

A SURVEY OF FARMER PERSPECTIVES ON THE PEI ALUS PROGRAM

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INTRODUCTION

- Growing public awareness of deteriorating environmental quality of agricultural land in PEI has led to an increased demand for environmental protection.
- Private landowners are in a position to adopt practices on their land which can help protect or enhance vital ecological processes. While these services provide benefits to the public as a whole, they are a direct cost to the producer.
- One option to enhance these services is to pay landowners for implementing best management practices (BMPs) that support environmental services. An increasingly popular payment program is the Alternative Land Use Services (ALUS) program.
- While a number of ALUS pilots have taken place over the past 10 years, the PEI government is the first to implement a province-wide ALUS program over the 2008-13 period.

OBJECTIVES

1. Understand who is and is not involved in the PEI ALUS program by analyzing demographics, farm type, etc.
2. Assess member satisfaction and understand what would increase member involvement.
3. Assess non-member attitudes toward the program, and understand what would encourage them to become involved.

BACKGROUND INFORMATION

- ALUS was developed by Manitoba's Keystone Agricultural Producers.



- A number of pilot projects have been implemented across Canada over the past 10 years.
- In 2007, a pilot project was implemented in two watersheds in PEI: the Souris and Founds River watersheds.
- The pilot was deemed a success and influenced the PEI government to adopt a province-wide, 5-year ALUS program in 2008.
- Six BMPs were included to help reduce soil erosion, improve water and wildlife habitat quality & reduce climate change impacts.

PEI ALUS practices and payments

| Practices | Payments |
|---|-----------------|
| Tree planting in buffer zones | \$185/ha/year |
| Expanding buffer zones | \$185/ha/year |
| Grassed headlands | \$185/ha/year |
| Retiring high-sloped land | \$100/ha/year |
| Soil conservation structures | \$250/ha/year |
| Maintaining livestock fences adjacent watercourses/wetlands | \$0.30/metre/yr |

- Enrollment in PEI ALUS has increased to 400 members.
- Adoption of all BMPs in the program have increased dramatically over the 2008-11 period, as have program expenditures.

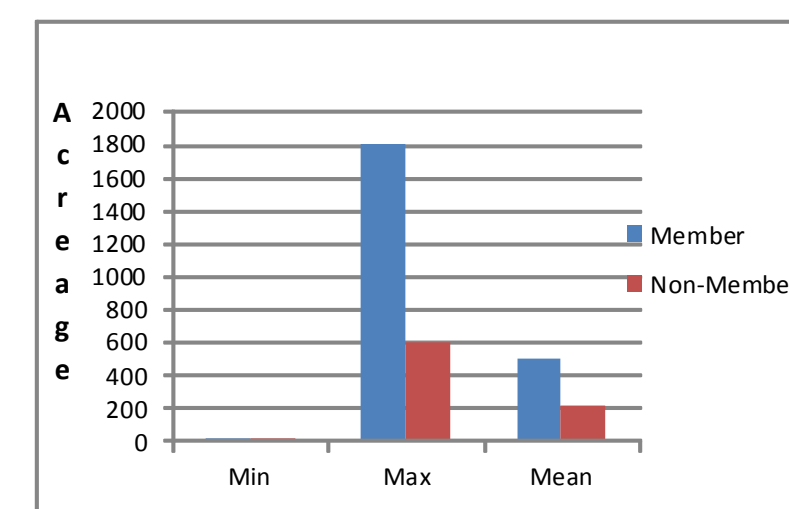
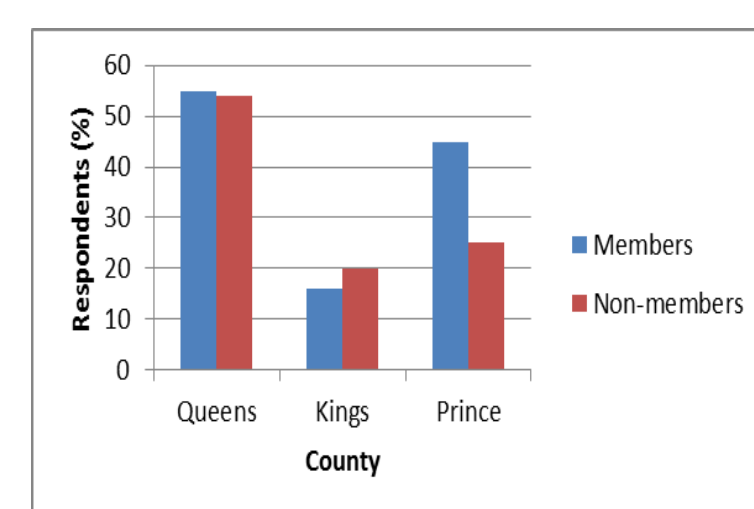
| Practices | ALUS Program Expenditures (\$) | | |
|----------------------------------|--------------------------------|----------------|----------------|
| | 2008-2009 | 2009-2010 | 2010-2011 |
| Tree planting | 5,236 | 19,906 | 41,070 |
| Expanding buffer zones | 10,915 | 32,431 | 88,430 |
| Grassed headlands | 1,314 | 50,524 | 83,435 |
| Retiring high-sloped land | 26,120 | 47,720 | 114,200 |
| Soil conservation structures | 13,875 | 121,213 | 189,250 |
| Maintaining livestock fences (m) | 0 | 31,286 | 63,019 |
| TOTAL | 57,459 | 303,079 | 579,404 |

METHODS

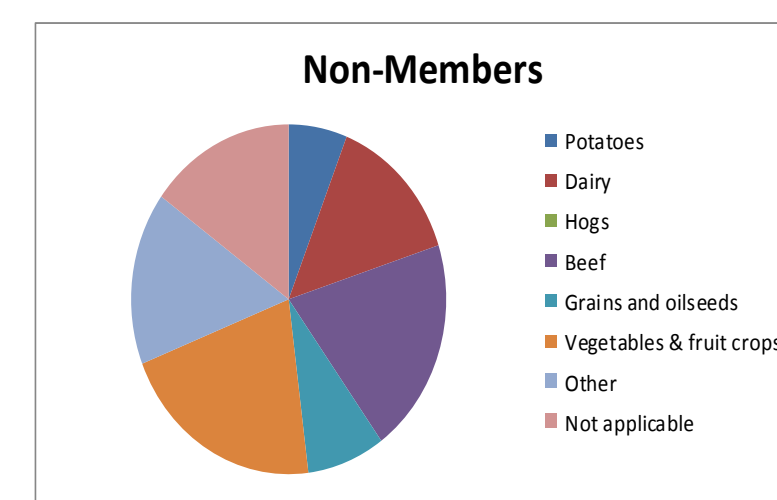
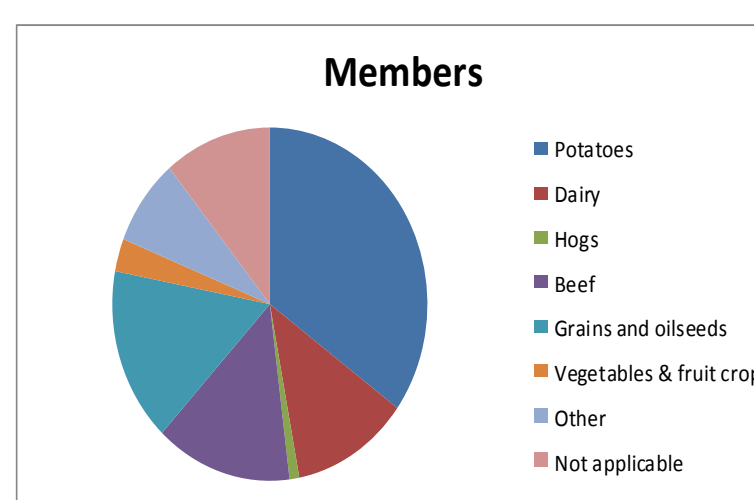
- Surveys were mailed to 400 ALUS members, and 400 randomly selected non-members.
- Addresses were obtained from the PEI Dept. of Agriculture & Forestry.
- Responses were analyzed using frequency distributions and Logistic regression analyses.

RESULTS

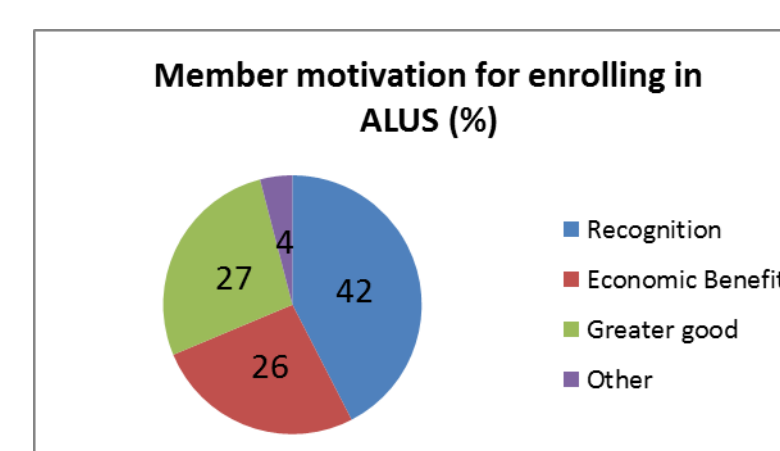
- Member & Non-member response rates were 51% & 31%.
- Ownership patterns did not vary geographically between Members & Non-members, however the former tended to own twice as much acreage as the latter.



- A relatively large proportion of members were potato farmers.



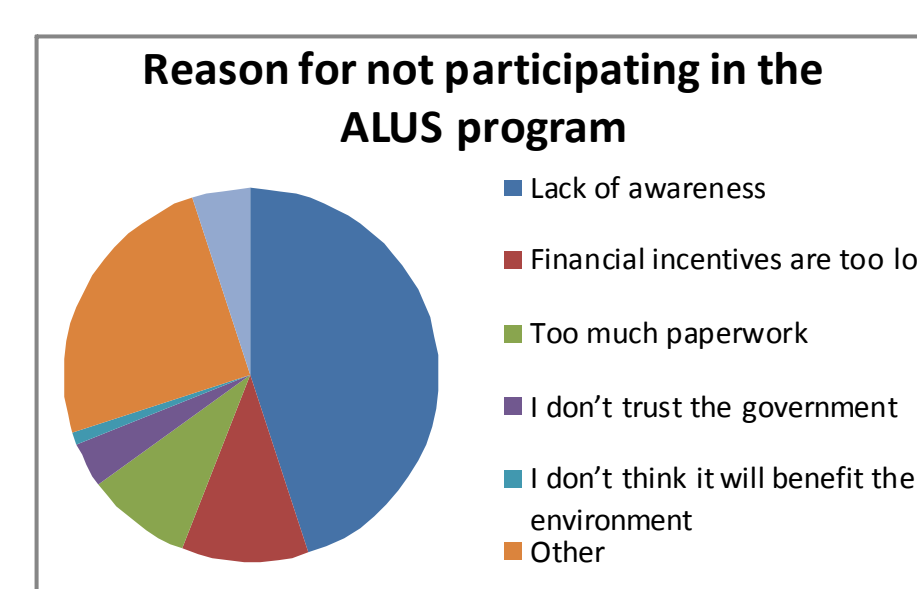
- The main reason for entering the ALUS program for most landowners was public recognition.



- A large majority (>90%) of Members were satisfied with the program and plan to renew their contract in 2013.

- Non-member adoption of BMPs remains low.

- Lack of awareness, paperwork, and low financial incentives tend to be contributing factors to lack of participation.



Landowner characteristics associated with ALUS membership:

| Explanatory Variables | Coefficient |
|---|-------------|
| Constant | 8.786 |
| Land Area Farmed | 0.002* |
| # Land Parcels: | |
| Purchased | 0.133 |
| Rented | -0.043 |
| County: | |
| Queen | 0.501 |
| Kings | -1.096* |
| Farm Type: | |
| Potato | 0.752 |
| Livestock | -0.671 |
| Grain/Oilseed | 1.060 |
| Veg/Fruit | -2.703* |
| Demographics: | |
| Male | -2.945* |
| Age 56+ | -0.465 |
| Grew up rural | 0.032 |
| Education | 0.284 |
| Income | 0.305* |
| Membership in associations: | |
| Environmental | 0.050 |
| Hunt/Fish | -0.525 |
| ATV/Snow | -0.196 |
| Farm | -0.208 |
| Forest | 0.402 |
| Agree with BMP reverse auction | 0.172 |
| Agree with higher payment rates for BMPs in sensitive areas | -1.390* |

*Represents confidence level > 90%

Landowner characteristics associated with adoption of BMPs covered under ALUS:

| Explanatory Variables | Tree Planting Buffers | Expanded Buffers | High Slope Land Retirement | Soil Conservation Structures | Headlands Fencing | |
|-----------------------|-----------------------|------------------|----------------------------|------------------------------|-------------------|---------|
| Constant | -1.305 | -4.235* | -4.147* | -4.297* | -2.794* | -3.42* |
| ALUS member | 1.028* | 1.608* | 2.564* | 1.402* | 0.718 | 0.991* |
| Land area | -0.0003 | -0.0002 | 0.0003 | 0.0002 | 0.0003 | -0.002* |
| Land obtained | 0.082 | 0.188 | 0.519* | 0.293* | 0.429* | 0.385* |
| County: | | | | | | |
| Queen | -0.070 | 0.164 | 1.030* | 0.132 | 0.082 | 0.372 |
| Kings | -0.161 | -0.200 | -0.316 | -0.358 | -0.043 | -0.372 |
| Farm Type: | | | | | | |
| Potato | -0.090 | 0.649 | 1.319* | 1.103* | 0.949* | -0.066 |
| Livestock | 0.610 | -0.221 | 0.562 | -0.635 | -0.223 | 2.498* |
| Grain/Oilseed | 1.257* | -0.109 | 0.737 | -0.682 | -0.315 | 1.384* |
| Veg/Fruit | 0.562 | -1.543* | -0.514 | -0.391 | -1.098 | -19.654 |
| Demographic: | | | | | | |
| Male | -1.581* | 0.543 | -1.151 | -0.374 | -0.575 | -0.867 |
| Age 56+ | 0.457 | -0.104 | -0.207 | -0.604 | -0.375 | -1.204* |
| Grew up rural | -0.654 | 0.394 | -0.971 | 1.129 | 0.210 | 0.980 |
| Education | 0.180 | 0.160 | 0.141 | -0.113 | -0.0291 | 0.179 |
| Income | 0.291* | 0.312* | 0.031 | 0.285* | 0.046 | -0.044 |
| Association | | | | | | |
| Environment | 1.149* | 0.847* | -0.248 | 0.658 | 0.985* | 0.916* |
| Membership: | | | | | | |
| Hunt/Fish | -0.355 | 0.259 | -0.208 | 1.002 | -0.162 | -0.804 |
| ATV/snow | 0.488 | 1.462* | 3.171* | -0.318 | 0.320 | 0.112 |
| Farm | 0.0165 | 0.172 | -0.327 | 0.560 | -0.025 | 0.649 |
| Landowner | -0.652* | 0.228 | 0.072 | -0.776* | 0.588 | -0.135 |
| Forestry | -0.386 | 0.096 | 0.388 | -0.666 | -0.172 | -2.501* |

*Represents confidence level > 90%

DISCUSSION

- Overall the ALUS program has been effective at increasing BMPs on agricultural land.
- While Members tended to be satisfied with the program, they indicated a number of issues that could be improved such as:
 1. Providing more opportunity for members to participate in discussions related to the program.
 2. Encouraging members to provide feedback about program.
 3. Ensuring members are aware of program updates.
 4. Providing a longer financial commitment to the program.
 5. Providing more personnel to monitor the program.
- Regarding Non-members, lack of awareness tends to be the main reason for non-participation. Program administrators may want to consider:
 1. Directing additional efforts towards providing non-members with information about the program.
 2. Increase financial incentives to attract non-members to the program.
- Addition considerations not assessed in detail in this report include:
 1. Assessing the effectiveness of the BMPs implemented in meeting program goals of improved water quality, wildlife habitat and soil erosion reduction.
 2. Examining the extent to which increasing financial payments in more environmentally sensitive areas could increase the cost-effectiveness of the program.
 3. Understanding the extent to which other incentives, such as technical assistance, public recognition, etc., could encourage participation in the program.



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