



Agriculture Division

2006 Farm Environmental Management Survey

Crops Module



CONFIDENTIAL when completed
Collected under the authority of the
Statistics Act, Revised Statutes of
Canada, 1985, Chapter S19.

For interviewer use only

| | | | |
|--------------------|-----|----|--|
| Fully completed | 005 | 1 | |
| Partial | 005 | 4 | |
| Refusal | 005 | 2 | |
| No contact | 005 | 3 | |
| In operation | 004 | 00 | |
| Change of operator | 004 | 12 | |
| Out of business | 004 | 13 | |
| Out of scope | 004 | 99 | |

TO THE RESPONDENT:

Objective of the survey:

Statistics Canada, with Agriculture and Agri-Food Canada, is conducting the Farm Environmental Management Survey in early 2007. This survey will gather information on management practices being used on the farm. The most accurate information about farming comes from producers like you.

The results of the survey will help guide research as well as inform environmental program and policy development in the department. Gathering accurate information on farm management practices will help researchers and policy makers focus efforts and resources on the areas and issues that need it most. Producers will ultimately benefit from such programs to help reduce environmental risk.

This questionnaire is to assist you in answering a telephone survey.

Complete this questionnaire and keep it by your telephone. An interviewer from Statistics Canada will telephone you after **February 11, 2007** for the information.

DO NOT MAIL this questionnaire. Only complete the sections applicable to your operation.

This is a voluntary survey conducted under Section 8 of the Statistics Act. Your cooperation is important to ensure that the information collected in this survey is as accurate as possible.

All information will be kept confidential under the Statistics Act.

Please refer to the calendar year **2006** when answering the questions.

La version française de ce questionnaire est disponible.

Instruction to the respondent:

For all questions about the management practices related to the crop and livestock on your operation, please consider the following:

The following questions deal with ALL LAND OPERATED.

- **Include:** Land rented from other operations and crown or public land used for agricultural purposes.
- **Exclude:** Land rented to other operations.

Review the information on the label. If any information is incorrect or missing, please make the necessary corrections in the boxes below.

| | | | |
|------|----------------------------------|--|----------------------|
| FRM | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | Farm Name (if applicable) | Area Code | |
| NA 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | Surname or Family Name | Telephone | |
| | <input type="text"/> | | |
| | Usual First Name and Initial | | |
| ADR | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | R.R. Box No. | Number and Street Name | |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | Postal Code | Post Office (name of city, town or village where mail is received) | |
| EML | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | E-mail Address (if applicable) | Area Code | |
| NA 3 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | Partner's Name (if applicable) | Telephone | |
| NA 4 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | Partner's Name (if applicable) | Area Code | |
| COR | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | Corporation Name (if applicable) | Telephone | |

2. In 2006, what types of crop did you have on your operation?

(Check all that apply)

- Annual field crops, tame forages, potato and/or summerfallow
- Fruits
- Vegetables
- Greenhouse, nursery, floriculture
- No crop, only livestock (Go to question 49)

3. Which type of crop contributed most to your gross farm receipts?

(Check one only)

-
-
-
-

FOR INFORMATION ONLY

Section I. Crop and Nutrient Management

Conventional tillage: Soil disturbance through tillage, planting and other field operations that together incorporate most of the crop residue (less than 30% of the previous crop's residue remains on the surface after planting). Typical implements include discs, mouldboard plough or heavy duty cultivators. Conventional tillage on summerfallow refers to practices which incorporate most of the crop residue prior to winter.

Conservation (or minimum) tillage: Soil disturbance through tillage, planting and other field operations that together retains a considerable portion of the crop residue on the surface (30-60% of the previous crop's residue remains on the surface after planting). Typical implements do not turn the soil over and include chisel plows, soil savers, field cultivators and rodweeder (prairie region). Conservation practices on summerfallow refer to a reduction in the number of passes or the use of implements that retain most of the crop residue on the surface.

No-till, zero-till or direct seeding into undisturbed stubble or sod: No tillage prior to planting (more than 60% of the previous crop's residue remains on the surface after planting). Seeding operations done using implements such as air seeder, air drill or other low disturbance drills or planter. No-till practices on summerfallow refer to the use of only chemicals for weed control (chem-fallow).

| <p>4. What crop was harvested in 2006? (consider any land in summerfallow in 2006 as a crop type, even if it wasn't harvested)</p> <p><i>(If more than 7 crops, report the ones with the largest area)</i></p> | <p>5. What was the area harvested? (or area of land in summerfallow)</p> | <p>6. What area was prepared prior to planting using each of the following practices ? (see definitions above)</p> | <p>7. What crop was harvested on the majority of that crop area the year before?</p> |
|---|--|--|---|
| <p>Crop 1: _____</p> | <p>_____</p> <p><input type="radio"/> Acres <input type="radio"/> Hectares <input type="radio"/> Arpents</p> | <p>Conventional _____</p> <p>Conservation _____</p> <p>No-till (zero-till) _____</p> <p>Other _____</p> <p>Not applicable, no tillage required <input type="radio"/></p> | <p>_____</p> |
| <p>Crop 2: _____</p> | <p>_____</p> <p><input type="radio"/> Acres <input type="radio"/> Hectares <input type="radio"/> Arpents</p> | <p>Conventional _____</p> <p>Conservation _____</p> <p>No-till (zero-till) _____</p> <p>Other _____</p> <p>Not applicable, no tillage required <input type="radio"/></p> | <p>_____</p> |
| <p>Crop 3: _____</p> | <p>_____</p> <p><input type="radio"/> Acres <input type="radio"/> Hectares <input type="radio"/> Arpents</p> | <p>Conventional _____</p> <p>Conservation _____</p> <p>No-till (zero-till) _____</p> <p>Other _____</p> <p>Not applicable, no tillage required <input type="radio"/></p> | <p>_____</p> |
| <p>Crop 4: _____</p> | <p>_____</p> <p><input type="radio"/> Acres <input type="radio"/> Hectares <input type="radio"/> Arpents</p> | <p>Conventional _____</p> <p>Conservation _____</p> <p>No-till (zero-till) _____</p> <p>Other _____</p> <p>Not applicable, no tillage required <input type="radio"/></p> | <p>_____</p> |

| 4. What crop was harvested in 2006? (consider any land in summerfallow in 2006 as a crop type, even if it wasn't harvested) <i>(If more than 7 crops, report the ones with the largest area)</i> | 5. What was the area harvested? (or area of land in summerfallow) | 6. What area was prepared prior to planting using each of the following practices ? (see definitions above) | 7. What crop was harvested on the majority of that crop area the year before? |
|---|--|---|--|
| Crop 5: _____ | <input type="text"/> <input type="radio"/> Acres <input type="radio"/> Hectares <input type="radio"/> Arpents | Conventional _____ Conservation _____ No-till (zero-till) _____ Other _____ Not applicable, no tillage required _____ | _____ |
| Crop 6: _____ | <input type="text"/> <input type="radio"/> Acres <input type="radio"/> Hectares <input type="radio"/> Arpents | Conventional _____ Conservation _____ No-till (zero-till) _____ Other _____ Not applicable, no tillage required <input type="radio"/> | _____ |
| Crop 7: _____ | <input type="text"/> <input type="radio"/> Acres <input type="radio"/> Hectares <input type="radio"/> Arpents | Conventional _____ Conservation _____ No-till (zero-till) _____ Other _____ Not applicable, no tillage required <input type="radio"/> | _____ |

8. How were the crop residues managed?

(Including straw, pruning material, etc.)

Were the residues...
(Check all that apply)

Crops harvested in 2006 (question 4, page 4)

- left on the ground
- chopped and spread
- spread without being chopped
- baled (straw)
- burned
- incorporated into the soil
- composted in a pile
- collected (chaff portion)
- grazed by livestock
- Other, specify: _____
- Not applicable/no crop residues

9. If you answered "conservation (minimum) tillage" for any of the crops in question 6, when was "conservation (minimum) tillage" first used on the land you operate?

- Prior to 1990 Between 1990 and 1994 Between 1995 and 1999
 After 1999 Not applicable Don't know

10. If you answered "no-till, zero-till or direct seeding" for any of the crops in question 6, when was "no-till, zero-till or direct seeding" first used on the land you operate?

- Prior to 1990 Between 1990 and 1994 Between 1995 and 1999
 After 1999 Not applicable Don't know

11. Were any commercial fertilizers applied to the land you operated in 2006?

● Exclude manure

Yes
↓

No
↓
(Go to question 18)

12. In 2006, what methods were used to apply commercial fertilizers on your crops?

Was it...

(Check all that apply, include application done by you, an employee or custom worker)

- applied with seed
- subsurface application separate from seeding operation (shovel, knife, bander)
- subsurface application during seeding in separate band away from seed (includes mid-row banding)
- post-plant or post emergent application (eg. top/side dressing)
- surface broadcast and not incorporated
- surface broadcast and incorporated
- fertigation (fertilizer added to irrigation water)
- foliar application
- Other, specify: _____
- Don't know

13. In 2006, what factors were considered when deciding on the amount and type of commercial fertilizer to apply?

Was the decision based on...

(Check all that apply)

- soil testing
- plant analysis (foliar, petiole)
- cost of fertilizer/crop prices
- soil moisture conditions
- nutrient carry over or removal from previous crop or manure
- nutrient added by previous legume crop (cover crops, plough down)
- nutrient requirement of crop grown
- provincial or other guideline/recommendation
- advice from consultant/dealer/crop advisor
- amount historically used in the past/based on experience
- Other, specify: _____
- Don't know

14. How often is the soil tested for a given field?

(If it varied for different fields, give the average)

- Every year
- Every 2 to 3 years
- Every 4 to 5 years
- Every 6 years or more
- Do not test soils
- Don't know

15. In 2006, were commercial fertilizers applied to land that had manure applied to it?

- Yes
↓
- No
↓
(Go to question 17)

16. If yes, was the amount of commercial fertilizer reduced to offset the nutrient content of manure?

- Yes
- No
- Don't know

Commercial fertilizer application practices

17. For each crop listed in question 4 on page 4, which commercial fertilizer was applied in 2006 and what was the rate and timing of application?

| Crop harvested in 2006 | Commercial fertilizer Applied in 2006 | Rate of application (e.g. 1 litre per acre, kg per ha...) | | Timing of application | | | |
|------------------------|--|--|----------|-----------------------|---|---|--|
| | | [N] - [P] - [K] | Quantity | Unit of measure | 1. <u>Before</u> seeding, at seeding time or <u>before</u> new crop growth begins | 2. <u>After</u> seeding, <u>before</u> harvest or <u>after</u> new crop growth begins | 3. <u>After</u> harvest |
| Crop 1: _____ | a. ___ - ___ - ___ b. ___ - ___ - ___ c. ___ - ___ - ___ d. ___ - ___ - ___ | _____ | _____ | _____ | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| Crop 2: _____ | a. ___ - ___ - ___ b. ___ - ___ - ___ c. ___ - ___ - ___ d. ___ - ___ - ___ | _____ | _____ | _____ | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| Crop 3: _____ | a. ___ - ___ - ___ b. ___ - ___ - ___ c. ___ - ___ - ___ d. ___ - ___ - ___ | _____ | _____ | _____ | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| Crop 4: _____ | a. ___ - ___ - ___ b. ___ - ___ - ___ c. ___ - ___ - ___ d. ___ - ___ - ___ | _____ | _____ | _____ | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| Crop 5: _____ | a. ___ - ___ - ___ b. ___ - ___ - ___ c. ___ - ___ - ___ d. ___ - ___ - ___ | _____ | _____ | _____ | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| Crop 6: _____ | a. ___ - ___ - ___ b. ___ - ___ - ___ c. ___ - ___ - ___ d. ___ - ___ - ___ | _____ | _____ | _____ | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |
| Crop 7: _____ | a. ___ - ___ - ___ b. ___ - ___ - ___ c. ___ - ___ - ___ d. ___ - ___ - ___ | _____ | _____ | _____ | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 |

Solid manure application

For the following questions, include all manure applied on the land you operated in 2006 whether produced on your farm, bought or received from others.

18. Was solid manure applied to the land you operated in 2006?

Yes
↓

No
↓
(Go to question 27)

19. On which crop was solid manure applied to on the land you operated in 2006,?

Crop harvested in 2006 (Question 4, page 4):

Crop 1 _____

Crop 2 _____

Crop 3 _____

Crop 4 _____

Crop 5 _____

Crop 6 _____

Crop 7 _____

Other, specify: _____

20. How much solid manure was applied on the land you operated in 2006?

Quantity

Unit of measure

(e.g. tons per acre)

21. What was the area on which solid manure was applied to?

Area

Unit of measure

Acres

Hectares

Arpents

22. In 2006, what factors were considered when deciding on the amount of solid manure to apply?

Was the decision based on...

(Check all that apply)

- soil testing
- soil moisture conditions
- nutrient content of manure
- nutrient requirement of crop grown
- amount historically used
- amount of land available to receive supply of manure
- nutrient carry over or removal by previous crop
- amount of commercial fertilizer applied
- distance from the manure storage area
- plant analysis (foliage, petiole)
- cost of commercial fertilizer
- Other, specify: _____
- Don't know

23. In 2006, was the solid manure tested for its nutrient content before being applied to the land?

Yes No Don't know

24. Of the total amount of solid manure applied in 2006, what percentage was applied...

(The total should equal 100%)

- ... before crop growth began _____ %
- ... after crop growth began _____ %
- ... after harvest, (before the ground is frozen) _____ %
- ... on frozen ground _____ %

(The total should equal 100%)

25. What was the most common method of application of the solid manure?

Was it...

- broadcast and incorporated into soil
- broadcast and not incorporated into soil
- Other, specify: (C2502) _____

26. If solid manure was incorporated in the soil, how much time passed between application and incorporation?

Was it incorporated...

(If different for different fields, give the average)

- the same day of the application
- 1-2 days after application
- 3-5 days after application
- more than 5 days after application
- solid manure was not incorporated
- Don't know

Liquid and/or semi-solid manure application

27. In 2006, was liquid and/or semi-solid manure applied to the land you operated?

Yes
↓

No
↓
(Go to question 36)

28. On which crop was liquid and/or semi-solid manure applied to?

Crop harvested in 2006 (Question 4, page 4):

Crop 1 _____

Crop 2 _____

Crop 3 _____

Crop 4 _____

Crop 5 _____

Crop 6 _____

Crop 7 _____

Other, specify: _____

29. How much liquid and/or semi-solid manure was applied on the land you operated in 2006?

Quantity

Unit of measure

(e.g. gallons per acre)

30. What was the area on which liquid and/or semi-solid manure was applied to?

Area

Unit of measure

Acres

Hectares

Arpents

31. In 2006, what factors were considered when deciding on the amount of liquid and/or semi-solid manure to apply?

Was the decision based on ...

(Check all that apply)

- soil testing
- soil moisture conditions
- nutrient content of manure
- nutrient requirement of crop grown
- amount historically used
- amount of land available to receive supply of manure
- nutrient carry over or removal by previous crop
- amount of commercial fertilizer applied
- distance from the manure storage area
- plant analysis (foliage, petiole)
- cost of commercial fertilizer
- Other, specify : (C3114) _____
- Don't know

32. In 2006, was the liquid and/or semi-solid manure tested for its nutrient content before being applied to the land?

Yes

No

Don't know

33. Of the total amount of liquid and/or semi-solid manure applied in 2006, what percentage was applied...

(The total should be equal to 100%)

- ... before crop growth began _____ %
- ... after crop growth began _____ %
- ... after harvest, (before the ground is frozen) _____ %
- ... on frozen ground _____ %

(The total should equal 100%)

34. What was the most common method of application of the liquid and/or semi-solid manure?

Was it...

- broadcast and incorporated into soil
- broadcast and not incorporated into soil
- directly injected into soil
- applied below crop canopy or using low boom applicator
- applied using irrigation system (e.g. with a pivot gun)
- Other, specify: _____
- Don't know

35. If liquid and/or semi-solid manure was incorporated in the soil, how much time passed between application and incorporation?

Was it incorporated...

(If different for different fields, give the average)

- the same day of the application
- 1-2 days after application
- 3-5 days after application
- more than 5 days after application
- liquid and/or semi-solid manure was not incorporated
- Don't know

FOR INFORMATION ONLY

Section II - Pesticide Application Practices

36. In 2006, were any herbicides applied to the land you operated?

Yes



No

(Go to question 38)

Don't know

(Go to question 38)

37. If yes, on which crop was it applied?

Crop harvested in 2006 (Question 4, page 4):

Crop 1 _____

Crop 2 _____

Crop 3 _____

Crop 4 _____

Crop 5 _____

Crop 6 _____

Crop 7 _____

38. In 2006, were any insecticides applied to the land you operated?

Yes



No

(Go to question 40)

Don't know

(Go to question 40)

39. If yes, on which crop was it applied?

Crop harvested in 2006 (Question 4, page 4):

Crop 1 _____

Crop 2 _____

Crop 3 _____

Crop 4 _____

Crop 5 _____

Crop 6 _____

Crop 7 _____

40. In 2006, were any fungicides applied to the land you operated?

Yes
↓

No
↓
(Go to question 42)

Don't know
↓
(Go to question 42)

41. If yes, on which crop was it applied?

Crop harvested in 2006 (Question 4, page 4):

Crop 1 _____

Crop 2 _____

Crop 3 _____

Crop 4 _____

Crop 5 _____

Crop 6 _____

Crop 7 _____

FOR INFORMATION ONLY

42. In 2006, what factors were considered when deciding to apply herbicides, insecticides, fungicides?

Was the decision based on
(Check all that apply)

- ... experience/regularly scheduled application
- ... seed purchased (included with treated seed)
- ... crop or weed growth stage
- ... scouting (at the first sign of weeds, insects or disease on farm)
- ... regional forecasting/warning services
- ... economic injury threshold (weed, insects or disease impact exceeds acceptable levels)
- ... climatic conditions (degree days, moisture)
- ... advice from other farm operators
- ... advice from seed or chemical salesperson, agronomist
- ... established integrated pest management program
- Other, specify: _____
(C4213/26/39)
- Don't know

| Herbicides | Insecticides | Fungicides |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

43. In 2006, did a formally certified (or licensed) person apply or supervise application of herbicides, insecticides or fungicides on your operation?

(Include application done by farm operator, partner, employees or custom applicator)

- Yes, all applications
- Yes, some applications
- No
- Don't know

44. In 2006, when was the sprayer used to apply herbicides, insecticides or fungicides calibrated?
(if more than one sprayer, answer for the one used most frequently)

Was it calibrated ...
(Check all that apply)

- only when it broke down or when major components were replaced
- before the beginning of the crop season / before first application
- between applications of different types of pesticides
- Did not calibrate
- Other, specify: _____
- Don't know
- Not applicable / no sprayer used

45. In 2006, were any of the following methods used to control herbicide, insecticide or fungicide drift on your operation?

Did you, a partner, an employee or custom applicator...

(Check all that apply)

- apply pesticides only when winds are below recommended thresholds for application rate/wind speed
- use low drift or low pressure nozzles
- use shrouded booms (protective shrouds or cones around sprayer boom)
- add anti-drift agents or chemical to the herbicides, insecticides or fungicides
- leave untreated buffer zones
- Other, specify: _____
- No specific method employed to control pesticide drift
- Don't know

46. In 2006, were any of the following methods used to reduce the amount of herbicides, insecticides or fungicides used on your operation?

Did you, a partner, an employee or custom applicator ...

(Check all that apply)

- use tracking, guidance or marking (flags) systems to minimize overlap and misses
- spray only target infested areas (including field margins)
- use in line injection/mixing systems to eliminate unused tank mixes
- apply smaller amounts than what recommended on chemical product label
- Other, specify: _____
- No specific method employed to reduce the amount of herbicides, insecticides or fungicides
- Don't know

Alternative methods to control weeds, insects or diseases

47. In 2006, were any of the following methods used specifically to control weeds, insects or diseases?

Did you, a partner, an employee or custom applicator ...

(Check all that apply)

- plant tolerant or resistant plants, varieties or cultivars (e.g. BT corn)
- rotate crops to disrupt pest cycles
- eliminate, remove or incorporate diseased plant, pruning residues or cull piles
- plant green manure or cover crops
- plant in the fall (e.g. winter wheat, fall rye, tamed pasture)
- use tillage implements (e.g. cultivator, rotary hoe)
- use hand weeding/hoeing
- use covers or mulches (synthetic or natural crop residues)
- introduce natural enemies/biological control agents (predators, parasites, pathogens, pheromones)
- lure or trap crops
- Other, specify: _____
- Don't know

FOR INFORMATION ONLY

Section III - Land and Water Management Practices

48. In 2006, were any of the following practices used on the land you operated?

If yes, specify the area for each practice used.

Did you use...
(Check all that apply)

Area

Unit of measure

cover or companion crops seeded (within an existing row "relay cropped" or solid seeded crop "intercropped")

Acres Hectares Arpents

winter cover or green manure crops seeded alone after previous crop harvest

Acres Hectares Arpents

strip cropping

Acres Hectares Arpents

contour or across the slope cropping

Acres Hectares Arpents

terracing (large soil ridges constructed on the contour or across the slope)

Acres Hectares Arpents

permanent perennial forages on erodible land

Acres Hectares Arpents

straw mulching (spread straw) on erodible land

Acres Hectares Arpents

farmstead shelterbelts/ windbreaks

Acres Hectares Arpents

field shelterbelts (trees, shrubs)

Acres Hectares Arpents

land with surface or subsurface drainage (e.g. constructed surface water channels or tile drainage)

Acres Hectares Arpents

Other, specify: _____

Acres Hectares Arpents

The following questions are about land use changes.

Woodlands include woodlots, sugarbush, tree windbreaks, bushes, shelterbelts.

Area

Unit of measure

49. In 2006, what was the total woodland area on your operation?

Acres Hectares Arpents

50. Over the last five years, how much land area was changed FROM woodland TO pasture or cultivated cropland?

Acres Hectares Arpents

51. Over the last five years, how much land area was changed FROM pasture or cultivated cropland TO woodland?

Acres Hectares Arpents

52. In 2006, how much land area was changed FROM cultivated cropland TO pasture?

Acres Hectares Arpents

53. In 2006, how much land area was changed FROM pasture (tame, seeded and natural) TO cultivated cropland?

Acres Hectares Arpents

Different types of wetlands may be distinguished by the amount of time they normally contain surface water and by the different plant communities they harbour. Temporary wetlands usually contain water only for a short time in the spring or after heavy precipitation.

Seasonal wetlands normally have water present until mid summer or early fall, and during most years. Examples include ponds, sloughs, potholes, seasonally flooded meadows, marshes and treed wet swamps.

Permanent wetlands are flooded year-round except for extreme drought periods.

Riparian buffer area includes both permanent planted or natural vegetation adjacent to a seasonal or permanent wetland or waterway, extending upslope from the normal shoreline.

Setback distance is the distance between the normal shoreline of a seasonal or permanent wetland or waterway, extending upslope to the edge of manure, fertilizer or pesticide applications.

54. Were there any seasonal wetlands on or adjacent to the land you operated in 2006?

Yes



No

(Go to question 61)

Don't know

(Go to question 61)

55. If yes, what was the total area of the seasonal wetlands?

Acres

Hectares

Arpents

56. Did you maintain a riparian buffer area around the seasonal wetlands?

Yes



No

(Go to question 58)

57. If yes, how wide was it? (If it varied for different wetlands, give the average width)

Feet

Metres

Yards

58. Did you maintain a setback distance around the seasonal wetlands?

Yes



No

(Go to question 60)

59. If yes, how wide was it? (If it varied for different wetlands, give the average width)

Feet

Metres

Yards

60. Did you stabilize shorelines or banks to prevent erosion?

Yes

No

Don't know

61. Were there any permanent wetlands on or adjacent to the land you operated in 2006?

Yes
↓

No
↓
(Go to question 68)

Don't know
↓
(Go to question 68)

62. If yes, what was the total area of the permanent wetlands?

_____ Acres Hectares Arpents

63. Did you maintain a riparian buffer area around the permanent wetlands?

Yes
↓

No
↓
(Go to question 65)

64. If yes, how wide was it? (If it varied for different wetlands, give the average width)

_____ Feet Metres Yards

65. Did you maintain a setback distance around the permanent wetlands?

Yes
↓

No
↓
(Go to question 67)

66. If yes, how wide was it? (If it varied for different wetlands, give the average width)

_____ Feet Metres Yards

67. Did you stabilize shorelines or banks to prevent erosion?

Yes

No

Don't know

Waterways include grassed waterways, coulees, treed waterways, ditches, creeks, streams.

Riparian buffer area includes permanent natural or planted vegetation adjacent to surface water.

Setback distance/separation is distance between surface water and manure, fertilizer or pesticides applications.

68. Were there any waterways on or adjacent to the land you operated in 2006?

Yes
↓

No
↓
(Go to question 75)

Don't know
↓
(Go to question 75)

69. If yes, what was the total LENGTH of the waterways?

Feet

Metres

Yards

Miles

Kilometres

70. Did you maintain a riparian buffer area around the waterways?

Yes
↓

No
↓
(Go to question 72)

71. If yes, how wide was it? (If it varied for different waterways, give the average width)

Feet

Metres

Yards

72. Did you maintain a setback distance from the waterways?

Yes
↓

No
↓
(Go to question 74)

73. If yes, how wide was it? (If it varied for different waterways, give the average width)

Feet

Metres

Yards

74. Did you stabilize shorelines or banks to prevent erosion?

Yes

No

Don't know

Domestic Water

75. In 2006, were there any active water wells on the land you operated?

Yes
↓

No
↓
(Go to question 77)

Don't know
↓
(Go to question 77)

76. If yes, how often is the water tested to meet quality standards for human and/or livestock consumption?

(If it varied for different wells, give the average)

- At least once a year
- Every 2 years
- Every 3 to 5 years
- Every 6 years or more
- Not tested, not a concern
- Never
- Don't know

77. In 2006, were there any abandoned water wells on the land you operated?

Yes
↓

No
↓
(Go to question 79)

Don't know
↓
(Go to question 79)

78. If yes, have these abandoned wells been decommissioned?

(wells filled in, capped)

- All decommissioned
- Some decommissioned
- None
- Don't know

Section IV - Wildlife Damage

79. In the last 5 years, were any damages caused to the CROPS on your operation by any of the following wildlife groups?

(Check all that apply)

- Waterfowl (ducks, geese, cranes)
- Ungulates (deer, moose, elk)
- Other birds (blackbird, starling, crows)
- Raccoons
- Bears
- Rodents and small animals (gophers, badgers, moles, porcupines)
- Other, specify: _____
- No damage caused by wildlife on my operation (Go to question 81)

80. In 2006, what crops were damaged, and what percentage of the crop was lost or damaged?

Yield lost expressed in percent, not in dollar value.

| Crop harvested in 2006 (question 4, page 4) | Specify percentage of crop that was damaged | | | |
|--|---|--------|---------|-------------|
| | 0% - 5% | 6%-10% | 11%-30% | 31% or more |
| Crop 1 _____ | ○ | ○ | ○ | ○ |
| Crop 2 _____ | ○ | ○ | ○ | ○ |
| Crop 3 _____ | ○ | ○ | ○ | ○ |
| Crop 4 _____ | ○ | ○ | ○ | ○ |
| Crop 5 _____ | ○ | ○ | ○ | ○ |
| Crop 6 _____ | ○ | ○ | ○ | ○ |
| Crop 7 _____ | ○ | ○ | ○ | ○ |

81. In the last 5 years, were any of the following practices used to reduce the impact of wildlife damage to your crops?

(Check all that apply)

- Fencing to protect crops
- Scaring devices or repellent systems
- Shooting or trapping by yourself or others
- Lure crops
- Less palatable crops
- Border cropping
- Netting
- Other, specify: _____
- No practices used specifically to reduce the impact of wildlife damage

82. In the last 5 years, was there any damage to BUILDINGS/EQUIPMENT on your operation caused by wildlife?



83. If yes, what was the damage?

Specify: _____

84. In the last 5 years, did your operation receive any payments for the following purposes?

(Check all that apply)

- Financial compensation for wildlife damage
- Financial compensation for conservation of wildlife habitats
- Payments for the purchase of land or for easement by wildlife conservation organizations
- Payments for land use/management agreement
- None of the above

Section V - Waste Management and Hazardous Materials

85. In 2006, how were the following materials stored on your farm operation?

(Check all that apply)

| | Commercial Fertilizers | | Pesticides (Insecticides, Herbicides, Fungicides) | | Petroleum Products | |
|--|--------------------------|--------------------------|--|--------------------------|--------------------------|--------------------------|
| | | | | | Fuel | Oil and Grease |
| Building with a concrete floor or pad | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Building without a concrete floor or pad | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Above ground sealed tank | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other, specify: _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Not stored on the farm operation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

86. Did the storage site have a containment system to handle spills?

| | Commercial Fertilizers | | Pesticides (Insecticides, Herbicides, Fungicides) | | Petroleum Products | |
|---------------------------|---------------------------|---------------------------|--|---------------------------|---------------------------|---------------------------|
| | | | | | Fuel | Oil and Grease |
| <input type="radio"/> Yes | <input type="radio"/> Yes | <input type="radio"/> Yes | <input type="radio"/> Yes | <input type="radio"/> Yes | <input type="radio"/> Yes | <input type="radio"/> Yes |
| <input type="radio"/> No | <input type="radio"/> No | <input type="radio"/> No | <input type="radio"/> No | <input type="radio"/> No | <input type="radio"/> No | <input type="radio"/> No |
| <input type="radio"/> N/A | <input type="radio"/> N/A | <input type="radio"/> N/A | <input type="radio"/> N/A | <input type="radio"/> N/A | <input type="radio"/> N/A | <input type="radio"/> N/A |

87. In 2006, how were these products (including their containers) disposed of? Were they disposed of ...

(Check all that apply)

| | Commercial Fertilizers | | Pesticides (Insecticides, Herbicides, Fungicides) | | Petroleum Products (e.g. oil, grease) | | Other Hazardous Materials (e.g. batteries, paint) | |
|---|--------------------------|--------------------------|--|--------------------------|--|--------------------------|--|--------------------------|
| | | | | | | | | |
| ... on farm (incineration, buried, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ... with domestic garbage | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ... in a municipal recycling program | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ... by returning to supplier | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ... using waste disposal sites for hazardous waste or dangerous goods | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other, specify : _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| No disposal | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Section VI - Environmental Farm Plan

91. Does your farm operation have a formal, written Environmental Farm Plan (EFP)?
(e.g. < relevant provincial plan > as part of a federal, provincial or industry program.)

A formal, written farm environmental farm plan is an overall assessment of environmental issues or concerns related to your operation, and can include Individual and/or Group planning processes.

Yes, plan
is developed

Yes, plan is in development
or being reviewed

No

(Go to question 96)

92. When was this Environmental Farm Plan (EFP) developed or last updated?

- Less than 1 year ago
- From 1 to 3 years ago
- From 3 to 5 years ago
- More than 5 years ago

93. To what extent were the Beneficial Management Practices (BMPs) identified in the action plan of your EFP implemented on your operation?

- Practices fully implemented
- Practices partially implemented
- Practices not implemented

94. Was any technical assistance received from any of the following groups to help implement the Beneficial Management Practices (BMPs) identified in the action plan of your EFP?

(Check all that apply)

- Did not receive assistance
- Government agency
- Industry (input supplier, processors, etc.)
- Environmental non-governmental organizations
- Producer association
- College/University
- EFP planning advisor/facilitator
- Agrologist
- Other, specify: _____

95. Was any financial assistance (from any source) received to offset costs for implementation of Beneficial Management Practices (BMPs) identified in the action plan of your EFP?

(Exclude drought payments)

Yes

No

96. In 2006, were global positioning system (GPS) equipment or products (digital maps) used on your operation?

Yes

No

Don't know



(Go to question 98)

(Go to question 98)

97. If yes, was it used ...

(Check all that apply)

- to collect information for soil and crop management
- to collect information for water management
- as a tracking or guidance system on tractor to eliminate overlaps and misses in field operations
- to target or vary fertilizer or manure application rate
- to target or vary pesticide application rate
- Other, specify: _____

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