure from neighbours and all levels of government worked against those changes*
- *To comply with requirements from my buyer.*
- *To insure sustainability of our operation.*
- *To keep farm updated for son to take over someday.*
- *To satisfy lender requirements.*
- *To ward off potential conflicts with neighbours and the community in general.*
- *Took part in a program sponsored by CARP. Fenced off river bank, planted trees, and put in a NOSE PUMP to keep cattle out of river and brook.*
- *Waiting for complete Environmental Farm Plan*
- *We are restricted financially to keep pace with all regulations and will probably be forced out of farming!*
- *We had ponds dug to irrigate crops.*
- *We were found to be quite compliant.*

50. Please indicate your agreement or disagreement with the following statements.

To maintain my production system within the requirements of current ENVIRONMENTAL REGULATIONS: [Select only one per statement]	Strongly Agree	Agree	No Change in Costs	Disagree	Strongly Disagree	Don't Know/ Not Sure
I pay more for labour . [Select only one]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I pay more for capital . [Select only one]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I pay more for production inputs . [Select only one]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I pay more for **management and administration**. [Select only one]



Generally speaking, approximately 11% to 13% of farmers are unsure of the impact on labour, capital, management and admin, as a result of ENVIRONMENTAL REGULATIONS. Impacts are summarized as follows:

- 42% agree that they pay more for labour,
- 55% agree that they pay more for capital,
- 56% agree that they pay more for production inputs, and
- 51% agree that they pay more for management and administration.

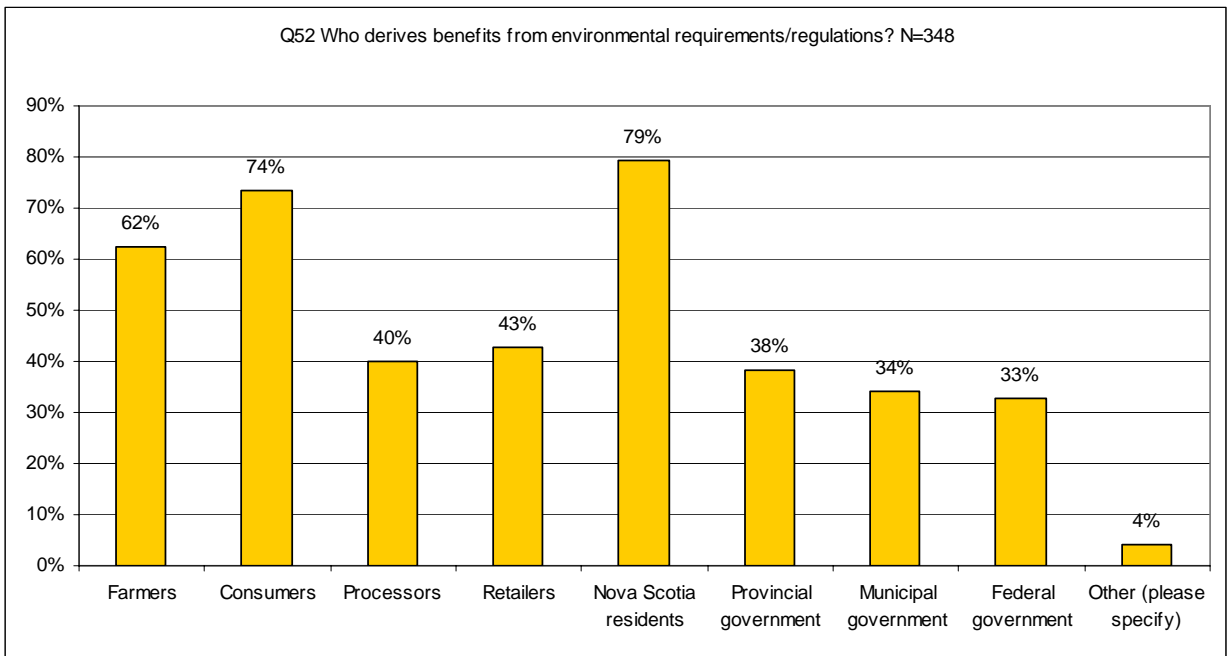
51. If you 'agree' with any of the above statements, are you able to recover your increased costs through your pricing? [Select only one]

Yes, **all** costs increases are included in my price.
 Yes, **some** costs increases are included in my price.
 No

When asked about their success in recovering cost increases resulting from ENVIRONMENTAL REGULATIONS:

- 3% indicated all costs increases are included in their product market price,
- 24% indicated some costs increases are included in their product market price, and
- 73% indicated they are not able to recover costs through their product market price.

52.	Who derives benefits from environmental requirements/regulations? [Select all that apply]	<input type="checkbox"/> Farmers <input type="checkbox"/> Consumers <input type="checkbox"/> Processors <input type="checkbox"/> Retailers <input type="checkbox"/> Nova Scotia Residents	<input type="checkbox"/> Provincial government <input type="checkbox"/> Municipal government <input type="checkbox"/> Federal government <input type="checkbox"/> Other (please specify) _____ _____ _____
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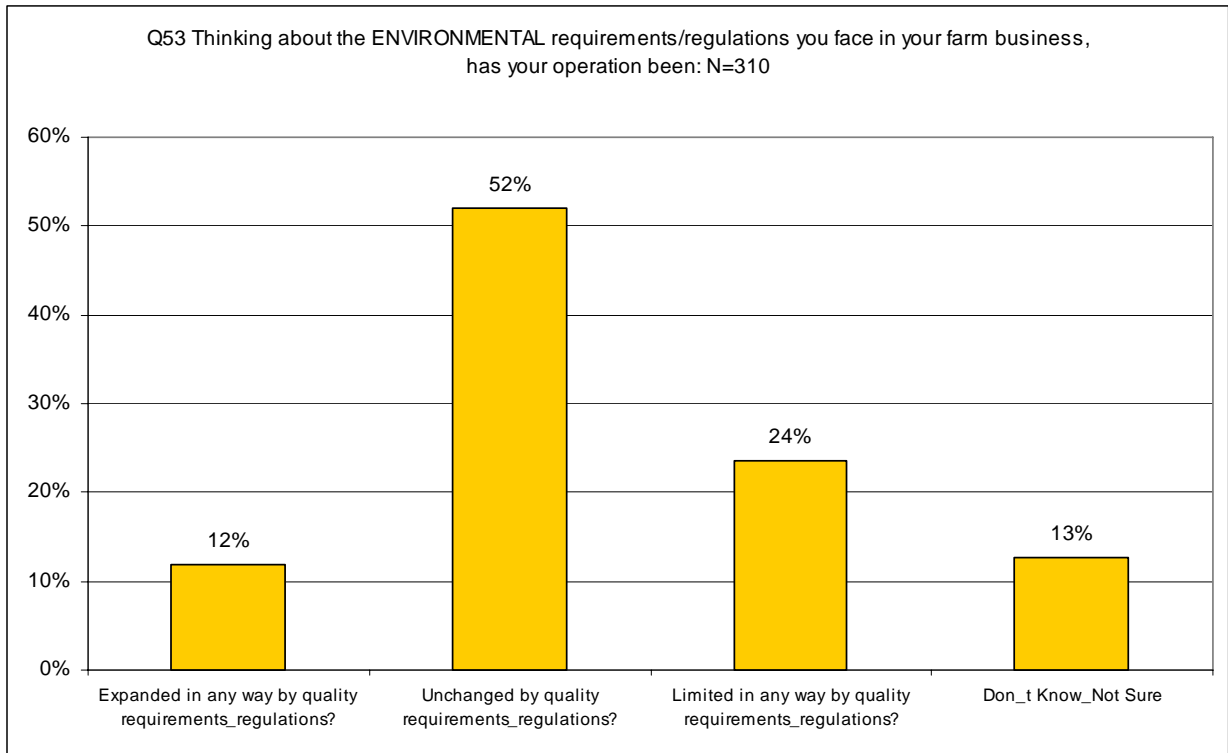


Farmers identified 1,418 beneficiaries from environmental regulations that impact farm operations. Nova Scotian residents were cited most often (79%), followed by consumers (74%) and farmers themselves (62%). Farmers provided the following comments:

- *Environment*
- *Everyone*
- *Future generations*
- *Government workers*
- *Hopefully the environment and therefore everyone.*
- *Neighbours*
- *No one if they do not have a common sense approach, otherwise everyone.*
- *Society*
- *The birds and the bees*
- *The entire world population*
- *The livestock*
- *We all do as we have good food and a good place to live.*
- *Without reference to specific requirements/regulations who is to say there are benefits*

53. Thinking about the ENVIRONMENTAL requirements/regulations you face in your farm business, has your operation been:

- Expanded in any way by quality requirements/regulations?
 - Unchanged by quality requirements/regulations?
 - Limited in any way by quality requirements/regulations?
 - Don't Know/Not Sure
 - Other (please specify)
-

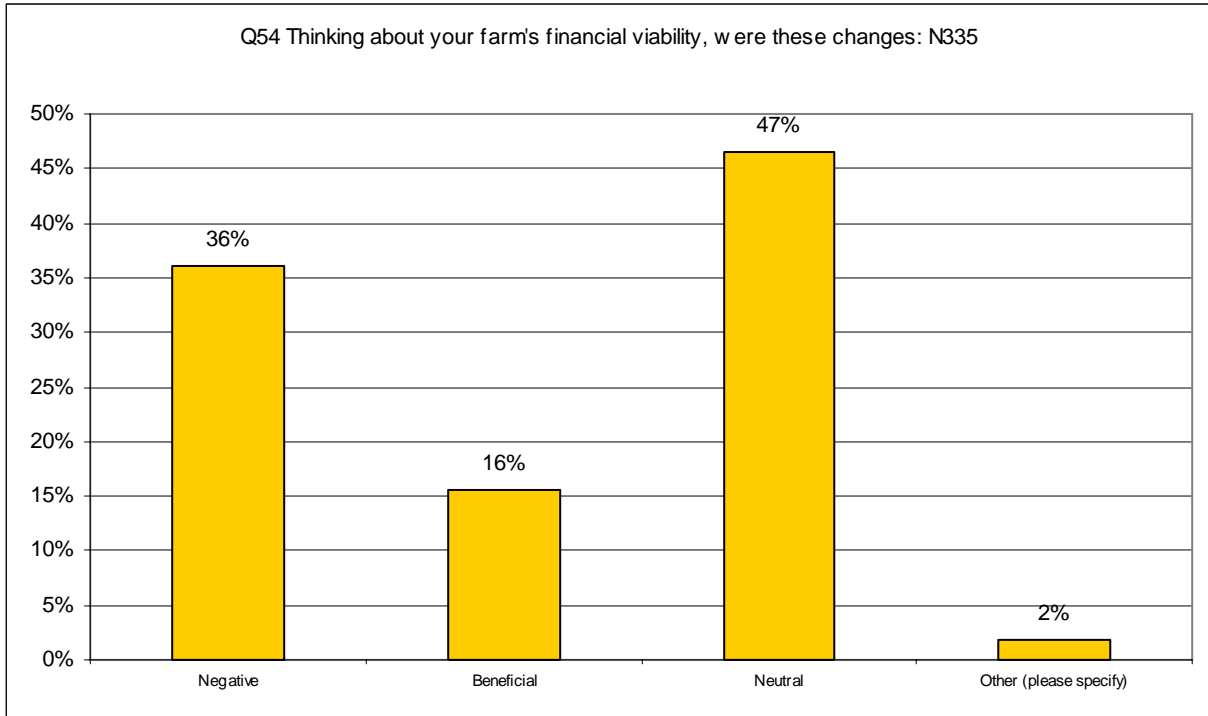


Most farmers (52%) felt that their operations had been unchanged by regulations (52%), 12% felt their operations had been expanded, and 24% felt their operation had been constrained.

Comments provided include:

- *Cut production where environmental regulations are a problem.*
- *Don't know/Not Sure (32)*
- *Has made us think outside the box!*
- *In the future expect limitations due to increase regulations*
- *Production areas lost to buffer zones*
- *Riparian management*
- *Stressed somewhat to comply*
- *Will have to expand manure pit with no money to do it*

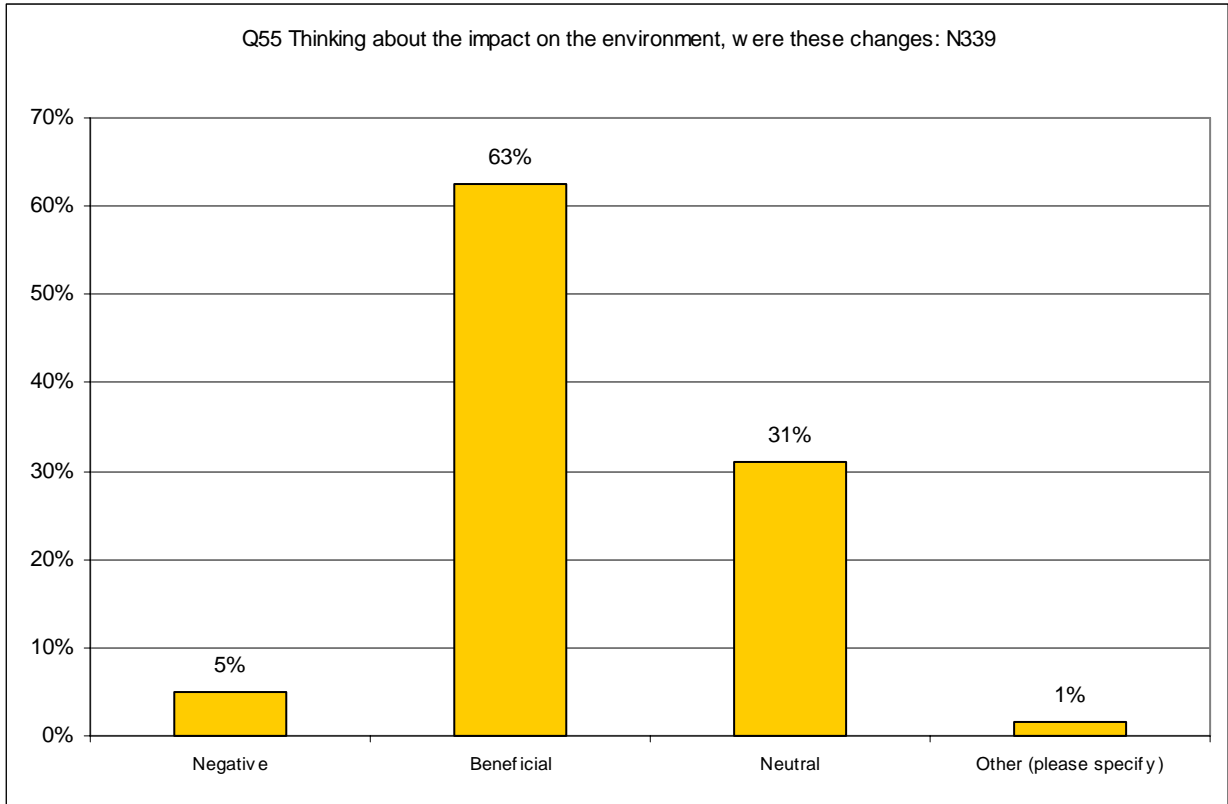
54.	Thinking about your farm's financial viability, were these changes:	<input type="checkbox"/> Negative <input type="checkbox"/> Beneficial <input type="checkbox"/> Neutral <input type="checkbox"/> Other (please specify) <hr/>
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Slightly more than 1/3rd of farmers (36%) felt that environmental changes had a negative impact on their farm's viability. Nearly half (47%) felt there was no impact on their farm viability and 16% felt the changes were beneficial. Comments provided include:

- *Beneficial in the long term - negative in the short.*
- *Costly*
- *Don't know*
- *Don't know yet! I'll let you know*
- *More cost*
- *Not enough time to see yet*

55.	Thinking about the impact on the environment, were these changes:	<input type="checkbox"/> Negative <input type="checkbox"/> Beneficial <input type="checkbox"/> Neutral <input type="checkbox"/> Other (please specify) <hr/>
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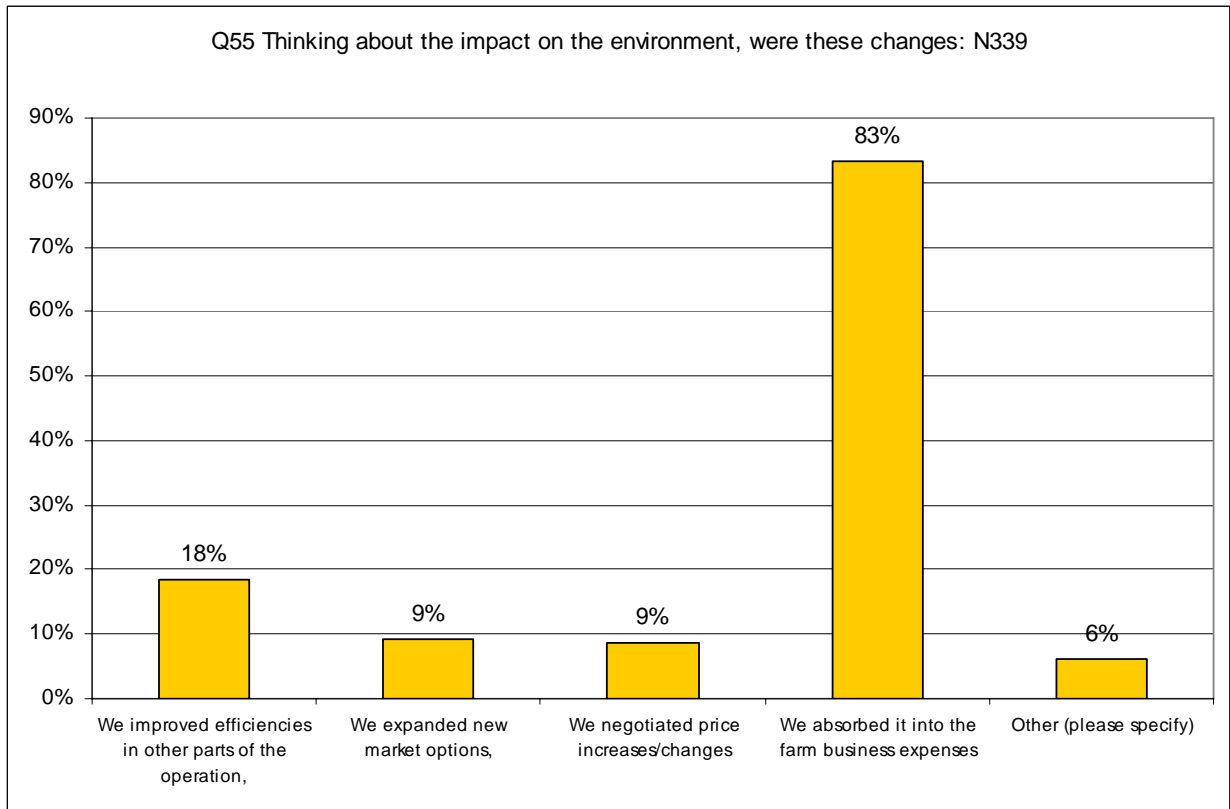


The majority of farmers (63%) felt that environmental changes had beneficial impacts on the environment. Nearly one third (31%) felt that the impact on the environment was neutral. Comments provided include:

- Costly
- Don't know
- More cost
- No changes made yet

56. If you experienced negative impacts to your farm viability or stability, what actions or steps were taken to off set the additional costs: [Check all that apply]

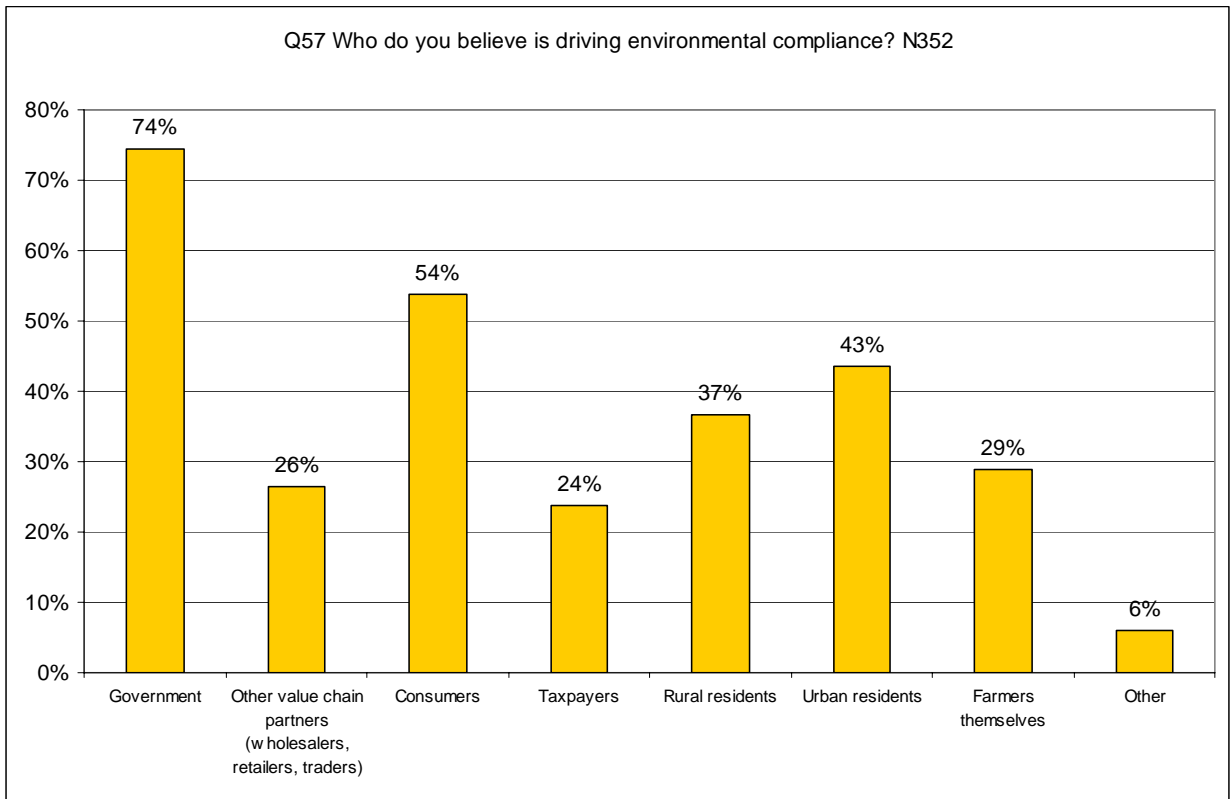
- We improved efficiencies in other parts of the operation,
- We expanded new market options,
- We negotiated price increases/changes
- We absorbed it into the farm business expenses
- Other (please specify)



For those farmers that experienced negative impacts to farm viability or stability, the majority (83%) absorbed the impacts into their expenses and relatively few of them (18%) improved their efficiencies to compensate. Comments include:

- *Can't compete with cost and regulations.*
- *Changed commodities*
- *go more in debt*
- *I have to support the farming operation with my off-farm employment.*
- *Shut down product line.*
- *Started a co-op with studies on the feasibility of building a store, that features local products, so our community can remain diverse. their is no market infrastructure today.*
- *Stopped chemical spray. No manure in certain places.*
- *We are trying to expand*
- *We didn't do the work. Ex: Buy lime*
- *We have tried to make the requirement a positive.*
- *We worked without pay longer and harder*
- *went in debt*

57.	Who do you believe is driving environmental compliance? [Check all that apply]	<input type="checkbox"/> Government <input type="checkbox"/> Other value chain partners (wholesalers, retailers, traders) <input type="checkbox"/> Consumers <input type="checkbox"/> Taxpayers	<input type="checkbox"/> Rural residents <input type="checkbox"/> Urban residents <input type="checkbox"/> Farmers themselves <input type="checkbox"/> Other (please specify) _____ _____
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Farmers identified 1,033 drivers of environmental compliance. The government was cited most often (74%) followed by Consumers (54%), urban residents (43%) and rural residents (37%).

Farmers offered the following comments on who they believe is driving environmental compliance.

- *activists*
- *ALL...for different reasons*
- *awareness of the impact on the environment*
- *combination of everyone*
- *corporations that lobby government to create consultancies such as Agrapoint*
- *Dead fish speak loudly*
- *Environmentalists (2)*
- *Financial Institutions*
- *interest groups with no sense of reality.*
- *lobby groups for importers!!*
- *media*
- *Societal values*
- *Society as a whole*
- *some rural residents*
- *Special Interest Groups (3)*
- *Tree Huggers*
- *Urban people moving to rural areas.*

58. Why do you believe farmers are being asked to adopt or comply with certain conditions?

(Please Explain)

Farmers provided comments on why they believe they are being asked to comply with certain conditions.

- 1) The ability of various levels of government to regulate agriculture as other sectors are covered by other gov. departments and cannot be regulated. Example manure storage vrs domestic septic. 2) Farms are large and obvious. People see what we do whereas they cannot see what goes into the waste stream from other industries or domestic homes.
- Accountability
- All businesses are being asked to comply with environmental regs. Farmers need to meet their commitments as well.
- All industries have become more regulated.
- Although most are good, the major push comes from the fact that we are governed by an urban majority.
- As producers of food the people in larger centres are not doing their part.

- Be more aware of the environment.
- Be proactive and not wait for legislation and possibly tougher rules.
- Because a lot of farmers strive to produce as much as they can off the land that they have. To do that they use (TOO MUCH) as much sprays and fertilizers permitted.
- Because as a voice we are too damned weak to just say - you want it, you pay for it!!!!!!!!!!
- Because city people are coming to live in the country and taking our rights by forcing us to go by there standard.
- Because farmers' participation is essential to the success of environmental improvement.
- Because Farmers are easy targets. No one goes after big companies for causing pollution, farmers get blamed every time a cow takes a bump in the field.
- Because government doesn't want to tackle the real culprits + worst environmental offenders = corporations.
- Because it is necessary for a sustainable industry & environment and will allow greater market access on the world scale.
- Because of some problems associated with older farming practises.
- Because of the chems. We use & spread on our farms.
- Because of the impact of farming operations on the larger ecosystem.
- Because some farm practices were not environmentally friendly, and some people can't mind their own business
- Because SOME farmers don't care about their neighbours or the environment.
- Because they are major stewards of our land resources.
- Because they are the most vulnerable in the food chain and by nature want to do what they have been conceived is right.
- Because we are not volunteering. What is more expensive, upgrading manure storage, or being sued because improper storage made people sick?
- Because we are perceived by the public as a result of owning a lot of land, to be more important in the protection of the environment than any other sector of industry.
- Because we must take care of our environment.
- Being organic certain conditions & regulations do not apply to organic farms?
- belief that sustainability and safety are tied closely to agriculture
- Bureaucratic wasted energy.
- Careless and sloppy farming must be stopped. we must respect our earth if we plan to use it much longer.
- Common sense - the 1st environmentalist was a smart long term farmer.
- Competition between retailers.
- Concerns about food safety animal welfare and environment.
- Concerns over the excessive use of chemicals. Mechanization needed to farm large areas. Lack of education about alternative crops and markets.
- Consumer pressure, global competition for markets.
- Consumer protection.
- Consumer wants to be assured of a safe food supply without harming environment.

- Consumers and general public are requesting that these conditions are in place and are complied with.
- Consumers feel threatened by the huge amount of toxic chemicals being used.
- Consumers pay a lot for groceries-they assume some of this money will/should be allocated for the benefit of our collective environment.
- Consumers, urban & rural residents, governments.
- Consumers want to know farmers are not harming the environment.
- Continual improvements needed.
- Don't know
- Due to pesticides and fertilizer and manure applications.
- Ensure food safety for consumers
- Environmental groups press government to adopt these.
- Environmental issues, land concerns; farms seen as major polluters by urban populace (majority votes); compliance regs give image of responding gov't with population and trading partners.
- Environmental issues.
- Environmental protection is a hot topic worldwide. Farmers are major players in land use and are very visible to the public.
- Environmental reasons
- Environmental regulation that apply to farming in NS
- Every one is becoming concerned about their health and safety.
- Everyone in this whole food chain wants to protect their part of the gate to plate process.
- Everyone wants a cleaner environment.
- Farmers are being asked to do their part before being told! by the same Supermarkets who dump & city sewage into rivers, lakes, harbours and expect government to pay for clean up.
- Farmers are not wanted in Canada any more.
- Farmers being asked to subsidize society as a whole.
- Farmers have always been able to make changes, if somebody has to make a change.
- Farmers have always been viewed as 'keepers' of the land - so certainly non-farmers look at agriculture in either a positive or negative manner dealing with the environment.
- Farmers have the ability to do great harm or great good. Good farm practices can do as much good for the environment as many individuals.
- Farms are larger an to save the environment
- Food safety
- Food safety and government DONT appreciate what agriculture contributes to society.
- Food safety and water safety.
- Food safety, pollution, damage to the environment.
- Food safety.
- For better water, cleaner air.
- For environmental and safety concerns

-
- For environmental reasons and safety for the consumers health.
 - For food and people safety.
 - For food safety.
 - For reason of environmental stewardship. For reasons of consumer protection. Because there is a disconnect between producers and not-producers - a supermarket mentality.
 - For the benefit of all. For a better world for tomorrow.
 - For the betterment of the environment and public safety.
 - For the environment
 - For the good of the environment and food safety
 - For the health and safety benefits of consumers and the environment
 - For the next generation.
 - For the protection of the environment for future generations.
 - Future sustainability of farms (i.e., land, waterways, etc) for food production.
 - General Public always looking to complain unconcerned what farmers do.
 - Global warming, keeping our water sources clean, being good neighbours, urban encroachment
 - Gov't and bureaucratic officials--Regulations are outpacing reality.
 - Gov't needs to 'control'.
 - Gov't regulates to download all costs to the producers. Wholesalers want a hazard free product to sell.
 - Government wants consumers to believe product safe for them
 - Government complements to world trade markets and food safety.
 - Government mistakes of the past.
 - Governments are pushed by taxpayers. Retailers are pushed by consumers.
 - Healthy environment. Healthy people and safe food and drink. More should be done with urban pollutions.
 - Help feed the bureaucracy
 - Help the environment.
 - Hopefully to reduce and eventually halt environmental degradation which could eventually hinder the ability of farmers to produce safe and high quality food; and which could impact other resource users.
 - I am totally against the farmer paying for updating regulations without the farmer getting increases for costs.
 - Improvement on farms.
 - Improve the environment.
 - Improvement in the environment
 - Improving to environment.
 - In all probability because a few have neglected and abused certain conditions. The majority haven't
 - In my case, neighbour (non farming) did not like smell.
 - Increased environmental protection and better quality food supply.
-

- Increased knowledge of what affects our environment and how agricultural practices play a role!
- It's a global marketplace. European countries have 'outlandish regulations and we are going to have our own hopefully sensible ones.
- It's best for the residents and government of the country.
- It's the right thing to do.
- It is all for the good of the land and water.
- It's an easier target than big business.
- It's the best for the environment in general.
- Just updating practices for good all round. Common sense manure storage, spreading practices make sense.
- Keep food supply safe.
- Keep waterway free of pollution.
- Lack of deterrent and penalties for poor environmental activities elsewhere
- Lack of education of consumers and urban populations, urban expectations, some are necessary for sustainability.
- Lack of real understanding/education of urban consumers.
- Long term benefit for residents of area.
- Long term food security.
- Lowest on the totem pole.
- Maintain water quality and address water supply and pollution issues.
- Maintenance of pristine environment, Reduction of nuisances (odours, etc) to neighbours, Improvement of food quality
- Make more work for the farmers and receive less money and time to farm.
- Make sure food is safe.
- Making changes to the environment
- More publicity and residents aren't educated on farming issues.
- Most are for the genuine benefit to the environment. Older farmers find it hard and expensive to change old ways - best to set things up in an environmentally friendly way from the beginning.
- Most farmers are trying hard in NS to make our province a safer place to live and produce safe food
- Most people think farmers are destroying the environment.
- Necessary/future farmers.
- Neighbours can call the department of the environment with stupid complaints and the farmer is investigated without any consequence to the reason filing the complaint.
- No comment
- No Comment!
- No money.
- Not sure
- People are concerned with the environment and what they eat.

- People are frightened by something they don't understand
- People as a whole much less understanding and tolerant of sites, noise, smell, labour associated with agriculture operations.
- People think more about the environment.
- Perception of issues as being bigger than they are. Liability issues.
- Personal safety and environment
- Political
- Politically easy
- Preserve from export markets and government regulations not required for the imports that Canada brings in.
- Pressure from consumers mostly.
- Pressure from government
- Pressure from non-farming residents, fewer farms in area relates to a lower input in government decisions.
- Pressure from residents whose properties are not on farm operations. Consumers, especially regarding use` of pesticide, food additions eg antibiotics in livestock etc..
- Pressure from the general, and sometimes uninformed, public.
- Pressure from the public
- Pressures to avoid repeating environmental catastrophes in other place - government and consumers
- Primary food chain provider, manure runs downhill. Finger needs to be pointed somewhere.
- Probably because the government wants to take better care of the environment.
- Protect environment.
- Protect food supply, protect environment
- Protect the environment In response to misinformation or misunderstandings held by the public
- Protect the environment, citizens, and especially ourselves and our future
- Protect water supply, wild life and over all benefit to ourselves and our children.
- Public's Heightened Awareness For The Environment
- Public as tax payers want safer and better quality food.
- Public confidence
- Public misinformed and media reporting scarring techniques.
- Public perception of farming practices and pressure to change same.
- Quality of food.
- Retailers and processors are implementing HACCP so that makes us a part of the solution. General comment: As farmers, if we are doing all the quality safety environmental regulations, then we should not allow any food products into this country without the same standards.
- Revenue to Govn. Retailers can buy south.
- Safe food and safe environment. Consumers want cheap food and will get it from retailers no matter where it comes from. food from other countries is believed to be safe

but not always this is true.

- Safe water supplies for the public.
 - Safety
 - Safety Accountability
 - Safety and water and air quality.
 - Safety of the land and environment.
 - Safety, to preserve environment /waters
 - So Government can look like it's doing something and retailers can use them as selling points, largely at the expense of the producer.
 - So government inspectors can justify their jobs.
 - So that the public has the comfort of knowing the environment is being taken care of appropriately.
 - So the consumer feels we are doing the best job we can for them.
 - Societal worries about food safety, and environmental lobbies, and a better educated population who are less aware of the food production costs for small farmers
 - Society is interested in it's health/safety.
 - Some farms have just got so large
 - Some one has to take the blame. There are a lot less farmers than there are malfunctioning septic systems.
 - Some think farmers are responsible for many environmental problems
 - Special interest groups who refuse to accept the reality that if they want to eat, it is necessary to use resources.
 - Standards upgrade.
 - Starts at primary production level.
 - Supposedly to protect our nations citizens.
 - The base for all food products comes from farms - to produce safe and healthy products in a safe & health environment is necessary for us all.
 - The environment and our planet!
 - The family farm is becoming a thing of the past. More ominous is being placed on the farmers to comply to anything the government implements based on formulas they see fit to apply. The ones that can comply are more likely to be operations that are larger and can invest more capital to meet requirements. The small operations that are just surviving will have the tendency to sell out or retire.
 - The media hype. Public opinion in urban areas and government empire building growing the nanny state.
 - The process will be so burdensome that smaller and even larger producers can't comply, making it easier for larger retailers and wholesalers to by-pass us in favour of cheaper products and one stop centralized buying. Also to shift total liability for anything going wrong to the primary producer.
 - The visibility and unproven science that is in the media daily.
 - These conditions will benefit everyone.
 - They are at the front line in producing the products
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- They are at the point where theory and practice meet.
 - They are large land owners who are visible. They are easy to target.
 - They are the first in line of food production
 - They are the primary producers - it has to start there.
 - They produce the products.
 - They think that we are the only ones who do things wrong.
 - This is the new reality of farming as determined by all of the above.
 - To address current problems
 - To assist in environmental protection and enhancement
 - To avoid environmental.
 - To be better stewards of the land. New information leads to new ways of caring for the land.
 - To be good stewards of the land.
 - To be more aware of environmental issues on a global scale.
 - To benefit the environment and to reduce criticism by the environmentalists and force polluters to clean up.
 - To better our products.
 - To conform to environmental concerns and consumer safety.
 - To create areas where government can make themselves indispensable ie paper shuffle.
 - To entice them to give up farming
 - To guarantee quality products and quality methods of production to the consumer.
 - To help keep our environment clean. To produce safe produce. To generally keep all things in ----- for food production and for our safe clean environment.
 - To help protect the environment
 - To help protect the environment and ourselves the farmers.
 - To help protect the environment and the water supply.
 - To help the environmental and to improve food safety.
 - TO HELP WATER AND SOIL QUALITY. ALSO URBAN RESIDENTS, WHO NOW RESIDE IN RURAL AREAS, AND OBJECT TO RURAL ODOURS AND SIGHTS.
 - To improve environment
 - To improve food safety.
 - To improve their product
 - To keep customers (i.e. voters) happy. Some conditions are good - some have no bearing in reality.
 - To keep environment clean, and make the world a better place to live.
 - To keep our water systems clean and viable and also to keep our environment from degrading further
 - To keep system viable. Response to consumer & resident demand on government. Urban sprawl.
 - To keep the cheap food for the consumers
 - To keep the consumers happy Protection -
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- To keep the environment from deteriorating further for future generations.
 - To keep up with other provinces, for the future good of our land and air and to create jobs in the environmental sector.
 - To limit the risk of future environmental damage.
 - To maintain a high standard and safe food supply. to save any more harm to the environment.
 - To maintain NS & Canada for the next generation
 - To maintain our environment.
 - To make certain we don't pollute a negative affect on the environment.
 - To make improvements
 - To make sure our food is safe and to make sure we're not hurting the environment.
 - To make things safe.
 - To minimize environmental impact of intensive farming.
 - To please Mr and Mrs Consumer who would buy from USA if price was lower regardless of quality of goods.
 - To protect against an environmental disaster.
 - To protect other value chain partners from consumer complaints.
 - To protect the environment, improve the land base, etc.
 - To provide clean, healthy food for consumers and to protect the environment (a farmers livelihood)
 - To reduce manure run-off.
 - To reduce the liabilities of those further up the value chain.
 - To respond to media hysteria
 - To satisfied do-gooders
 - To show society that government is concerned about environmental issues. It is a 'hot' topic.
 - To transfer costs and liability from other value chain 'partners' to the primary producer.
 - To try to correct some misuse (decades) of the land, waterways, etc. misuse of chemicals, erosion, etc
 - To try to stop polluting water ways, rivers, ground waters. By overproduction on land.
 - Urban residents control 1 acre if they are lucky. Farmers control hundred of times that much (they have to eat what we grow!)
 - Urban residents moving into rural areas demanding changes to farm practises.
 - Usability of government.
 - Used as consumer promotion by retailers
 - Using land to produce food. easier people to push it onto! Changes to the agriculture industry had to come even from the farmers.
 - Visible minority that deal with and use products that the general public are concerned about i.e., manure use, pesticides, herbicides, etc.
 - Water safety issues, urban residents, who retire to rural areas and offshore summer home owners.
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- We're becoming a minority population too far removed from agriculture ie heritage farms too close to town/cities.
- We are an easy target, but regulations must be put in place so all are complying.
- We are easy targets! 1% of the pop.
- We are having an impact on the environment. Therefore we all need to help.
- We are responsible for sustainability as stewards of the land.
- we are the ones with direct access to processes
- We are the primary producer and very visible.
- We have no other choice. They will drive us out I spend more time with paperwork than farming.
- We need to be accountable for our effects on around us and the environment in general.
- We owe this to the next generation
- Yes, most are willing to but not at a financial loss to their business.
- Yes.

O. General Comments

59.	Do you have any additional comments on QUALITY, SAFETY or ENVIRONMENTAL regulations as they apply to farming in Nova Scotia?	<input type="checkbox"/> No <input type="checkbox"/> Yes, (please comment) _____ _____ _____
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Farmers provided general comments at the end of the survey. These are provided below.

- P/S forgot to mention local land use by-laws about livestock per acre and minimum distance from property line effectively prohibiting farming on traditional farmlands in Kingsburg/Riverport area, where lots are historically long and narrow.
- Keep up the good work.
- I think the costs of implementing these regulations should be covered by the gov't.
- Quality and food safety issues should stress importance of handling and preparation after leaving farm.
- As our farm has taken a down turn, we feel we can't answer all questions fairly.
- All farmers must comply. All farmers should benefit from funding programs.
- All regs come at a high cost to producers. No recovery from the marketplace.
- All regulations are doable when farmers have input into drafting the requirements.
- All regulations are reasonable if all people and countries in the world have to comply with the same. It becomes unfair when we have to comply and compete against product that has been imported from a location that does not comply.
- All these milk quality conditions have gone a bit too far.
- Because its beneficial to all society, farmers shouldn't have bare the whole cost
- Comment - There is one environmental issue which adds to production costs and is time consuming that is the pesticide certification program. While initially I think it was a good idea and well meaning, it has now turned into another example of gov't going too

far. I took the course, passed the test (\$100) then in 5 years wrote the test again (another \$50). Now the D of Environment is changing the rules and more tests, more money, - for what end? Enough is enough. How many times do I have to re-take the test - gov't waste and control at its worst.

- Consumers demand for goods that 'look' good come with a great price to their health.
- Consumers need to be made aware that farmers are doing a good job on food production.
- Cost farmers money. Most do not get paid for it.
- Cost should be shared with consumers & retailers.
- Cost will soon exceed the ability to administer the requirements and still stay in business. too much time devoted to record keeping and compliance and not enough devoted to actually producing a revenue generating commodity
- Costly.
- Costs for environmental projects way too high. You need to hire experts for everything. Ordinary persons not qualified.
- Do not over regulate
- Environmental Farm Plan is good. NMP is good Can't stand CQMP. It is not needed.
- Environmental regulations should be brought on slowly with great effort towards educating farmers of their value.
- Everyone must be treated alike.
- Farmers are not checked close enough.
- Farmers cannot foot the bill for quality, safety and environmental regulations and stay in business!
- Farmers have the responsibility of the food chain but can't get back increased costs. It's seen as a cost of doing business.
- Farmers should be compensated for new tagging system costs because it is a health matter for society.
- Farmers should not have to pay for all these changes when many do not have an adequate income.
- Farming is going to be gone in the next 10 yrs if something isn't done 'soon'.
- fees for Prov. Environmental assessments are too high.
- G&B Parker Farms LTD. no longer produces Crops or Livestock.
- Have always farmed for sustainability. - The most important questions about farming and the future of farming are not being asked - Ex: Do you believe you are being paid a fair price for your product in light of annual increasing costs of production? Are your returns increasing or on par with costs of production increases? Although these two questions seem redundant - so do most of these in this survey!
- Have someone in Government calibrate sprayers and other farm equipment.
- Hedge rows and wetlands must be protected better than at present.
- I am closing my business for age and health reasons and I do not have any interest in participating.
- I am totally against the farmer paying for updating regulations without the farmer getting increases for costs.

- I believe the regulations are necessary and should continue to push farmers to become more aware & responsible for their business actions.
- I do not know of the Quality, Safety or Environmental regulations that apply to NS farming.
- I have been ahead of most of these regulations for 35 years.
- I HAVE NOTICED THAT INDIVIDUAL FARMERS ARE PROSECUTED MORE OFTEN THAN TOWNS, VILLAGES, ETC. IN ENVIRONMENTAL OFFENSES.
- I hope non Canadian producers will be held to the same standards
- I think it is important to help fund compliance in ways that do not disadvantage very small farmers like myself. I am trying to expand my business so that I can change from a professional career into farming, but I am hindered by limited time and money to be aware and to be able to capitalize changes at my scale. I think that the current system supports and privileges agra businesses and corporations such as Agrapoint more than small farmers.
- I think that for the most part, farmers do a good job of protecting the environment. We have to; we need it healthy to survive. Most of the regs appear to be pandering to society, and society (gov't) should play (pay) a bigger role.
- I think there is too many regulations made without enough research done.
- I think they are a good idea, if implemented carefully with farmer consultation.
- If (and I believe so) these changes will help the general public -- then the general public needs to pay for it, not the farmers at a loss
- Improvement is long overdue in these areas. The government seems to have overlooked the clear cutting issue. I feel it is a bigger threat than farming.
- In general we can't pass these costs on, therefore they serve only to erode our operating margins in the short term.
- It has been my experience that farmers generally take better care of the environment than the rest of the population. We rely on the environment for our lively hood. We are not going to go do things that harm our fields and livestock as that will cause us problems. People need to understand we can't afford to abuse the environment because this is how we make a living. I look at the litter on the roads and it soon shows who is looking after the world, and who is not.
- It is a big pain and causes a lot of conflicts. The land base for farming is cut in half?
- It is good but it is putting farmers out of business much to quick.
- It needs to be reasonable, and for the right reasons, because we have such a huge influence on the environment we must be proactive
- Lots of farmers are quitting farming! no money in it! I bet that more farmers may commit suicide this year than will die in farm accidents. A much different social impact will be soon more apparent as fewer and fewer farms will be profitable, soil poorer and poorer farmers getting older and their sons & daughters not taking over. Wild weather, threatening pandemics, too many academics, too few workers! Co-Op closures feed mill, slaughter house closures. Process plant closure. ETC. Fuel transport cost increases, electricity cost increase, property taxes on and on it goes.

- More paperwork, more cost, for SAME product but consumer (or retailers) will not pay for the costs.
- Most farmers have or use good farming practices. we should be more focused on reducing or eliminating our use of fuel!!!
- Need more gov't funding as costs can't be recovered through milk sales at the farm level.
- Never contacted on environmental regulations
- No problem with them, sure there should be greater government support and food chain transparency and a level playing field with international competitors. But this survey makes it seem like the regulations are the problem. Good environmental stewardship makes good business sense.
- No return on investment.
- Not enough advice given farmers to farm in a more environmentally sensitive fashion.
- Nova Scotians (Canadians) must compensate farmers for the extra costs incurred to perpetuate the cheap food policy in Canada!!!
- One of the issues with obtaining compliance within the farm community is the feeling that we have been doing this for years so why change. People don't realize that farm size has gone up drastically, farm practices i.e. solid vs. liquid manure handling and employee rights have improved over the last few years.
- Organo-phosphates, GMO's, terminal seeds, industrial farms should all be much more closely regulated.
- Organic farming pays more!
- People need to use a common sense approach.
- Proper price for quality goods
- Regarding the quality regulations, I am not sure the people (farmers) paying for the programs are getting their fair share of the benefits.
- Regulations are great, but we have to be able to receive compensation. The farmer cannot afford to carry everything that needs to be done by himself. The consumer has to pay - one way or another.
- Regulations are necessary but should contain common sense. Government - Some are needed, some are over the top. Sometimes it seems like a way to justify increase is \$ going to gov't too much change to fast. Sometimes there is not enough money and time to do it all.
- Retailers are the primary beneficiary of farm production...they pay little to assist the farmer.
- Seems being a conscientious farmer is not enough to placate neighbours. People are moving closer to farms. Building their houses in the middle of farms and are of a sudden. They smell the manure and it comes as a great surprise. If you don't like the smell of a farm then why would you build nest to one. I speak from experience as I was the 1st farm to defend itself in a farm revue.
- Should be more financial assistance.
- Should not be downloaded to the farmer.
- Society and govts are expecting more from farmers while both are reluctant to assist

farmers.

- Society in general should be paying for these costs as these benefits are for society.
 - Some are good and some are not.
 - Some of it is just good common sense. Most farms already operate in an environmentally friendly way, its the over and above costs we need help with.
 - Some regulations may not be the right ones if pushed by the wrong person.
 - someone else needs to pay for societal benefits
 - Stay this way or get even better.
 - Streams, river, lakes, wetlands, water bodies need far greater protection from all activities. Farming, forestry developers, etc.
 - The biggest safety issue in NS is adequate supply during transportation interruptions.
 - The crops vary due to climate - our winters and amount of rain and when two crops have been terrible - one not even feasible to pitch due to dry summer. Last year a very poor year as well. Small growers cant get help to irrigate like many people and people who have hundreds of acres can. We have most of our work done by contractor who has been certified. My husband does the rest of the work so my input is not good sorry!
 - The environment is not new. Farmers have always been stewards of the environment but they have not been paid/compensated for these activities. Food Safety programs make sense for all involved. Need new markets and Tax credits, water shed management (total)
 - The Federation should study emerging Agro forestry technologies: www.unl.edu/nac (Univ. of Nebraska national agro forestry center)
 - The major impact these area have had on farmers is that those who do not comply will in the future no longer be in business
 - The same controls for all food products being imported.
 - The small food producers will incur more cost to meet the requirements but will not receive anymore money for their product. The middlemen and retailers will, however, keep their profit margins as per usual.
 - The use of bio-matter (HUMAN WASTE) on land to grow produce 'SHOULD NOT' be permitted! The health risks are too great. Do you want to eat a fruit or vegetable grown in soil fertilized with all the 'meds' that are flushed down the toilet, (that do not breakdown)? I do not!
 - There is an increased cost to maintaining records for quality assurance programs. There is some benefit to the farmer to be able to show due diligence on the production side to mitigate risk and / or identify problems before they become major issues. There are certain environmental issues that could become costly if they were implemented – i.e. a ban on burning brush/ root piles when clearing land.
 - There should be a place to live (housing) and a place to farm. We should all have good practices for farming and living. Note* Being strictly a hog farmer, we have lots of problems with environment but I don't crop so most of my opinions are on animal quality and care so my participation would be very limited.
 - These costs should be societal, not individual.
-

- These regulations would not be a problem in an ordinary business because the extra costs can be passed on. The three commodities we grow, (apples, strawberries, beets) it's a take what you get.
- They are doing nothing about the non-inspected butcher shops.
- They keep getting stricter and we get less for our product. If something is not done about low prices at the farm gate there will be no beef or hay farmers left!
- This is a Organic Veg. Farm, NSOA has regulation, which I go by. So a lot of these questions do not apply to my farm.
- Too many consultants & surveys with their hand in the pot.
- Too many regulations.
- Too many rules and regulations and too much time spent on paperwork and conformity.
- Too much cost by farmer
- Very few people have looked at our soil maps/water ways before for thinking of farmers.
- We already have the safest and cheapest food in the world.
- We feel our farm has been meeting environmental regulations standards for the past 30 years.
- We need financial help. We cannot survive this way.
- We need to reduce our thinking about global markets, and start figuring out how we can feed ourselves locally as energy costs increase to the point where exiting infrastructure for food production and distribution becomes impractical.
- We need incentives for increasing the number of small scale mixed farms with lower energy requirements both on farm and externally (i.e. the huge energy requirements for manufacturing fertilizers and pesticides and the associated environmental degradation which inevitably results). It seems fairly obvious that the road to sustainability lies in the direction of more small farms, not fewer large ones.
- We owe this to the next generation
- We should be leaders and make regulations that are sensible and reasonable.
- Why do we have this extra regulations but foreign food is exempt from this compliance? The new dairy regulations are going to add considerable expense, bit capital and annual, with little or no benefit for me or to the consumer. Will not be cost recoverable nor help in putting a better product forward. Does the food from other countries have to meet the same requirements
- Why Farmers Why not everyone.
- Why not mandatory inspection for all, beef, pork, chicken same etc.

Enter Draw for \$100 Prize

60.	<p>Please provide your name and address to be entered into a draw for \$100. [You must provide contact information to be eligible for one of the three \$100 draws.]</p> <p>YOUR SURVEY RESULTS WILL BE KEPT CONFIDENTIAL.</p>	<p>Your Name: _____ # and Street: _____ P.O. Box: _____ Town/City: _____ _____ County: _____ Postal Code: _____ Phone Number: _____ _____ e-mail: _____</p>
61.	<p>We will be selecting a number of farm operations for case studies to support the overall research. If you are interested, please indicate if we may contact you. [Select 'yes' or 'no' only those who selected 'yes' may be contacted]</p> <p><i>Yes (36%)</i> <i>No (64%)</i></p>	<p><input type="checkbox"/> Yes, I am WILLING to participate in further research (please ensure that you have provided contact details above).</p> <p><input type="checkbox"/> No, I am NOT able to participate in further research at this time.</p>

End of Survey

Thank you for taking the time to complete this survey. Your responses will be pooled with other responses so that we can assess the impact of environmental, safety, and quality requirements on farm operations.

