

Feasibility Assessment of Afforestation
for Carbon Sequestration (FAACS) Initiative:

Prairie Provinces Pilot

**Landowners' Perspectives on Incentive Mechanisms
for Afforestation**

Jointly Convened by:
Manitoba Forestry Association and Natural Resources Canada,
Canadian Forest Service

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This report was prepared by the author for the Manitoba Forestry Association, with the help and guidance of the Prairie Provinces FAACS planning team, which includes: Patricia Pohrebniuk, Sheldon McLeod and Marke Ambard. Derek Sidders, of the Canadian Forest Service (Northern Forestry Centre), provided technical assistance and conducted focus group presentations.

If you have any questions regarding this report, please contact:

Patricia Pohrebniuk
Program Administrator
Manitoba Forestry Association
900 Corydon Avenue
Winnipeg, Manitoba R3M 0Y4
(204) 453-3182
ppohrebniuk@mts.net

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Executive Summary

The Feasibility Assessment of Afforestation for Carbon Sequestration (FAACS) initiative is funded by the Canadian Forest Service (CFS) of Natural Resources Canada and is a part of the Climate Change Action Plan 2000 of the federal government. Led by the Canadian Forest Service, FAACS is a national policy that is designed to explore the potential of a large-scale afforestation effort as a means to contribute to a portion of Canada's commitment to the Kyoto Protocol.

The Manitoba Forestry Association, a non-profit education organization based in Winnipeg, Manitoba, established a collaborative research partnership in November of 2002 with the Canadian Forest Service (Northern Forestry Centre) in Edmonton, Alberta, to deliver a FAACS Pilot Project for the prairies. This prairie-centered pilot project is one of five across Canada under the federal FAACS initiative, each conducted and designed separately by various organizations, with the intent of assessing and testing a variety of regionally relevant mechanisms that might work as incentives for afforestation on private lands.

The Manitoba Forestry Association conducted a series of focus groups that sought to solicit input from landowners regarding the incentives required to entice landowners to an afforestation initiative. This report presents the findings and recommendations from these focus groups.

Summary of findings:

- Carbon credit trading system is ill-defined. More clarity is required to assess the acceptability of possible incentives.
- Landowners are not willing to assume all of the risks in an afforestation initiative.
- Should be no minimum commitment of land needed in order to qualify for federal incentives.
- Afforestation initiative should be partnered with incentives to encourage maintenance of existing forests.
- Polluters should be made to reduce their emissions.
- Environmental values should not take a back seat to policy and financial considerations.
- Need an in-depth economic analysis of afforestation as a business venture.
- Landowners should not be penalized for participating in afforestation, in terms of tax rates and property assessments.
- Landowners need an accessible and regional knowledge transfer system.
- A federal initiative should be flexible between and within regions.
- Landowners need financial incentives to make afforestation viable.
- Create a system that facilitates the building of partnerships between landowners and industry.

1 Introduction

The Feasibility Assessment of Afforestation for Carbon Sequestration (FAACS) initiative is funded by the Canadian Forest Service (CFS) of Natural Resources Canada and is a part of the Climate Change Action Plan 2000 of the federal government. Led by the Canadian Forest Service, FAACS is a national policy that is designed to explore the potential of a large-scale afforestation effort as a means to contribute to Canada's commitment to the Kyoto Protocol.

The primary focus of FAACS research is on private land and current work efforts include improving afforestation land assessment data and information, developing afforestation carbon accounting tools, assessing policy issues (potential program design, incentives, and afforestation co-benefits), and establishing a network of afforestation pilots involving different levels of government and interested environmental and non-governmental organizations and private sector partners.

The Manitoba Forestry Association, a non-profit education organization based in Winnipeg, Manitoba, established a collaborative research partnership in November of 2002 with the Canadian Forest Service (Northern Forestry Centre) in Edmonton, Alberta, to deliver a FAACS Pilot Project for the prairies. This prairie-centered pilot project is one of five across Canada under the federal FAACS initiative, each conducted and designed separately by various organizations, with the intent of assessing and testing a variety of regionally relevant mechanisms that might work as incentives for afforestation on private lands.

The FAACS Pilot Initiative #1 –03/04 seeks to develop, test and evaluate the design and mechanics of potential afforestation incentive options for private landowners. This project is an extension of the landowner focus group sessions (FAACS Pilot Initiative #2: Assessment of Landowner Attitudes) the Manitoba Forestry Association conducted in 2002/03. The overall objectives of the first focus group sessions held in 2002/03 were: 1) to determine landowner attitudes towards participating in an afforestation program for the purpose of carbon sequestration, and 2) to determine what characteristics the program should have to attract landowner interest.

The objectives of this current project is to report on the change in landowner opinions subject to the presentation of various incentive mechanisms, as landowner knowledge increases with an on-site tour of afforestation plantations. The intent of these second focus group sessions is to determine the incentive mechanisms most favourable to landowners interested in participating in afforestation, and to elicit landowners' views, opinions and concerns regarding afforestation, carbon credit trading systems, and any other issues they felt relevant. The purpose of this investigation is to provide the federal government with a practical set of incentive mechanisms for consideration, highlighting not only the opportunities but also the barriers and requirements on a regional level that will need to be addressed in order to attract private landowners to an afforestation initiative.

2 Afforestation

According to the Kyoto Protocol, afforestation is defined as the planting of trees on land that has not been forested for at least 50 years, through direct planting, seeding, and/or the intentional promotion of natural seed sources. Reforestation refers to the planting of trees on land that was once forested but as a result of human intervention became non-forested; reforestation may come as result of direct planting, seeding, and/or the intentional promotion of natural seed sources, but only lands that did not contain forest before January 1, 1990 will qualify as sites for reforestation. In Canada, the term afforestation is used to refer to both afforestation and reforestation as defined by the Kyoto Protocol.

3 Afforestation for Carbon Sequestration

Afforestation presents an opportunity for mitigating the effects of greenhouse gas emissions through the ability of trees to sequester carbon by photosynthesis. Afforestation has a history long preceding concerns over climate change, however. Many nations have initiated afforestation programs to maintain or improve a supply of trees for construction or firewood, and Canada and the United States have practiced afforestation for many decades as a means to foster wind breaks and for erosion control; for aesthetic and environmental reasons; and to maintain a steady supply of fiber (Gilsenan, 2003).

The federal government estimates that the use of afforestation will reduce Canada's greenhouse gas emissions by 65 megatonnes annually during the 2008-2012 commitment period; this would account for one-third of Canada's Kyoto objective.

4 Methods

This study is founded in a qualitative methodology that relies on the focus group as the primary interface for data collection. The research problem in this instance is: What incentives are required to attract private landowners into afforestation initiatives to sequester carbon, as a means to helping Canada meet its commitment to the Kyoto Protocol?

Several systematic steps were followed in the process of these focus group sessions, with the objective of fostering the best possible environment for data collection. The first of these steps was a systematic approach to presenting the subject—in this case the feasibility of afforestation for carbon sequestration—and allowing the participants to collect their personal thoughts, listen to the opinion of others, and to become updated on the technical aspects of the project being proposed. This follows a standard protocol endorsed by other focus group researchers (Morgan and Krueger, 1998). Once this

introductory period had allowed the group to calibrate to the task at hand, the facilitator then presented to the group the key questions that guide this research. Each focus group was recorded for greater precision in recreating notes from the focus group session, and as a means of continued analysis following the initial data collection event. A third step of this analysis involved the coding of responses into thematic categories. The coding of relevant themes raised by participants becomes the starting point for sorting, investigating and communicating the results of this project.

The verification of themes was facilitated during each focus group session, with the help of the facilitator, by the request of the researcher. In order to ensure that what participants were intending was being adequately communicated to the researcher, the facilitator provided numerous opportunities for repeated clarification or reiteration by focus group members. Each of the three focus groups was run identically to the others. To begin, the participants were asked to explain their primary interest or reason for attending the session. This often elicited the participant's overriding rationale for attendance and made subsequent comments and concerns raised by participants easier to contextualize and interpret.

Throughout the focus group session, each participant was encouraged to contribute their response to a number of different incentive options and packages that were designed with the intent of eliciting their participation in a proposed afforestation initiative. After presenting each incentive package and soliciting participants' responses and concerns, there followed an opportunity for participants to present incentives or packages that they felt were missing from the facilitator's presentation. This allowed for further guided input by the participants. In order to increase interaction and deliberation at this point, the participants were broken off into smaller groups to discuss what they would like to see added to the list of incentives and packages. Participants were left to deliberate and interact for approximately 15 minutes and then the focus group session was resumed for the presentation of each group's list. Following this input mechanism the facilitator again went around the table for final comments from each participant. This final wrap-up was intended to provide participants the opportunity to state something that they felt had not been properly addressed during the session, or to reiterate a point that they felt was important enough to bear repeating. All of these components of the session were tools that were incorporated into the focus group format for verifying participants' responses. This repeated soliciting of participants' responses, facilitated in different situations and through different approaches, was meant to aid analysis and improve communication. The analysis of these findings was guided by the research questions and objectives.

5 Participation Selection

The participants for this round of focus groups were drawn from the pool of participants that had participated in the first round of focus groups in 2002/03. These participants were re-invited because they had an understanding of the federal government's current obligations to Kyoto and the role afforestation could play in meeting these obligations (due to the knowledge they gained at the first focus group sessions); as well, they were

re-invited as a means to updating these participants to the progress taking place with the federal government's afforestation initiative. The first focus group sessions conducted in 2002/03 focused on the question: how would landowners with little to no knowledge of afforestation react to an afforestation initiative? This current project is guided by the research question: what incentives would be required for a fully informed landowner to participate in an afforestation initiative? The FAACS planning group agreed that inviting participants who had attended the first round of focus groups to the second (current) round of focus groups would make for easier comparison between the two groups (i.e., those with little knowledge of afforestation and those with more knowledge).

In the initial round of focus groups held in 2002/03, seven focus groups were held throughout the prairie provinces: three were held in Manitoba, two in Saskatchewan, and two in Alberta. Generally, each focus group site was the most central location for participants that had to travel from up to two or three hours away. Three sites were selected for Manitoba mainly for logistical and familiarity reasons. In Saskatchewan and Alberta, organizers relied more on agricultural representatives and government extension officers as initial points of contact to develop participant lists.

The participants were selected on the basis of their geographic proximity to the selected sites and their diversity in terms of farm size, farming type, interest in afforestation, and previous personal experience with forestry-related issues. There were also participants who were not landowners, such as technical experts in afforestation, woodlot management, local municipal officials, local agrologists, and local agricultural representatives. Typically a maximum of two or three non-landowner participants of these types would be at any one focus group with ten local landowners on average. The two Alberta focus groups also included some industry representatives as the non-landowner participants. These representatives came from Alberta Pacific and Daishowa-Marubeni International Ltd., in Athabasca and Peace River, respectively. These participants were selected through purposive sampling and through the use of existing Manitoba Forestry Association contacts. Agricultural representatives in Manitoba and Saskatchewan were able to provide lists of eligible contacts in order to get the necessary cross-section of farm types, interests, and experience with afforestation. In Alberta, a woodlot management specialist was able to provide similar lists for the Athabasca and Peace River regions.

For the more recent round of focus groups, which occurred in February of 2004, the participants who attended the earlier focus groups were contacted once again. These participants were informed that the project they helped to inform with their earlier participation had evolved and had reached its next planning phase. The participants were invited to attend one of three workshops that would be held in the prairie provinces. The difference between the 2004 focus groups and the 2003 focus groups was the overall purpose of the sessions. Whereas the 2003 groups discussed afforestation in general terms, the 2004 round of focus groups focused on landowners' responses to specific incentive mechanisms, and sought direct feedback on what landowners felt would be necessary in order for them to pursue afforestation on their land.

Because of the purposeful sampling method and the relatively homogeneous nature of the participants, results from the focus groups should not be used to generalize to the larger population of private landowners. Participants were selected based partially on their experience with afforestation or their interest in becoming involved in afforestation. Landowners who might be skeptical of an afforestation program were excluded from this portion of the study.

Participants received a small honorarium for their participation and some of their travel expenses were covered.

6 Focus Group Process

The focus group began with the facilitator introducing the day's agenda as well as the guiding topic of incentive mechanisms and attracting the interest of present landowners. The goals of the focus group session were stated, and all of the members of the FAACS planning group present were introduced. The facilitator also went around the table asking each participant to introduce her or himself, and to briefly state her/his reason for attending, and what she/he hoped to get out of the focus group session.

Following the introductions, a presentation was given by a member of the FAACS planning group that detailed what FAACS was; why it had been instigated; and how it related to other federal programs or initiatives already underway, or soon to be underway. This presentation served as a refresher for the participants regarding the basics of afforestation, and it also provided more in-depth information concerning afforestation than would have been presented to them at the first focus group they participated in. This presentation also introduced a matrix of incentive mechanisms that would serve as the focal point for the afternoon's discussions (see Appendix 1). The presentation quickly introduced each incentive package and discussed what each meant and how they differed. It was made clear that this incentive matrix would be the basis for the afternoon's discussion, and so would be deliberated much more closely at that time; but, it was introduced early in the day so that participants could keep the incentives in mind as they were on the guided bus tour to visit working afforestation sites. The rationale for presenting these incentives early in the day was that more time for internal deliberation would make for greater group deliberation later in the day. This introductory presentation would typically begin around 9 am and last until 10 am.

Following this presentation, the group would adjourn to the bus for a tour of working afforestation demonstration plots. The purpose of this tour was to provide landowners with an intensive, on the ground look at the requirements for afforestation; to create a meaningful environment for discussion of some of the obstacles and considerations for getting a plantation initiated; and, to give participants a visual impression of what a plantation would look like at different ages of growth. The bus tour was approximately 4 hours, lasting from 10:15 am – 2:15 pm. Lunch was eaten on the bus.

Upon returning to the initial focus group location, the facilitator would lead participants in a discussion focusing on the core issues at hand. This portion of the day was referred to as the “focus group” proper since it dealt with the key issue and provided time for discussion and interaction; all that had preceded the “focus group” to this point had been introductory and informational in nature. The focus group would begin with the facilitator walking the participants through each incentive package and asking for participants’ perceptions of strengths and weaknesses with each package. This was also an opportunity for the fielding of any questions held by participants. Following this case by case treatment of the incentive packages, the facilitator would ask the participants to break off into smaller groups to discuss what they would like to see in terms of incentives or a package of incentives that had not yet been discussed.

This change provided for a break from the more structured focus group setting and allowed participants to interact on a more intimate level, sharing impressions and concerns regarding the incentives that had been presented to them. This was an opportunity for deliberation on a more personal scale, providing participants with a less intimidating environment for hearing what others were thinking, for asking questions of one another, and for brainstorming ideas that could improve the incentive packages that had already been presented to them. After this deliberation the whole group was gathered and each group presented their comments; other groups were encouraged to ask questions of each group’s perspectives and ideas. This format not only made for improved deliberation among the participants, but it also aided the researcher in understanding the meanings behind participants’ responses and concerns.

The focus group was concluded with a round table format where each participant was encouraged to present some closing remark. Participants were encouraged to either state a concern or issue that they felt had not been addressed in the day but that they felt was important, or to reiterate some point that they felt was important enough to warrant repetition. This final comment period acted as a further form of verification for the researcher because it highlighted, through reiteration, salient themes that had emerged in the day, often in a slightly different way, thereby allowing the researcher to verify some of his already recorded notes and impressions from the day.

7 Data Analysis

A thematic approach to data analysis was utilized for the purposes of this project. The raw data included the researcher’s notes from the three focus groups, augmented by the facilitator’s notes—which were written on a flip board visible to all the participants and which were largely constructed with the input and approval of the participants themselves—and the audio recording of the focus groups. The latter were revisited on multiple occasions to ensure that no issues, comments or concerns relevant to the research question were missing from either of the other sources of data.

The researcher accessed all these sources of data—field notes, flip chart notes, and audio recordings—for data analysis. The transcripts were read multiple times, and based on an

evolving set of codes, key themes were identified from the focus groups. From these codes and themes, a set of analytic memos was created to compare themes between the three different focus group sessions. The analysis is drawn from this interface between the codes, themes and comparative memos (Charmaz, 1995 as cited in Altschuler et al., 2004).

8 Findings

The objective of the focus group sessions was to identify the incentives that would encourage landowners to participate in an afforestation initiative on their land. The FAACS planning group for the prairie provinces presented participants with a series of scenarios representing possible incentive mechanisms, and sought landowners' criticisms, opinions and comments.

This section highlights the 12 major themes of discussion that emerged from the three focus groups (see Table 1). These 12 categories represent the topics most discussed by participants in response to the incentive packages presented to them by the FAACS planning group. This section will explore each of these major theme areas and attempt to clarify their meanings. Subsequent sections of this paper will provide more detailed responses to each incentive presentation.

8.1 Carbon Credits

As mentioned throughout this paper, carbon credits remain the area of greatest uncertainty for landowners. While there were many landowners who expressed an interest in carbon credits, assuming that a fair trading system were to be put in place, it was nearly unanimously agreed that carbon credits at present are too uncertain to be a meaningful incentive to landowners. Landowners were unclear as to how value for carbon credits would be exchanged: would they be paid yearly throughout the lifespan of an afforestation project, or only in one payment at the mature stage of the plantation? Landowners were also concerned that the government and industry are in negotiations to set a price that carbon credits would be traded at, and one landowner stated that the current price being negotiated is \$15/ton of carbon credits. The participants in these focus groups were skeptical of such negotiations, arguing that in a free market system landowners should be paid what the carbon credits are truly worth to the polluters. The landowners recommended that a minimum base price should be set, below which trading of carbon credits will not go, but above which trading could occur should the market dictate.

There were landowners whose primary concern with carbon credits had less to do with the particulars and more to do with the idea in general. Some of these simply found the entire topic to be confusing, and were uncertain as to what it meant, how it would work, and where this trading would occur. For these landowners, carbon credits were a foreign concept and not easily understood. One landowner raised a concern that trading carbon

credits has managed to monetize air; this was something he was not sure was a good thing.

8.2 Risk

Risk was a major topic of concern and discussion, in each focus group. The landowners repeatedly communicated that undertaking an afforestation venture on their land base would put them at considerable risk, and for an uncertain return. Further, the return on their investment would not be realized until approximately 20 years in the future, without much short term gains; this is something that is not only undesirable, but that may make the whole venture untenable to many landowners. With the establishment and maintenance costs being as high as they are, and the time and management required intensive, landowners felt that they would likely not be able to commit to such a project without some sort of short term pay off.

The majority of discussion around the topic of risk had to do with the risk of crop failure. Trees are currently not an insurable crop in any of the prairie provinces, thus leaving landowners to shoulder the loss should their plantation fail due to pests, fire or some other natural disturbance. Landowners strongly advised that, without crop insurance, afforestation would not be a practical business venture.

The point was made that the federal government is turning to the private landowner to help Canada meet its commitment to the Kyoto Protocol, but that landowners are asked to bear all of the risks, while the federal government, and the country as a whole, receives the benefit from their labour. Landowners stated that in order for them to commit to an afforestation project, the risk would have to be more fairly distributed among all interested parties, such as the federal government and industry. The comment was made that landowners should not bear the brunt of someone else's consequences from poor management; specifically, all polluters—industrial and otherwise—have caused this problem, but only private landowners are being asked to take steps to alleviate it, and to bear the greatest risk.

8.3 Size of Plantations

Landowners were concerned that any initiative endorsed by the federal government would potentially set restrictions on who could qualify for the federal incentive packages. The landowners repeatedly contended, in each focus group, that the federal government should not set a minimum land commitment. The landowners argued that many people would be interested in afforesting small pieces of land at first, as a sort of trial run, and these tentative first steps should be supported by the federal government to the same degree as those who would be planting larger acreages of land. A common argument along this line of reasoning was that every bit would help meet the government's obligation, and it may be easier to convince 100 people to plant 50 acres than it would be for the government to convince 5 people to plant 1000 acres. The point that the government should open participation to all landowners, creating an inclusive

afforestation initiative accessible to anyone that is interested, was the most common closing remark made by participants across the three focus groups.

8.4 Deforestation

Another topic area that was addressed repeatedly by all focus groups was the current level of deforestation that occurs in agricultural areas. The participants of these focus groups found a great disjunction between what is commonly practiced in their communities and what the federal government is attempting to foster. Landowners acknowledged the value of an afforestation initiative, but many commented that it made no sense for the government to pay people to plant trees while many others are cutting down the trees that already exist.

The participants from these focus groups suggested that the federal government should invest money and energy into ensuring that treed agricultural landscapes remain treed. It was argued that the government should make it worthwhile to landowners to keep what trees are already there, even while it pursues its afforestation initiative. It was suggested that preventing further deforestation now would reduce the amount of time and money that would have to be invested by the government in the future on similar afforestation initiatives. Further, the landowners saw a disjunction in different government initiatives, some which (perhaps unwittingly) encourage deforestation, such as with certain federal subsidies that increase relative to the amount of land in production, and others, such as this one, that call for a planting or re-planting of trees on agricultural land. This sort of poorly coordinated government planning was something that the landowners did not want to see happen with this afforestation initiative.

8.5 Industrial Polluters

The landowners commented that industrial polluters are a large part of the reason Canada now needs to invest in afforestation for carbon sequestration. It was argued that while afforestation may be a viable management option for managing climate change, many also argued that more needs to be done to directly penalize, or at least hold accountable, industry. Further, there were landowners who did not like the thought that their participation in this initiative might help large polluters to continue polluting, through the use of their offset carbon credits. Instead of putting the problem of greenhouse gas emissions onto the backs of private landowners, these participants argued that large polluters should be made to pollute less. These landowners indicated that they would feel better about participating in an afforestation initiative if the government made a significant attempt at policing these polluters, requiring them to clean up their emissions.

8.6 Environmental Values

There were landowners who communicated unease with the direction of the federal government's afforestation initiative, because of its obfuscation of the environmental values inherent in the Kyoto Protocol. One landowner in particular was very disappointed that at the focus group he attended the focus was solely on the monetary

opportunities associated with an afforestation initiative, and with the growing of non-native hybrid poplar. His concern grew as he began to realize that it might likely be the case that those interested in afforestation for financial gain would be the ones to qualify for government incentives, while those who would be interested in growing native trees solely for the environmental and aesthetic values of doing so, such as in his case, might not qualify for government incentives. Other landowners also communicated this concern.

Throughout the focus groups, landowners often commented that afforestation did not make good business sense. Despite this, many landowners still expressed an interest in planting trees on their land because of the environmental or aesthetic benefits. The focus groups highlighted to the researcher that the environmental values of landowners would in many cases override the costs and risks associated with planting trees. With this in mind, then, it makes more sense that landowners were uncomfortable with the suspicion that the government was marketing afforestation as an opportunity to make money. The question raised by some was: What if a landowner does not want to sell the trees, or profit from afforestation? Would such a landowner still qualify for federal assistance in initiating and maintaining an afforestation project?

Furthermore, certain landowners stated a preference for a mix of native tree species as opposed to planting the hybrid poplars that were the focus of discussion from the FAACS planning group. Another question raised was: Would a landowner who wanted to plant a mix of native species still qualify for federal incentives, even though these would grow much slower than the hybrid poplars? The technical advisor to the FAACS planning group explained that because the commitment period for the Kyoto Protocol is 2008-2012, fast growing trees are necessary, and for this reason hybrid poplar are being suggested over slower growing native trees. Participants could understand this perspective, but some were uncomfortable that environmental considerations seem to be taking a back seat to commercial and policy considerations in such an important environmental initiative.

8.7 Property assessment and taxes

There was uncertainty regarding how property assessment and tax rates would be affected by afforestation. Landowners were concerned about what would happen to the value of their land should they change their current land use from agriculture to afforestation. The possibility that the land may be re-assessed at a greater or lesser value was suggested, and advantages and disadvantages to each were discussed. Landowners were adamant that a federal initiative would have to include a fair property assessment and tax structure for afforestation to attract landowners.

Landowners suggested that the property tax system for afforested land would need to be at least as favourable as that for agriculture, and it was recommended that if taxes were to decrease this could entice some landowners towards afforestation. Landowners also suggested that there should be an automatic tax rebate associated with afforestation in addition to any other incentives. It was stated that if afforestation led to a worse tax

situation, it would deter many landowners, but if it remained the same then taxes would not necessarily be an issue. Landowners did state, however, that tax incentives would be an effective mechanism for encouraging participation in afforestation.

8.8 Knowledge Transfer

A system of accessible and regionally relevant knowledge transfer needs to be a part of the federal afforestation initiative. Following the site tour of existing afforestation plantations, led by the technical advisor to the FAACS planning group, landowners commented that they felt a significant lack of knowledge in regards to growing trees. A federal afforestation initiative would need to acknowledge this lack of information and provide for an adequate system of knowledge transfer. The participants in these focus groups suggested that a local agricultural representative, knowledgeable in afforestation, would be the ideal contact for this system.

8.9 Flexibility

A federal initiative will need to be flexible to attract landowners to afforestation. Landowners called for flexibility not only between different regions, but also within one area. For example, a landowner should have the option of different incentives for different areas of his or her land. Landowners also called for flexibility in the terms of agreement, suggesting that landowners should be able to negotiate the terms for exiting the agreement, rights to the wood, species of tree to be grown, etc. While the landowners did not state any immediate preferences for these terms, they did recommend that the government institute a system that would be flexible for each landowner's situation.

8.10 Economic Analysis

Landowners called for in-depth economic analysis and market research regarding afforestation potential. Landowners expressed a view that there was a lack of rigorous economic investigation associated with the idea of afforestation as a business venture. There were landowners who asked for a market analysis that could show that serious time and thought has been put into the question of afforestation as a viable business venture for private landowners. Questions that remained unanswered for landowners that could be dealt with in an economic analysis are: Will there be a market for privately grown plantation wood in 20 years? Where will this market most likely reside? How much wood could this market be expected to support? Is there a distance from mills beyond which it makes no sense to afforest for market?

8.11 Incentives

It was widely commented that without investment by either the government or industry, afforestation by private landowners would not make financial sense. Landowners found the risks to be too high, the return too uncertain, and the return on investment (should it come) too separated in time from the initial investment to be a viable option. Without government incentives, or industry buy-in, few of the landowners who attended the focus

groups could see afforestation as a likely business option. As mentioned above, there were landowners who commented they would still plant trees on their land, but this was despite the business aspects, not because of them; these landowners would plant trees because trees were important to them.

8.12 Partnerships

These participants were open to the idea of partnerships between private landowners and industry, but uncertain as to how to attract partners, and where to locate them. Landowners repeatedly called for a system that could help interested landowners and industry to locate each other. One landowner suggested that this could be done through a list of names, indicating potential partners for afforestation in each part of the country. This information would allow landowners to instigate negotiations on their own, without the interference of government, and could potentially help convince landowners as to the legitimacy of afforestation as a business option. There was concern by some landowners that although a partnership could be beneficial, such a long term agreement might be difficult to sustain.

Table 1: Summary of Major Themes

Theme	Issue	Suggestion
Carbon Credits	Lacks clarity and certainty	Set base price that Carbon won't trade less than, but may trade higher than.
Risk	Landowners assume all of the risk in these scenarios, Canada receives benefit	Acknowledge the benefit that landowners are providing to Canada, and take some of the burden of risk away from landowners.
Size of Plantations	Initiative seems to favour larger plantations	There should be no minimum land requirement for plantations that will qualify for federal incentives.
Deforestation	Many landowners currently cut down trees on their property	Provide incentives for landowners to keep existing forests, otherwise afforestation seems futile. Make it worthwhile to not cut down trees.
Industrial Polluters	They pollute and the landowners are asked to clean up.	Enforce pollution standards on industry so they take responsibility for their actions (i.e., penalize polluters).
Environmental Values	Environmental values seem to take a back seat in this process	Provide incentives that also encourage afforestation for environmental reasons. This initiative should not just be about meeting commitments quickly and making money.
Economic Analysis	Need a credible study on the future & economics of afforestation	Provide a credible study on the future & economics of afforestation for private landowners.
Property Assessment and Taxes	Will afforestation affect land value or property taxes?	Ensure that landowners are not penalized for participating in afforestation projects.
Knowledge Transfer	Landowners need information about best practices for afforestation	An accessible and regional system for knowledge transfer needs to be included in the federal afforestation initiative.
Flexibility	Different landowners have different needs	Ensure that a federal initiative is flexible enough for landowners in different regions or situations to participate in afforestation in a way that is suitable to each.
Incentives	Nothing concrete being offered	Federal Government or industry needs to invest in this, bringing money to the table, in order for this to get off the ground.
Partnerships	Partners are desirable but hard to find	Create a system that facilitates easy recognition between interested industry and landowners.

9 Detailed Responses to Incentive Package Scenarios

9.1 Incentive Package #1

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Package 1	Land Investment and/or Aesthetics	Nil	Nil	Landowner	Landowner	Landowner	Landowner

9.1.1 Strengths

Landowners agreed that the complete control inherent in this scenario was an advantage, due to the ability of the landowner to decide the size of the project, the type of tree species planted, and how the end product would be dealt with. This was particularly advantageous to those landowners who were interested in afforestation not for profit motive but for the aesthetic or environmental benefits associated with having trees on one's property. Indeed, as is stated under the Land Use Objective column in the table, this package was designed with precisely such a landowner in mind—one who would plant trees with the intent of meeting quality of life needs, or environmental needs.

However, there was a diversity of response to this package. Among those participants who cited “total control” or “greater flexibility” over the project as advantageous, the benefits of this control and flexibility were interpreted differently. Landowners noted that benefits could include: the freedom to plant any desired trees species; the freedom to choose a less dense pattern of spacing; and the freedom to sell the end product to whomever the landowner desired. This freedom of choice was desirable to some landowners who wished to make profit as well as those who were solely interested in the aesthetics or environmental concerns, or at the very least they saw the advantages of such freedom. As the ‘Weakness’ section below will illustrate, however, they also saw the drawbacks of such freedom.

Landowners were also interested in the possibility that afforestation may increase the land value of their property, although some were unclear—and there was no clarification forthcoming from other members of the group—whether afforestation would increase or decrease land value. Likewise, it was unclear to the groups whether property taxes would increase or decrease due to afforestation, and so this was mentioned both as a possible strength and weakness.

9.1.2 Weaknesses

Foremost in the minds of participants was the total assumption of risk that is involved with this scenario, in particular. While the assumption of risk by the landowner was a common theme throughout all of the scenarios discussed in the focus groups, it was particularly prevalent with this scenario. The point was made that because there is no partner involved with this scenario, it is the landowner who is responsible for all the establishment and maintenance costs, and so these will be lost to the landowner should a crop failure occur. Other scenarios that split either the establishment or maintenance costs between the landowner and the partner represent one means for reducing the impact of crop failure for landowners, since only a portion of the landowner's money will be invested in the project. It was also stated that there are other losses that a landowner would incur should a crop failure occur that would not be borne by a partner, such as the opportunity costs for the land while it is being used for afforestation.

Landowners were concerned about the lack of crop insurance available for afforestation. Because afforestation is still something little known to bankers and insurance brokers, an afforestation project would be hard to initiate. Further, landowners stressed that afforestation, especially as represented in this scenario, becomes a very difficult endeavour for a landowner to pursue since there is a lot of initial costs but no income for approximately 15-20 years.

Another weakness raised by some landowners for this scenario was the lack of knowledge and experience of most landowners in regards to afforestation. In a partnership there would exist the distinct possibility that the partner would bring some knowledge and experience to the table that could greatly improve the likelihood of growing a successful crop. In this scenario, the landowners would likely be left to their own knowledge base, which many stated would be insufficient for growing trees.

Landowners were also concerned that the market for the wood seemed uncertain. They asked about the likelihood of being able to sell the wood to a buyer, and how this would be affected by their location. For instance, if a landowner were far from a mill, would there still be interest in their wood? How far would be too far from a mill? As one landowner stated, someone would "probably buy them in the end", but "along the way there is no cash flow and we have to swallow the risks".

The issue of carbon credits was certainly the most contentious topic during each focus group. The lack of information regarding the value of a carbon credit, how these will be measured and monitored, and how the system will be structured and run were all issues that concerned landowners greatly. The overriding sentiment regarding carbon credits was that it would be great if it could benefit landowners, but as it stands the whole concept seems "wishy-washy" and likely to favour industry rather than landowners.

9.1.3 Questions Raised

This section notes topical questions that were raised during the discussion of scenario one. The question may not necessarily pertain only to this particular incentive package, but it was raised during the discussion of this package.

1. A question was raised as to whether or not unmanaged forested land would be taxed less than agricultural land. One of the FAACS planning team answered that he believed unmanaged forested land would be taxed less, but that afforestation may be contrary to the idea of 'unmanaged forest land' since by definition afforestation is an intensively managed endeavour. This question was left without any clear understanding of how property taxes would change for landowners should they choose to pursue an afforestation initiative.
2. There were questions raised regarding carbon credits, especially in regards to the value of carbon credits and whether these would be capped at some level to be decided by government and industry. The implication was that carbon credits may be a good thing for landowners if the system flourishes, but there was some concern that a fair market value may not be realized due to negotiations by government and industry to keep the value of the credits artificially low.
3. One participant asked what would happen to the value of the land if a landowner had to sell the property for some reason: would the land be valued less because of the trees and/or the half grown plantation? This was a question that no one was able to answer.

9.1.4 Comparison of Focus Groups

There was no marked distinction between the three focus groups in regards to their reactions to this incentive package. All groups were consistent in voicing their concerns that 1) landowners assume all of the risk; 2) the costs of initiating afforestation are prohibitive, especially if considered next to the extremely long delay until there is any hope of a return on investment; 3) the carbon credits trading system is unclear and sketchy; 4) most landowners lack knowledge of how to afforest successfully; and, 5) the likelihood of a prospective market for their end products is unknown.

9.2 Incentive Package #2

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Package 2	Aesthetics and Future Return on Investment	Nil	Nil	Initiator	Landowner	Landowner	Initiator/Landowner (50/50)

9.2.1 Strengths

Landowners were quick to point out the advantage of sharing the costs and risks in the establishment of the plantation. The comment was also made that the initiator may bring not only cash to the project but also expertise in afforestation and/or harvesting, thereby improving the chances of success. The element of added expertise in terms of dealing with the planting and harvesting of trees, and finding a market for the end product, was very important for most landowners. One participant commented that by investing in the project the initiator would have a stake in the end product and therefore may be a strong ally in ensuring that the crop succeeds.

9.2.2 Weaknesses

Landowners were quick to point out that with this incentive package the landowner loses some control, flexibility and benefits from afforestation. Business decisions such as the size of the plantation, the type of tree species grown, and the buyer it will be sold to are all considerations that the landowner would have to share with the partner/initiator. Further, the end product in this scenario was to be split 50/50, and some landowners felt this may be too much. The FAACS planning group stressed the specifics of the packages are not set in stone, but are meant to act as an example of what could be possible. One landowner asked how establishment costs compare to maintenance costs. The technical advisor for the FAACS planning group answered that establishment costs would total about 60% and maintenance costs about 40% of the total initial investment. This information led more than one landowner to comment that the 50/50 split of end product was probably not a fair ratio, especially considering that the project is on the landowners land, a fact that should be acknowledged in the final accounting of profits. One landowner was adamant that for the use of his land, any outside partner would need to put forth some sort of annual lease payment, even if other forms of investment were being negotiated.

There were other concerns regarding the initiator or partner. One landowner commented that there could be a liability for the landowner if he was responsible for damaging the crop. Because of the investment of the initiator, any poor management practices by the landowner could result in the landowner owing the partner a certain amount of

compensation. This sort of accountability is something that was not present in package #1, since the landowner was the sole investor.

It was suggested that the initiator might also be the final buyer. This was a concern due to the possibility that the initiator could end up dictating (somewhat) the end price, resulting in reduced options for the landowner.

Lastly, the point was raised in two focus groups that this incentive package may be a difficult one from the perspective of the initiator, and therefore an initiator to fit this description may be hard to find.

9.2.3 Comparison Between Focus Groups

There was no marked distinction between the three focus groups in regards to participant reaction to this incentive package. All groups called for clarification of the difference in costs between establishment costs and maintenance costs, and expressed some reservations about the 50/50 split of the end product value if the input for both parties was not necessarily 50/50. All three focus groups commented on the advantage of sharing risk and cost with a partner, as well as the possibility of accessing the partner’s expertise and knowledge regarding afforestation.

9.3 Incentive #3

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Package 3	Annual Lease Payment	Nil	Annual Payment (Local Land Lease Rate)	Initiator	Initiator	Initiator	Initiator

9.3.1 Strengths

The guaranteed cash flow associated with this incentive package was seen as a definite advantage to participants. The fact that the initiator, or partner, takes responsibility for all aspects of the project—establishment and maintenance costs, as well as final product ownership—and simply pays the landowner a rental for the use of land was believed to be a good option for an absentee landowner, or for a landowner who has land that is unusable (or less usable) for conventional agricultural purposes. Landowners expressed the impression that the amount of risk assumed by the landowner is greatly minimized in this scenario.

9.3.2 Weaknesses

While the long-term cash flow from the land rental was attractive to many landowners, one participant commented that in this instance the land would be tied up for 25 years. This participant's argument was that a landowner could rent out his land for conventional agricultural purposes, receive the same cash flow, but retain the flexibility of annual crops. For instance, if the landowner were to decide that he would like to regain use of his land he would only have to wait a year as opposed to many years for the lease to expire. The trees, then, decrease the landowners control over the situation, especially considering the reclamation that would need to be done after the harvest of the tree crop in order for the landowner to use that land for agriculture again.

Another participant commented that the trees may be worth more than the landowner's annual payments, and because the trees are going to the initiator the landowner could be missing out on a good opportunity. The issue of crop failure was raised again, and it was suggested that the provincial governments would need to add forestry to the list of insurable crops in order for afforestation to be feasible to landowners and investors alike. A comment repeated by many landowners throughout the focus groups was that any contract for an annual lease payment would have to account for an on-going adjustment for land lease rate.

9.3.3 Questions Raised

This section notes topical questions that were raised during the discussion of scenario three. The question may not necessarily pertain only to this particular incentive package, but it was raised during the discussion of this package.

1. The question was raised as to what kind of investor would put in dollars for maintenance and establishment if they don't know the end product price? The technical advisor for the FAACS planning group used an Alberta example where land close to a mill is being rented in just this manner.
2. The majority of the landowners present at the focus groups owned land that was not close to a mill, and so the question was raised as to whom they should talk to about finding a partner for afforestation, or a buyer for their wood, and how much they could expect for this wood. The technical advisor for the FAACS planning group answered that a landowner could expect \$8-10 m³ regardless of where they were located. He advised that they compare this to the inputs they would require, and make their decision based on this.
3. A participant asked whether annual lease payments were taxable at full rate. He was trying to discern whether or not an increase in land value would result in an increase in tax rate, which could be a tax disadvantage. There was no answer forthcoming from the participants or the planning group.

9.3.4 Comparison Between Focus Groups

The three focus groups raised largely the same strengths when discussing this incentive package. Participants were attracted by the hands-off nature of this package and the cash flow that would accompany it. Participants felt better about the level of risk that they would be responsible for assuming, and many felt that this would be a good option for unused land, or for landowners who do not live on their land.

The Winnipeg group discussed the issue of proximity to a mill while discussing this incentive package. It was this group that raised the question of what sort of initiator would pay out the establishment and maintenance costs for a product with an unknown market price. Landowners referenced the Alberta example, where land close to the mill is being rented a forestry company, to illustrate their concern that landowners far from mills may not qualify for this sort of a project. This issue of location was raised by each focus group at some point during the focus group sessions.

Landowners repeatedly raised concerns regarding the reclamation that would be required following afforestation, and who would be responsible for this.

9.4 Incentive #4

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Package 4	Cash Flow w/ Carbon Credit Incentive	Nil	Annual Payment (Local Land Lease Rate)	Initiator	Initiator	Landowner	Initiator

9.4.1 Strengths

Participants commented on the potential benefits of the carbon credits if these were tradeable. One participant added that as long as the annual lease payment does not decrease (because of the additional value of the potential carbon credits) then this package would be acceptable.

9.4.2 Weaknesses

From the landowners' perspectives, the overriding weakness with this package was undoubtedly the uncertainty attached to the carbon credit trading system. As mentioned above, carbon credits were the area of greatest concern for landowners. All focus groups made it clearly known that they felt carbon credits have been poorly explained, planned and as of yet there is no concrete indication that they exist or will be of benefit to landowners. While most landowners are willing to acknowledge that these credits could

be of use to them, the standard feeling is one of skepticism in regards to the likelihood of these credits playing an important role in their business. The primary criticism to the carbon credit trading system was that it is difficult to make any sort of informed decision without knowing anything substantive about these carbon credits and the protocols for measuring them and trading them.

There was another concern that for those landowners who are practicing reduced or zero tillage management, which is known to store carbon in high quantities, perhaps nearly equivalent to that stored in trees, measuring carbon levels on their land may not benefit them following the change from low tillage to afforestation.

9.4.3 Questions Raised

This section notes topical questions that were raised during the discussion of scenario four. The question may not necessarily pertain only to this particular incentive package, but it was raised during the discussion of this package.

1. How will carbon credits be measured? The technical advisor for the FAACS planning group answered that this will be costly, but that efforts are underway to determine what system for measuring and monitoring of carbon credits will be the most feasible.
2. Another participant asked about when landowners would be paid for their carbon credits; would they be paid yearly or at the end? This was an important consideration for landowners, and one for which no one present had an answer.
3. One landowner asked if it would be possible to lease out their carbon credits instead of selling them. This landowner reasoned that this would allow for greater control on the landowner's part, and allow him access to his own credits if some time down the road he should be required (by changing national regulations) to use them himself. This concern is related to a very general worry common to many participants that they may somehow be penalized if they should choose to harvest their trees for sale (thereby forsaking the carbon sink).

9.4.4 Comparison Between Focus Groups

Because this incentive package deals primarily with the role of carbon credits, and because carbon credits represent the single largest issue participants had during these focus group sessions, this incentive package finds the greatest level of agreement between groups as well as within groups. As mentioned above, participants were open to the benefits that a carbon credit trading system could provide but almost all participants were very unclear about how it would work and whether it would truly benefit them. There was a great deal of concern that if the system were ever created it would be done so as to benefit industry over the landowners.

9.5 Incentive #5

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Package 5	Partnership	Nil	Annual Payment (Local Land Lease Rate)	Initiator/Landowner (50/50)	Initiator/Landowner (50/50)	Initiator/Landowner (50/50)	Initiator/Landowner (50/50)

9.5.1 Strengths

This is the package for which one respondent said, “It’s the one I’d pick”. Landowners indicated that they were attracted to the partnership quality of this package, and the fact that the landowner and the partner (or initiator) share risks and responsibilities. Landowners expressed enthusiasm in regards to the possibility of associating with a knowledgeable partner, and receiving even a minimal annual payment.

9.5.2 Weaknesses

Landowners assumed that the annual payment would be less than in other scenarios due to the sharing of all costs. Likewise, while landowners were positive about the possibility of associating with a knowledgeable partner, some raised concerns about the possibility of associating with a bad partner. It was also commented that partnerships are trying relationships, and in a partnership that would need to span close to two decades there is likely to be some partnership woes. Landowners often commented during the discussion of this scenario that contract negotiations would be important. For example, there would have to be a clear plan of recourse should the landowner decide to sell his farm and dissolve the partnership.

One participant estimated that from what he had heard during the day that it would cost approximately \$500/acre to afforest. He concluded that if the landowner had this kind of money then there would be no problem, but that if he had to borrow it then the project would likely not happen.

9.5.3 Questions Raised

In response to the last comment above, the question was raised as to the amount of return that a landowner would need to make this project worthwhile. Some answered that at least double the costs would need to be achieved.

9.5.4 Comparison Between Focus Groups

Both the Saskatoon Focus Group and the Winnipeg Focus Group raised concerns regarding the difficulties of successful partnerships, although the Saskatoon group seemed more sensitive to this issue. The Saskatoon group raised concerns about being tied into an end product use that might be more restrictive with the input of an outside partner; they mentioned that the likelihood of partnership woes was increased due to the longevity of the contract; and they mentioned that one's borrowing power would be decreased since the capital is shared between the landowner and the partner (i.e., banking/financing is more complicated when two people are accountable).

The Winnipeg group did mention that a bad partner could harm a landowner, and that negotiations would need to be clear on repercussions of one party dissolving the partnership. The Edmonton Focus Group did not raise any concerns regarding the partnership.

9.6 **Incentive #6**

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Package 6	Future Return on Investment	Nil	Nil	Initiator	Initiator/ Landowner (70/30)	Landowner	Landowner/ agreement to sell to initiator for fair market price

9.6.1 Strengths

Landowners commented that, like the scenario above, this package allows for the possibility of associating with an initiator who has knowledge about afforestation, and who can act as the final market buyer. The idea of a guaranteed buyer for the end product was one that seemed beneficial to some landowners. For landowners, this scenario represented a sharing or minimizing of risk.

One respondent commented that this scenario would work to the landowner's favour since the initiator is paying for establishment costs, and splitting maintenance costs. It was this respondent's opinion that the share of the maintenance costs borne by the landowner would be negligible since he would already have much of the equipment and supplies he would need for maintenance, such as the vegetation control supplies.

9.6.2 Weaknesses

In conjunction with the last comment above, landowners were aware that this scenario is probably unfair to the initiator. One respondent commented that the only initiator who

would agree to this sort of contract would be the government, since the initiator pays so much and the landowner benefits so greatly.

Landowners were concerned about the phrasing of “fair market price”, and questioned who decided what this price was to be. With this package landowners again began to comment that they would have to assume all of the risks, while receiving no cash flow throughout the life of the project. Also, some landowners were concerned that they would have to go through the initiator at harvest, instead of having the freedom to sell the end product where and how they desired.

9.6.3 Questions Raised

- 1) What is the ratio of establishment costs to maintenance costs? (Answer: establishment 60%, maintenance 40%).
- 2) What is the “fair market value”?

9.6.4 Comparison Between Focus Groups

There was no marked distinction between the three focus groups in regards to participant reaction to this incentive package. All groups were interested in the minimization of risk that this scenario represented; the (almost) guaranteed buyer after harvest; and, the potential for benefiting from a knowledgeable partner. All groups were concerned about the definition of “fair market price”. Two groups raised concerns regarding the ability of the partnership to survive such a long contract, while the other group did not mention the issue of maintaining a healthy partnership.

9.7 Incentive #7

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Package 7	Future Return on Investment	Tax Rebate (≤85% tax credit on property taxes)	Nil	Initiator	Landowner	Landowner	Landowner

9.7.1 Intent

The intent of this scenario was to present the landowners with a tax option incentive. For this purpose, the planning group decided to choose any tax incentive, simply to communicate that the federal government could present a tax option, if they were informed that this was what would be required for landowners to participate. The scenario was meant simply to address tax issues with landowners and search for their perspectives on this. The first focus group, in Winnipeg, was presented with a different

incentive than the other two groups. Instead of being presented with the “Tax Rebate” shown above, they were presented with a “Deductible on Income Tax”. Again, this was simply to open a dialogue concerning taxes. This was changed for the next two focus groups, because participants in Winnipeg were commenting more on the specific incentive of a deductible as opposed to discussing taxes in general.

9.7.2 Strengths

For the Winnipeg group, which was presented with the “Deductible on Income Tax” incentive, and not the “Tax Rebate”, landowners commented on the target group that would be interested in this scenario. According to these landowners, it was believed that an income tax deductible would only be attractive to someone with a lot of money, or for an older landowner who is looking for an investment that will pay off for his kids down the road. In the latter case, it was suggested that afforestation could work as a short-term way to help on taxes, but that could also pay off in 20 years and act as a future return for a landowner’s kids.

For the other two groups, who were presented with the “Tax Rebate” incentive, landowners commented on the high level of control that is available for landowners, especially in the ability to decide how the end product would be sold or utilized. One landowner commented that in a best-case scenario, one could accept the initiator’s contribution to the establishment costs, and also try to line up an end product buyer who would be willing to make a contract to buy the harvest, and supply a cash flow in the mean time. Another landowner indicated that this package represents a “hygienic way” for someone interested in forestry to get involved with it, because this scenario is “uncomplicated”.

9.7.3 Weaknesses

A landowner in the Winnipeg group, responding to the “Deductible on Income Tax” incentive, commented that nobody would go into a business for a write-off on income tax. For him, this scenario did not represent an adequate tax incentive. Other landowners commented that the initiator does not seem to benefit from this scenario, and some raised doubts as to the likelihood of finding an initiator to agree to this sort of arrangement. One response to this concern, raised by a participant, was to suggest that there could be a polluter who would be willing to pay landowners to afforest, such as in this scenario, to offset their emissions, or to improve their standing in the public eye.

The two focus groups that were presented with the “Tax Rebate” option indicated that even an 85% tax rebate on property tax would probably not translate into a very big incentive. In Saskatchewan, the comment was made that this rebate would likely equal an annual lease payment (as seen in other scenarios). In Edmonton, a landowner estimated that an 85% tax rebate on property tax would likely only equal approximately \$1.50-2.00/acre. Some believed that this tax rebate could end up being less than a landowner would receive in one of the annual lease payment options from above.

It was also mentioned that landowners would still have to pay maintenance costs in this scenario but would be receiving no cash flow. Another weakness, as indicated by the Edmonton and Winnipeg focus groups, is that afforestation may be considered as an improvement to the land, thereby increasing the value of the land. This increase in land value may increase property tax, thereby nullifying any benefit, and it was feared that any increase in land tax might stay higher even after the life of the project.

9.7.4 Questions Raised

In the Winnipeg session, which was presented with the “Deductible on Income Tax” incentive, and not the “Tax Rebate” incentive, the question was asked, What happens with the land tax price? This question was also a common question and concern in the other two groups, which were presented with the “Tax Rebate” option.

9.7.5 Comparison Between Focus Groups

It is difficult to compare the Winnipeg Focus Group with the other two groups due to the presentation of a different incentive example for this group. While both Edmonton and Saskatoon Focus Groups were presented with the incentive of a tax rebate on property taxes, the Winnipeg Focus Group was presented with the example of using afforestation as a deductible activity on income tax. As mentioned above, this was done simply to open discussion of incentives and tax options.

All three groups did raise concerns about their land value and tax increases due to the improvements on their land. Landowners saw this as a potential disadvantage to afforestation.

9.8 Missing Incentives

After discussing each incentive package, the facilitator broke the focus group up into smaller groups, asking each group to come up with ideas that they had not seen as of yet. This was an opportunity for the participants to discuss what was presented to them by the FAACS planning group, and to comment on incentives they felt were missing, or to suggest other incentive packages that may work better for landowners. The focus group was split up into smaller groups to allow participants to discuss these questions without the guidance or influence of the FAACS planning team, giving participants time among themselves to share impressions, raise questions and reach conclusions.

The facilitator allowed approximately 15-20 minutes for the groups to discuss the questions and then he asked each group to present their suggestions/ideas to the whole group. He also allowed an opportunity for the other groups to ask questions of the group that was presenting so that all participants were able to interact over any idea or issue they felt inclined towards. This section will highlight the suggestions and ideas as proposed by these groups.

9.8.1 Edmonton

Group #1 commented that any federal initiative for afforestation should have no restrictions regarding maximum or minimum land commitments. These landowners believed that there would be those interested in running a trial on small areas of their land, and that it would be best for the government to encourage these landowners to do so, as opposed to imposing a minimum area of land to qualify for incentives.

Likewise, it was commented by this group that any initiative put forward by the federal government should strive for flexibility. It was argued that the government cannot make one plan for everybody, and even with one person, allowing for flexibility should be a priority. For example, a landowner may wish for different options on the same piece of land, using one incentive package for a specific 20 acres of land, and another package for a different 50 acres.

This group also raised the issue that landowners will not want to lose control of their land, but rather they will want to be involved in the afforestation taking place on their property. Any annual cash payment should acknowledge and follow the land classification system. If the government follows this system, this group believed that the annual lease payment would better work towards risk management for landowners.

This group emphasized that any overlapping programs should be combined. The specific example raised by this group was the Environmental Farm Plan, which certain individuals in this group felt could address some of the issues that this afforestation initiative is striving to accomplish. This group also felt that all plantations should receive a tax rebate.

Group #2 answered this request by designing a scenario “8”, or what they thought would be an ideal incentive package. This ideal package had either the landowner or initiator paying for establishment costs, depending on the circumstances; the landowner covering the maintenance costs; and the landowner having control of the final product, with the initiator having ‘first right of refusal’. The carbon credits would also accrue to the landowner. This scenario would also include an annual lease payment as down payment to the landowner, in anticipation of final product value, and if the landowner does not sell to the initiator, then he would pay the rent back at the sale of the harvest. If the landowner were to sell to the initiator, the annual lease payment to date would be taken into account in the final price negotiation between the two parties. This group also suggested that an ideal incentive package would include a tax rebate, wherein any landowner that planted trees would qualify for a tax rebate.

9.8.2 Saskatoon

Group #1 called for a program that offered more extension to landowners; specifically, they would like to see an agricultural representative that could help to answer questions regarding afforestation. What they feel is needed by landowners is someone who is

knowledgeable about forests, afforestation, regional issues, and can aid them in their afforestation project.

This group also stressed that everybody should be eligible for any afforestation initiative, and outreach should target everybody. These landowners felt that the government should not apply a narrow or focused approach to encouraging afforestation, but should accept landowners who are willing to afforest small areas of land, as well as those willing to afforest large areas.

They also stressed that the federal government should respect the social values and environmental values attached to planting trees, and not focus so heavily on the fiber potential in afforestation. This group argued that the environmental benefits of afforestation should also take a central role in any federal initiative, and native habitat should be compensated as a valuable ecosystem. A potential mechanism for this sort of improved environmental ethic, associated with this initiative, would be for the federal government to partner with environmental non-governmental organizations to find incentives for farmers to keep existing trees instead of pulling them up. While these landowners understood that this was beyond the topic of afforestation, their assertion was that the high rate of bulldozing trees in agricultural areas exacerbates environmental concerns, including carbon sequestration, and will lead to a greater need in the future to encourage afforestation. By encouraging landowners to keep forested land, possibly with incentives, the government would have to recruit fewer landowners for afforestation initiatives in the future.

This group also suggested the idea of the initiator paying the landowner an annual income per acre over the life of the project, which would be paid back in part by the landowner after the sale of timber. This provides the landowner with cash flow during the 20 year growing season, but attempts to repay the initiator at the time of sale.

Group #2 called for a guaranteed base price for carbon credits—a level below which landowners can be certain carbon will not be traded for less than—until a viable market is established. This group made it clear that they felt below-ground carbon credits should go to the landowner in all cases, and that these credits should also be tradeable. The landowners also called for federal tax incentives for landowners and/or investors, as well as assistance with establishment costs.

As with other groups, Group #2 stated the need for crop insurance. The group also requested environmental impact guidelines that would highlight best management practices, such as spraying for worms, dealing with pests, and other issues specifically relevant to afforestation.

Group #3 called for a tax break for producers that would make it easier to grow trees, or grants that could assist new growers. The group also suggested that low interest loans may be a desirable course for the government to pursue since it would help producers grow trees, but it would also work to keep landowners involved in the project over the long term—since they are tied into a loan.

This group also called for education regarding potential markets for trees; producers need to be educated on where this market is, what the opportunities are, and how best to access these opportunities.

9.8.3 Winnipeg

Group #1 called for a meaningful dollar contribution by the federal government—something that they felt has not been forthcoming. This group also stated that the current framework for afforestation, and the incentives that have been proposed, fail to take into account the risk facing landowners should they undertake afforestation, and the return they are likely to receive for their efforts. Their contention was that without access to crop insurance for trees, the risks from crop failure, predator damage, or natural disturbance are simply too much for the landowner to bear alone.

This group stressed that the value of future carbon credits, and saleable wood, has yet to be defined. Without this sort of information, landowners are unable to make informed decisions about afforestation.

Group #1 also indicated that the blocks of land that landowners might be willing to afforest may be the most undesirable areas for harvesting—the field corners, which can be irregular and difficult to access. As well, this group cautioned that a system of transferring contracts is needed in the event of land sale or succession.

Group #2 called for reasons other than monetary gain for afforestation. They argued that there should be some emphasis on non-monetary advantages for afforestation, especially since this entire initiative is premised on the Kyoto Protocol, which is largely an environmental initiative, not a business one.

This group commented on the carbon credits issue, referring to it as “nebulous mumbo jumbo”. The group felt that the trading system and its particulars were too unclear at this point to translate into a legitimate opportunity from their perspective. Also related to the carbon credit issue, these landowners asked whether the federal government had only planned to put this carbon sequestering burden on agricultural landowners, or if they had also intended to make this an initiative available to the public at large, and if so, does the government intend to put effort and money into wider outreach?

Group #2 called for a list of names that could help put landowners in touch with initiators or potential investors.

Group #3 echoed the call for crop insurance for trees, and explained that insurance would not be forthcoming unless the trees were shown to be worth something, and this may be hard to do at this stage because insurance brokers and bankers are not currently informed about the potential returns for plantations of trees. Likewise, bankers are currently not informed as to whether this would increase or decrease the land value.

This group wanted to see federal government investment dollars up front, but they did not want the federal government to stay closely involved throughout the project. For this group, once the establishment phase is completed the federal government should dissociate itself from the project. These landowners were concerned that if the government stayed involved throughout the project, unforeseen complications may arise. One scenario of concern to some landowners was the possibility that the federal government might decide to force landowners not to harvest, as could be the case if the government felt they were short of carbon credits and wanted to hold on to trees in a certain area. This sort of direct interference by the federal government was a concern.

Group #3 felt that afforestation made little sense for young landowners, although it could be an option for retired landowners. Young landowners would likely not be able to afford the opportunity costs associated with afforestation, nor the price of establishment, the assumption of so much risk, and all without the certainty of a market for the end product. This group commented that without the involvement of financial institutions and industry, afforestation was an unrealistic business venture.

Group #4 called for an annual payment with inflation factored in. These landowners desired a guaranteed market for carbon credits. The combination of these two incentives would make afforestation an attractive option for retirees since the annual payment with inflation, and the income from the carbon credits, would allow a retired landowner to know how much money would be coming in over the year.

10 Summary and Recommendations

10.1 Summary of Findings

While landowners did express an interest in afforestation, there were a number concerns that these landowners indicated would need to be addressed before afforestation would be a viable venture for most landowners. These are:

1. The participants were open to carbon credits if they would truly have the capacity to benefit from them. It was forcefully communicated that, currently, these landowners feel carbon credits are too insubstantial and poorly developed to qualify as a meaningful incentive for their participation.
2. The participants repeatedly commented about the amount of risk involved in an afforestation venture. These participant landowners felt that, because the benefits of afforestation would accrue to the federal government, industry and the public at large, the risk inherent in such a project should be better distributed. Along with other suggestions, landowners called for trees to be included as an insurable crop.
3. It was stated that many landowners might be interested in afforesting small areas of land, at least as an initial trial. Participants argued strongly that the federal

government should allow all interested parties to qualify for federal incentives regardless of the amount of land a particular landowner was willing to commit to afforestation.

4. Landowner participants commented repeatedly that the federal government should make it worthwhile for landowners to keep the trees already in existence on their land. Although this does not fall under the mantle of afforestation, it was argued that discouraging the rapid removal of trees that is going on today will result in less effort and money necessary in the future to encourage afforestation. It was argued that promoting afforestation while refusing to take steps to reduce deforestation would be self-defeating.
5. A barrier to some participants was the impression that their cooperation would be a means for large industrial polluters to continue polluting. Some landowners commented that polluters should be made to reduce emissions, regardless of whether an afforestation initiative is developed or not.
6. Many participants were enthusiastic about afforestation not because of business opportunities, but because of the environmental and aesthetic benefits that would accrue from doing so. For these landowners, the federal government needs to promote a national policy that acknowledges environmental values at its core, and not cater only to those interested in the investment opportunities inherent in afforestation. Native species should be considered and encouraged because of their positive environmental functions, and not discounted simply because they grow slower than hybrid poplar.
7. There was uncertainty regarding how property assessment and tax rates would be affected by afforestation. Before landowners would be willing to pursue afforestation seriously, these questions need to be answered.
8. Landowners commented on their lack of knowledge in regards to growing trees. A federal afforestation initiative would need to acknowledge this lack of information and provide for an adequate knowledge transfer.
9. A federal initiative will need to be flexible to attract landowners to afforestation. Landowners called for flexibility not only between different regions, but also within one area. For example, a landowner should have the option of different incentives for different areas of his or her land.
10. An economic analysis of afforestation would provide landowners with a substantive source of information from which to make their decision. Issues that need to be addressed for the participants of these focus groups include: distance from mills and markets; forecasts of market opportunities in 20 years; return on investment scenarios.

11. Significant incentives from government or industry are required in order to attract landowners to afforestation. Landowners repeatedly commented that the financial risks are too great, the return on investment too uncertain and too distant from the time of initial investment for afforestation to represent a viable business venture for the majority of landowners.
12. These participants were open to the idea of partnerships between private landowners and industry, but uncertain as to how to attract partners, and where to locate them. A federal initiative should acknowledge the desire of landowners to partner in afforestation, and should take steps to encourage industry/landowner relationships.

10.2 Recommendations

The participant landowners who contributed feedback into the process of identifying incentive mechanisms that could attract landowners to an afforestation initiative, also provided a number of recommendations as a component of their feedback. These are included below.

1. Carbon credits should be traded for their market value, and not held to a low price for the benefit of industrial polluters. There should be a base price set for the trading of carbon credits, below which trading will not occur, but above which trading might occur if the market dictates.
2. Trees should be considered as an insurable crop. This is necessary to alleviate some of the risk faced by landowners considering afforestation. In conjunction with this, the government or industry should provide landowners with an annual lease payment, regardless of other negotiated terms, part of which will be paid back at harvest. This yearly cash flow will further mitigate the amount of risk assumed by landowners.
3. All landowners interested in afforestation should qualify for federal incentives, regardless of the amount of land they are willing to commit.
4. Incentives should be provided to discourage the amount of deforestation that is presently common among landowners. Forests conserved today mean less time and money needed to afforest tomorrow; landowners need to know it is worthwhile for them to maintain existing forests on their lands.
5. The federal government needs to ensure that polluters are reducing emissions. A current disincentive to some landowners is the suspicion that afforestation on private lands will simply be a mechanism to allow polluters to continue polluting, something that these landowners feel uncomfortable being involved with.
6. Ensure that landowners concerned with solely environmental and aesthetic values in relation to afforestation are compensated and allowed access to the same incentives as those landowners who are interested in afforestation for the return on investment. Ensure that federal incentives are available for landowners who wish to afforest with

native species due to the environmental benefits of this, as opposed to encouraging only hybrid poplar simply because of tight policy timelines.

7. Create a tax environment that is conducive to landowners interested in afforestation.
8. Provide local and accessible information and assistance for landowners pursuing afforestation.
9. Ensure that any federal initiative for afforestation remains flexible, allowing for regional and personal needs and situations. A landowner should have the option of different incentives for different sections of his or her land.
10. Conduct an economic analysis of afforestation in order that perspective landowners have access to a comprehensive and critical source of information for when they are debating the merits of afforestation.
11. Provide landowners with a choice of incentive packages that would make afforestation a viable business venture, because without this most landowners will not view afforestation as a realistic option.
12. Create an index of landowners and industry interested in afforestation partnerships as a means to improve the ability of each to find suitable partners.

Appendix 1

Table 1: INCENTIVES FOR PARTICIPATION IN AFFORESTATION

Incentive	Land Use Objective	Tax Breaks	Land Rent	Establishment Costs	Maintenance Costs	Carbon Credit Ownership	Final Product Ownership
Scenario 1	Land Investment and/or Aesthetics	Nil	Nil	Landowner	Landowner	Landowner	Landowner
Scenario 2	Aesthetics and Future Return on Investment	Nil	Nil	Initiator	Landowner	Landowner	Initiator/Landowner (50/50)
Scenario 3	Annual Lease Payment	Nil	Annual Payment*	Initiator	Initiator	Initiator	Initiator
Scenario 4	Cash Flow w/ Carbon Credit Incentive	Nil	Annual Payment*	Initiator	Initiator	Landowner	Initiator
Scenario 5	Partnership	Nil	Annual Payment*	Initiator/Landowner (50/50)	Initiator/Landowner (50/50)	Initiator/Landowner (50/50)	Initiator/Landowner (50/50)
Scenario 6**	Future Return on Investment	Nil	Nil	Initiator	Initiator/Landowner (30/70)	Landowner	Landowner with agreement to sell to initiator once mature for fair market price
Scenario 7	Future Return on Investment	Up to 85% Tax Rebate on Property Taxes	Nil	Initiator	Landowner	Landowner	Landowner

*Annual Payment refers to the Local Land Lease Rate.

**Forest 2020 is an example of this package, but where the Initiator relinquished Final Product Ownership to the Landowner.

References

- Altschuler, A., C.P. Somkin, N.E. Adler. 2004. Local services and amenities, neighborhood social capital, and health. *Social Science & Medicine*, 59: 1219-1229.
- Gilsenan, R. 2003. The feasibility assessment of afforestation for carbon sequestration (FAACS): Incentives to expand forest cover: A framework for Canada, Phase 1. Interim Document.
- Morgan, D.L. and Krueger, R.A. 1998. The focus group kit. Sage Oaks, CA: SAGE Publications, Inc.