

5 Participation in Selected Ontario Programs

5.1 Mapping Farming Patterns and Program Participation

5.1.1 Concentration of Farming and Viability

The maps and tables in this section were compiled to demonstrate the geographic variations in farming across Ontario and how these relate to patterns of participation in two major agri-environmental programs. These are the federally-funded EFP, which has universal reach throughout the province, and the Rural Water Quality Programs, largely funded by the province and municipalities and mainly delivered by some CAs. The CAs themselves receive funding from various sources, including the municipalities making up the watershed, the provincial Healthy Futures for Ontario Agriculture program and the federal Agriculture Environmental Stewardship Initiative (AESI). Some CAs also receive donations from corporate sponsors and philanthropic organizations.

There is a large number of other conservation/stewardship programs current in Ontario, both private and public, the latter originating from all levels of government. For example, Ontario Stewardship, an agency of the MNR, coordinates a series of local conservation programs. These do not provide individual landowners with grants, rather they provide funding and other resources to local groups for community projects. At least two provincial tax-incentive programs are in place: the Conservation Lands Tax Incentive Program (CLTIP) and the Managed Forest Tax Rebate/Incentive. Among private incentive programs is the LandCare program of Ducks Unlimited Canada.

The many conservation and agri-environmental programs share few similarities with each other, making a meaningful comparison of participation difficult even when information is available. For most agri-environmental programs, information could not be obtained within the time frame of this report. Therefore, the following discussion is restricted to the EFP and Rural Water Quality Program in selected watersheds.

There are more census farms than registered farmers in Ontario (see definition of census farm in Acronyms and Definitions). Figure 5.1a shows the number and general distribution of census farms across Ontario in 2001. Figure 5.1b is the same map, but includes the regional divisions used in this study.

Figure 5.1a: Census Farms, by Census Division, 2001

Figure 5.1b: Distribution of Census Farms

We see that the largest number of census farms is in the Southwest and South Regions, followed by the eastern part of the province. The fewest farms are found in the northern areas of the province and in some parts of the Shield Region. The influence of the heavily urbanized areas of the province on number of farms in adjacent census divisions is demonstrated in the South Region. The fewer farms in these areas is partly due to the well-known urban shadow effect.

Figure 5.2a shows the average size of census farms, in hectares. Again, this is repeated in Figure 5.2b, using the regional divisions. Here, we see that the largest farms are in the North Region, the northern and eastern parts of the Shield Region and all of the East Region, except the immediate area surrounding Ottawa, which also shows the influence of the nearby metropolitan area.

Regions of large farms are also where they are fewest in number. Exceptions are in the extreme western part of the Southwest Region and the areas of the South Region adjacent to Lake Huron. Here are found many farms, which are also large.

Figure 5.3a shows farmland as a percentage of total municipal area, repeated in Figure 5.3b for the regional divisions. We again see great variation across the province. There are three general zones where farmland forms more than 50 percent of municipal territory: the eastern part of the East Region, a band along Lake Ontario in the southern Shield Region and South Region, and the areas of the South Region and southwestern parts of the Southwest Region between Lake Huron and Georgian Bay. These areas of relatively homogeneous farming are interrupted by municipalities around the western end of Lake Ontario. These have less municipal territory in farmland because of the proximity of the cities; between 34 percent in Halton to 50 percent in Hamilton.

The municipalities which have more than 75 percent of their territory in farmland are all in the extreme southwest of the province; in the Southwest and South Regions. Among these, Perth and Chatham-Kent census divisions have 90 percent or more of their territory in farmland.

Figures 5.4a and 5.4b were compiled to show the variation in census farm viability across the province. Since current census data on net income were unavailable at the time of writing, we have created a “net return index” to describe viability for 2001. This is the difference between census farm gross receipts and farm business operating expenses, expressed as a decimal fraction. It includes income from farm subsidies. This index is similar

Figure 5.2a: Average Farm Size in Hectares; 2001

Figure 5.2b: Average Farm Size in Hectares, 2001

Figure 5.3a: Farmland as a Percentage of Total Area, 2001

Figure 5.3b: Farmland as a Percentage of Total Area, 2001

Figure 5.4a: Average Net Return Index for Census Farms, by Census Divisions, 2001

Figure 5.4b: Regional Average Net Return Index for Census Farms, by Census Divisions,
2001

Figure 5.5: Relation between Average Census Farm Size and Net Return Index for all Ontario Census Divisions; 2001

to the census statistic of “net income,” which uses a number of other parameters in addition to the two parameters used here. By expressing our net return index as a decimal fraction, it becomes possible to compare farm viability in different census divisions¹.

We see from Figures 5.4a and 5.4b that the net return index is highly variable across the province; ranging from -0.5 in Haliburton census division to 4.0 in Oxford. The areas of the province with the highest net return index are in the South and Southwest Regions as well as the East Region. Much of the Shield and North Regions have a net return index of less than 1, which indicates the precarious financial state of farming in these areas. This low viability also appears in the western part of the East Region and near Georgian Bay. In the three census divisions of Parry Sound, Muskoka and Haliburton, the net return index is less than 0, meaning that many census farms in those regions are operating at a loss. It is clear that many census farms in large parts of the province are barely breaking even, even with existing subsidies.

Figure 5.5 graphs the relationship between farm size and net return index. It shows an inverse relationship between farm size and net return index, yielding a Pearson product moment correlation coefficient, $r = -0.44$. In other words, there is a fairly strong tendency for larger farms to be less viable. This may be because the preponderance of large farms is in the north.

The maps clearly show that farming in Ontario is both concentrated and viable in the South and Southwest Regions, especially near the Great Lakes, with another area of concentration and viability in the East Region between the Ottawa and Saint Lawrence Rivers. Viability is low in the Shield Region and much of the North. These less viable areas are where support to farmers through agri-environmental programs could be used as a strategy for rural sustainability. This would require decision-makers to integrate agri-environmental payments into broader regional development policy, through direct environmental payments, for example.

5.2 Participation in EFP

The federally-funded EFP is one of the few voluntary agri-environmental incentive programs which is universally available to farmers throughout the province. This is likely

¹ With thanks to Alfons Weersink, for verifying our logic.

because of a federal commitment to distributive justice for all citizens. It also seems to be the only program which makes standardized reports publicly available, possibly in response to a policy of public transparency and accountability.

Participation in the EFP², from its inception in 1993 to the end of July, 2002, is mapped in Figure 5.6a and again by study region in Figure 5.6b. The participation rates are highly variable across the province, ranging from a high of 81.4 percent of farmers in Grenville (of Leeds-Grenville) to a low of 14 percent in Brant. Rates are particularly low in a band of municipalities just north of Lake Erie in the South Region, an area of intensive and concentrated farming. Low rates of participation also occur north of central Lake Ontario where farming is somewhat less concentrated than north of Lake Erie.

Simple comparison by inspection of Figures 5.6a and 5.6b with Figures 5.2, 5.3 and 5.4 suggests that many areas of the most concentrated and viable farming also show lower participation rates in the EFP. This inverse relationship appears to run contrary to the findings of the federal review of the EFP discussed in Section 4, which finds that the EFP is most successful among larger and fully-committed farmers.

Figure 5.7 graphs the relationship between net return index and participation rates in EFP. This yields a correlation coefficient, $r = -0.44$, an inverse relationship which verifies the visual impression given by the maps, that low participation rates occur in regions of high viability. By coincidence, the coefficient is the same as found in correlating farm size and viability shown in Figure 5.5.

5.2.1 Conclusions on Participation in EFP

Two points may be made about the spatial variables mapped here and the apparent relationship between participation in the EFP and farm viability. First, many census farms in a number of watersheds draining into the Great Lakes have not entered into the EFP program. These are also the areas of the highest percentage of municipal territory in farmland and which have the largest number of farms. These are areas where the local environment and the Great Lake eco-systems are most at risk from loss of habitat, loss of bio-diversity and non-point-source pollution deriving from agriculture. These areas should continue to be specifically targeted for environmental program funding by public agencies

² Participation in the EFP is defined by OSCIA, the delivery agency, as the number of workbooks distributed per total registered farm businesses.

Figure 5.6a: Participation in the EFP as of July 31, 2001

Figure 5.6b: Regional Participation in the EFP as of July 31, 2002

Figure 5.7: Relation between participation in EFP (%) and net Return Index for all Ontario Census Divisions, 2001

and where the use of environmental payments may be necessary to promote a desirable environmental outcome, rather than as a form of farm subsidy.

Secondly, in areas of the province where farming is less concentrated and where farm viability is lower, participation rates in the EFP have been relatively higher. This suggests that these are areas where farmers may have a heightened sense of environmental responsibility or that the financial grant offered, currently a one-time disbursement of \$1500 is, indeed, an important incentive to participation. Further, these are areas where the use of additional financial incentives may be effective in agricultural and/or rural sustainability.

We may conclude from this that the two major aims of agri-environmental payments described in Section 1; as a means of promoting an environmental outcome and as a form of financial assistance to farming, both have merit in Ontario, but with different emphasis in different regions. The two-fold purpose of environmental payments programs would seem to be valid points of departure for policy-making.

5.3 Participation Patterns in Rural Water Quality Programs

Several CAs provided information to this project on participation in the Rural Water Quality incentive programs current in their respective watersheds. It is, however, difficult to compare CAs because record keeping is not standardized. As well, some CAs are not involved in this particular program.

The regional differences in delivery of the Rural Water Quality program are in keeping with the local flexibility which has always been part of the mandate and traditions of the CAs. It is also a function of the cost-sharing nature of the provincial programs. There is a wide variation in grant-seeking activity by CAs and their success in obtaining funding. Most CAs active in the program draw funding from a number of programs or partnerships. Our key-informants attribute this to differences in human resources and the local population base which provides the funding to the CA through municipal taxes. Some CAs either do not have the expertise to write an effective application to the provincially-led program, lack delivery personnel, or must follow the lead of their municipalities, who may choose not to become involved or who may decide to administer the program themselves. It is paradoxical that CAs with a large population place the most potential stress on the environment, but which also have the financial means to address this environmental impact.

The CAs noted in Figure 5.8 submitted information which could be compared in

Figure 5.8: Recent program Uptake in Selected Ontario Watersheds

three of our study regions: East, South and Southwest Regions. Census data were added on watershed area, number of census farms, approximate watershed size, population density and urban and rural population. This allows us to list the ratios of projects per square kilometer, and relate this to population density so that meaningful comparisons can be made between CAs.

Figure 5.8 gives an indication of the reach of the Rural Water Quality programs. The data comprise a rough guide only, since new applications were being received and funded at the end of data collection for this report. As well, the boundaries of the CA watersheds are difficult to reconcile with the census farm data³.

Despite these problems, it is apparent that certain CAs have funded many more projects than others. The Maitland CA leads this group, followed by the Grand River and Ausable-Bayfield watersheds. The Grand River watershed is both the largest of this group, has the most census farms and has the largest rural population. The St. Clair, Nottawasaga, South Nation and Rideau watersheds were lagging the others at the time of writing. It is unfortunate that information from the Upper Thames CA was not supplied for this table. It is an environmentally important watershed, has many farmers, and is a very pro-active authority in agri-environmental programs.

We see from Figure 5.8 that funding is extremely variable throughout the province. Further, nowhere among these CAs is there as much as one project per square kilometer. The number of projects per 10,000 rural population varies between 1.0 in the Rideau Valley to a high of 174.4 in the Maitland Valley. Despite this variability, in many CAs, program funds are often completely allocated through voluntary uptake.

When we compare the number of census farmers and the number of projects granted in each CA, we see that a very large number of potentially-eligible farmers have not enrolled. In some CAs, such as the Grand River, a completed EFP is required to establish eligibility for access. Projects funded from the Healthy Futures for Ontario Agriculture generally require the completion of an EFP. In some watersheds, such as the Nation River, the CA tries to accommodate applicants through other funding sources which do not require completion of an EFP, such as AESI.

³ Tracey Ryan, of the Grand River Conservation reported to us that the precise number of farmers in the watershed is unknown.

Because funding tends to be fully allocated in some CAs, access is obviously closed to those who are late in the application process. There is some evidence from the focus groups conducted for this study that these limits cause some farmers to lose interest in programs altogether.

5.3.1 Conclusions on Participation in the Rural Water Quality Program

When compared with the high levels of uptake in conservation and environmental programs in Europe or the United States, the information given in Figure 5.8 is sobering. We must conclude that one of the largest barriers to participation is simply the lack of sufficient funding for full and free access to provincial programs. This may be due to the size of the original program budget, the inability of delivery agencies to successfully bid for a finite pool of money or eligibility constraints. In watersheds of low population, the low tax base means that CA resources may be very limited. The necessity for an EFP to be in place for access to funds deriving from the provincial Healthy Futures for Ontario Agriculture funding itself is a barrier to participation in the Rural Water Quality Program.

No information on monitoring or collection of baseline data in the watersheds was available at the time of writing. Nor is it known whether indicators are being employed by any agency as a proxy to collection of base-line data. Environmental progress may well occur through participants' demonstration effects on non-participants to voluntarily modify their practices. The guarantees of anonymity and confidentiality awarded to farmers mean that independent analysis and evaluation of programs will be difficult. In the absence of effective monitoring, wide experimental data, or other method of evaluation, it is difficult to make any objective statement about the outcome of the Rural Water Quality programs at this time.

Further, almost nothing is publicly available about farmers who already practice careful stewardship, conservation or best management practices. Similarly, we are completely at a loss about farmers who may not practice good stewardship and who may pose a risk to the environment. There is no requirement for public reporting of these details at the time of writing and no systematic and comprehensive monitoring by any private or public agency which reports regularly to the public. This information vacuum was corroborated in our interviews with many key-informants as well as our stakeholder meeting conducted as part of this research. The self-regulation discussed by Montpetit and Coleman (1999) is real and present.

Confidentiality issues were reported as an important barrier to participation in programs in the literature reviewed in Section 4. The issue is obviously very sensitive, but is also important to the assessment of the effectiveness of current programs. The demand for confidentiality in farm stewardship is well protected by practices in place in Ontario today. It may well be a legitimate privilege awarded to farmers. But considering the generally insufficient monitoring, this demand for confidentiality may just as legitimately be called into question by wider society demanding accountability and transparency about the environmental outcome of publicly-funded programs.

This impasse has no obvious solution at this time. Any positive environmental outcomes from the Rural Water Quality programs will be gradual and incremental and will be enmeshed in other public and private efforts at remediation. Change in farmers' behaviour and the resulting environmental outcome will, indeed, be "one farm at a time," to paraphrase from environmentalists, and reliant on intangible demonstration effects.

5.4 Participation Revealed at Four Ontario Farm Shows

The barriers to participation revealed in a survey conducted among 537 visitors to the CFFO booth at four farm shows in the late summer of 2001 were largely instrumental in launching the current inquiry. These shows were: the Hastings Farm Show, the Canadian Outdoor Farm Show at Woodstock, the International Ploughing Match/Rural Expo at Navan and the Temiskaming Farm Show at Earlton.

While the design of the survey was itself rigorous, no attempt was made to produce a representative sample of visitors. The farm show survey was delivered according to CFFO custom; being offered to all visitors to the organization's booth by different volunteers, including the author. Because of this, there is a large variation in numbers sampled at each farm show. It is unknown what proportion of visitors were members of the CFFO. The sample is rather more opportunistic than rigorously representative.

Because of the potential sampling biases introduced during the survey, parametric analysis is not appropriate and caution must be exercised in generalizing the findings to the province's entire farm community. Still, the sample is reasonably large, includes a broad selection of farmers from different parts of the province and retains some utility for analysis using non-parametric methods.

The survey was designed to discover farmers' participation in any past or current agri-environmental incentive program, their motivations for participating in them and the barriers to participation in them. The questions were composed after a literature review and theoretical conceptualization of the following possible barriers to participation:

- Lack of knowledge about available programs;
- Aversion to the concept of incentive programs;
- Respondent perceives him/herself to already be environmentally responsible;
- Aversion to conditions of eligibility or performance;
- High transaction costs, i.e. the time, money and energy to do the project or paperwork involved;
- Insufficient level of funding of incentives.

These conceptualizations were then translated into the following questions:

- 1) What experience have you had with voluntary incentive programs that pay, or help pay farmers for environmentally-friendly projects on farmland?
 - Never heard of them;
 - Heard of them, but have never participated;
 - Participated in the past, or am participating now.
- 2) What motivated you to take part in a voluntary incentive program, or if you have never taken part in one, what might motivate you? (multiple responses allowed)
 - A way to reduce expenses, earn extra income;
 - Persuasion by others to get involved;
 - A sense of environmental responsibility;
 - An opportunity for learning/training;
 - My personal convictions about stewardship;
 - Other reasons.
- 3) Why might you decide not to take part in a voluntary incentive program

- or in another one? (multiple responses allowed)

- Already have the best environmental stewardship possible;
- Don't like others involved in how I manage my land;
- Too much time/paperwork;
- All in all, it might not be worth it economically;
- Too many conditions might be attached;
- Other reasons.

4) Occupation

- Farming is my primary occupation;
- Farming is a secondary occupation;
- A farm related business is my primary occupation;
- Other occupation.

5. Questions relating to landholding (not used here)

6. Question relating to place of residence.

It is sometimes said that Secondary farmers, i.e. those who farm as a secondary occupation, are different in their environmental practices and outlook from Primary farmers, i.e. those who farm as a primary occupation. For example, the federal evaluation discussed in Section 4.2.1. found that “large and committed farmers” were more likely to participate in the EFP. As well, conventional wisdom holds that farmers in different parts of Ontario behave differently in regard to their environmental practices. The analysis here seeks evidence to support or refute these assumptions.

All non-farmers and non-residents of Ontario were omitted from the original data set, leaving a sample of 359 farmers. These were divided into the 267 (74.0%) who farmed as a Primary occupation and the 92 (26.0%) who farmed as a Secondary occupation. The sample was sorted by place of residence within the regions used in this study, giving 66 from the Southwest (18.4%), 132 from the South (36.8%), 80 from the Shield (22.3%), 62 from the East (17.3%) and 24 from the North Region (5.3%).

Three questions from the original survey were analyzed, concerning: 1) participation in programs, 2) motivations for participation and 3) barriers to participation. The non-parametric chi square test was used to reveal any statistically significant differences between

Primary and Secondary farmers or between the five regions, for all farmers. Chi square testing is a more reliable means of comparison than simple comparison of percentages. The test yields probability values which indicate whether there are significant differences between the observations. A p-value of .05 or less indicates that there is a statistically significant difference between the groups, which is reliable 95 times out of 100. A p-value of .95 or greater indicates that there is no statistically significant difference between the groups, again reliable 95 times out of 100. Any other p-values fall outside these confidence limits and no statistically significant differences between the groups of compared observations can be inferred. In a number of the regions, low numbers of responses and/or the large number of categories of response rendered the chi square test inappropriate. This is indicated in the tables.

5.4.1 Analysis

Figures 5.9a, 5.10a and 5.11a show the multiple responses respectively for: participation, motivation to participate and barriers to participation in any agri-environmental program. This is reported by Primary and Secondary farmers and for each region.

From Figure 5.9a, 32 of all 359 (8.9%) farmers surveyed were unaware of the existence of any agri-environmental programs, 152 (42.3%) had heard of them but had never participated in a program, and 170 (47.4%) had participated, or were participating in one.

For all regions, Primary farmers were significantly more active in programs than Secondary farmers; 53.9 percent compared to 28.3 percent. Some 39.0 percent of Primary farmers had heard of the programs but had never participated compared to 57.6 percent of Secondary farmers. Only 7.3 percent of Primary farmers had never heard of any program compared to 14.1 percent of Secondary farmers. The chi square test comparing participation between Primary and Secondary farmers yields a p-value of .00008, meaning that these differences are statistically significant. This bears out the findings of the federal EFP review; that “larger and more committed” farmers were more active in programs. We consider the finding that Primary farmers participate in programs more readily than Secondary farmers to be important.

Because of the small sample in some regions, the chi square test was inappropriate for direct comparison of participation of Primary and Secondary farmers in several regions.

Figure 5.9a: Participation in Programs (single response), by Primary and Secondary Farmers and by Region, 2001 Farm Shows

Figure 5.9a: Continued

Figure 5.9b: Participation in Programs; Comparison of each Region with the Rest, all Farmers, 2001 Farm Shows

Figure 5.10a: Motivations for Participation in Programs (multiple responses), by Primary
And Secondary Farmers and by Region, 2001 Farm Shows

Figure 5.10a: Continued

Figure 5.10b: Motivations for Participation in Programs; Comparison of Each Region with the Rest, all Farmers, 2001 Farm Shows

Figure 5.11a: Barriers to Participation in Programs (multiple responses), by Primary and Secondary Farmer and by Region; 2001 Farm Shows

Figure 5.11a: Continued

Figure 5.11b: Barriers to Participation in Programs; Comparing each Region with the Rest, all Farmers, 2001 Farm Shows

Regions where the test was valid included the South, East and North Regions (using Yates chi square in the North). The test statistics indicate that significant differences in levels of participation occurred in the South and the East Regions. We may not make the same claim for the North Region, however, which shows no significant differences.

To overcome the small sample size in some Regions and still render the test valid, all farmers for each region were compared with all other regions to reveal any statistically significant differences between them and shown in Figure 5.9b.

Here only the Shield Region shows with certainty that patterns of participation are the same as for the rest of the province. In all other regions, p-values indicate that the differences could have been due to chance alone and no statistically significant differences occur between any region and all the rest. We may conclude that there are no discernable differences in participation rates in environmental programs within the province, when all farmers who responded to the original CFFO survey are aggregated.

Figure 5.10a gives motivations for participation in programs through multiple responses to six categories. The categories of “other” and non-response were combined to reduce the degrees of freedom and allow an appropriate use of the test.

For all regions and all farmers, the most frequent motivation to participate was for environmental concern (34.0%), followed by financial reasons (23.7%), stewardship (21.1%), education (13.4%) and finally persuasion by others to get involved (4.0%). “Other or no response” made up 3.8 percent of responses.

The chi square test indicates significant differences in motivation between Primary and Secondary farmers. While both Primary and Secondary farmers selected environmental reasons most often (35.0% and 30.7% respectively), Secondary farmers chose financial reasons (29.4%) almost as often as environmental (30.7%). As well, Primary farmers chose stewardship more often than Secondary farmers (22.6% compared to 16.3%). Education was selected less often by farmers of both type but especially by Secondary farmers; 14.1 percent by Primary and 11.1% by Secondary farmers. Persuasion by others to get involved was chosen less often; 3.4 percent of responses by Primary farmers and 5.9 percent of responses by Secondary farmers. Other reasons or no response were reported least often; forming 3.0 percent of responses by Primary farmers, but 6.5 percent of responses by Secondary farmers.

The chi square test yields a p-value of .033 when comparing Primary and Secondary farmers across all responses for motivations to participate. Therefore the reported

differences in motivations between Primary and Secondary farmers for the whole province are statistically significant. That is, Secondary farmers are less motivated by either environmental or stewardship considerations than Primary farmers. Nor are they as motivated to participate for educational purposes. They are, however, more likely to be motivated to participate as a result of persuasion by others than Primary farmers.

We may consider the finding that Secondary farmers chose financial reasons as readily as environmental reasons for participation to be important. It appears that the financial incentives offered are critical factors determining participation among Secondary farmers.

Farmers are often recruited to programs through delivery or extension agents or during presentations at farm meetings. Other forms of promotion rely on a demonstration effect within the community. The fact that persuasion by others is the lowest listed reason to participate is another important finding of this survey. It suggests that recruitment methods that rely on persuasion may not be as successful as some other methods, but may have somewhat more effect on Secondary farmers than on Primary farmers.

The comparison of regions and motivations for participation given in Figure 5.10b show no significant variations across the province for all categories taken together. In other words, the results reported could have happened by chance alone.

Figure 5.11a gives the barriers to participation through multiple responses to six categories by Primary and Secondary farmer. Again the “other” and non-responses were grouped into one category in an attempt to decrease the degrees of freedom and allow for an appropriate chi square test. Nevertheless, in every region, the test was found to be inappropriate and so no valid statement can be made.

For all regions, the largest barrier to participation was conditions attached to programs, reported equally often between Primary (28.0%) and Secondary (28.8%) farmers. The next most-reported barrier was time or paperwork involved, reported in 26.1 percent of responses by Primary farmers and 25.2 percent of responses by Secondary farmers. This was followed by responses stating doubt of gains from participation in 13.6 percent of responses by Primary farmers but only in 9.9 percent of responses by Secondary farmers. The barrier of others being involved in decision-making was reported in only 8.2% of responses by Primary farmers and in 9.9 percent of responses by Secondary farmers. Farmers’ belief that they already had the best possible practices and had no need of programs was reported least;

in only 6.5 percent of responses by Primary farmers and 6.3 percent by Secondary farmers. This question on barriers produced the largest number of “other or no responses,” 17.6 percent of responses by Primary and 19.8 percent of responses by Secondary farmers.

In the comparison of barriers to participation between Primary and Secondary farmers, the p-value was .917, which indicates that there are no statistically significant differences between Primary and Secondary farmers’ responses at this level of confidence. If we relax our confidence levels to about 92 percent of the time, then we may accept that there are significant differences between Primary and Secondary farmers.

Figure 5.11b compares all farmers in each region with the rest of the province to search for any regional differences in barriers to participation. The chi square test finds no pair where either a statistically significant difference or similarity exists. This means that there is no systematic difference between regions in the pattern of barriers to participation. The fact that there is no apparent systematic regional difference in reasons for non-participation in programs is, nevertheless another important finding of this survey.

5.4.2 Conclusions on Participation from Four Farm Shows

The 2001 CFFO farm show survey reveals that there are important differences in behaviour between all Primary and Secondary farmers in regard to participation in environmental programs. There is some evidence that there are differences between regions in patterns of participation. Primary farmers tend to participate more readily than Secondary farmers. This is particularly so in the East and the South Regions.

A slight majority of all farmers surveyed either did not know about the programs or did not participate in them. By the same token, many more Secondary farmers had heard of the programs but had never participated than Primary farmers. In all regions except the North, there were farmers of both types who had never heard of the programs.

The most important motivation for participation for both types of farmer was for environmental concern. The second most important reason by Primary farmers was a sense of stewardship. For them, this was equal in magnitude to participation for financial reasons. The second most important motivation for Secondary farmers was more clearly for financial reasons, with stewardship being the third most important reason. Education was of lesser

importance as a motivation for both types. Persuasion by others to get involved was not an important motivation for either type, but especially for Primary farmers.

Although we may claim significant differences between Primary and Secondary farmers in participation and for motivation for the province as a whole, we may make no statement on differences in motivations between Primary and Secondary farmers within each of the five Regions. This is because the small sample size precluded use of significance testing.

The conditions attached to programs are the most important barriers to participation for both Primary and Secondary farmers. This is closely followed by time and paperwork involved, for both types. The third most important barrier is doubt about whether the programs are financially worthwhile. The fact of others being involved in decision-making was just as large a concern as financial benefit for Secondary farmers. This was not as important for Primary farmers, however, which supports key-informant and focus group evidence that larger farmers had the financial means to enter into programs. The belief that one was already a good environmental actor was not an important barrier for either group. Many refused to answer this question, however, which we interpret as reluctance to reveal other barriers.

As with motivation to participate, there are no statistically significant variations between the different regions in regard to barriers to participation discernable from this data set. This apparent lack of regional difference warrants further investigation. Clear differences in rates of participation in the EFP across the province are apparent in Figures 5.6a and 5.6b. Further, Figure 5.8 demonstrates that uptake in other programs is highly variable throughout the province.