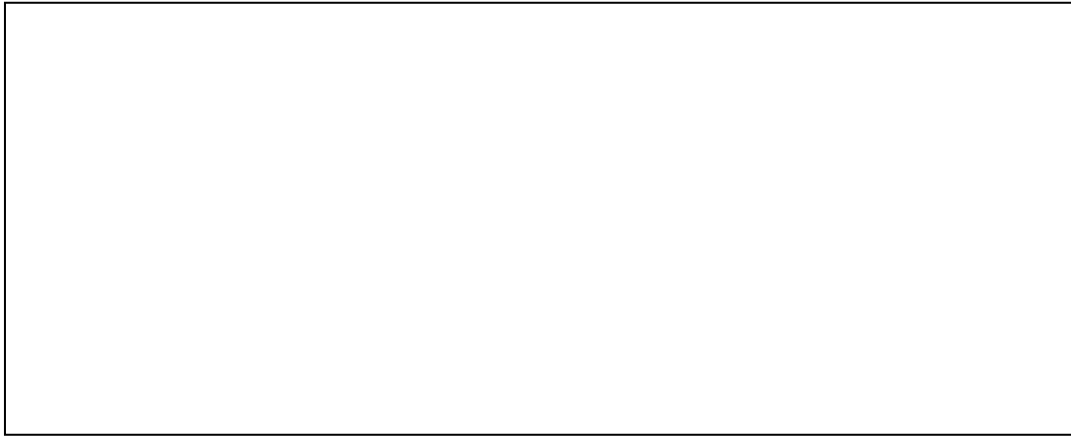




# 2005 Livestock Farm Practices Survey

## Dairy Producers



**CONFIDENTIAL**  
when completed

Collected under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S-19.

To correct or make changes to this label → See below

**Ce questionnaire est disponible en français.**

### 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:

To improve overall air quality in Canada and worldwide, agriculture like other industries is asked to quantify emissions of ammonia into the atmosphere. The results of the survey will place Canada among other industrialized countries who have agreed to co-operate to improve air quality around the globe. Because pollutants travel long distances crossing many boundaries, international co-operation is essential for long-term air quality. The information obtained from the survey will guide researchers to improve efficiency of Nitrogen use on farms.

Your farm was selected at random for this survey from a list of dairy producers. While participation in this survey is voluntary, your cooperation is important to ensure that the information collected in this survey is as accurate and as comprehensive as possible.

Statistics Canada is prohibited by law from publishing any statistics which would divulge information obtained from this survey that relates to any identifiable business, institution or individual without their knowledge and consent. The data reported on this questionnaire will be treated in confidence, used for statistical purposes and published in aggregate form only.

This questionnaire on commercial dairy operations deals with feed protein, barn types, manure handling and spreading of manure. The person most knowledgeable about these items should complete the questionnaire.

**Please refer to the 2005 calendar year when answering questions unless specified otherwise.**

### Change or correction to the address label (if required)

Are there any changes required to the address label?

Corporation name

Area code

Operator name

Telephone

Contact name

Telephone

R.R.

P.O. Box

Number and street name

Postal code

Post office (name of city, town or village where mail is received)



Statistics Canada / Statistique Canada



FOR INFORMATION ONLY

**For questions about dairy cows include the following:**

- All milking cows, dry cows and heifers on your operation, regardless of ownership, including those that are custom fed or fed under contract for others.

**For questions about dairy cows exclude the following:**

- Do not report milking cows, dry cows or heifers owned by you but kept on a farm owned by someone else.

**Section 1 – Feeding and housing practices: milking and dry cows, dairy calves, heifers**

1. In 2005, what was the average number of cows, calves and heifers present on your farm operation, at any one time?

How many milking cows ...?

--	--	--	--	--	--	--

Milking cows<sub>1(L00101)</sub>

How many dry cows ...?

--	--	--	--	--	--	--

Dry cows<sub>2(L00102)</sub>

How many dairy calves ...?

--	--	--	--	--	--	--

Dairy calves (up to 1 year)<sub>3(L00103)</sub>

How many heifers ...?

--	--	--	--	--	--	--

Heifers (over one year)<sub>4(L00104)</sub>

2. In 2005, how did you feed protein to your milking cows? *Check all that apply*

Fed all the same protein amounts regardless of production or age .....  <sub>1(L00201)</sub>

Divided into high and low (or more) groups according to milk production .....  <sub>2(L00202)</sub>

First lactation animals fed differently than multi-lactation animals .....  <sub>3(L00203)</sub>

Each cow fed individualized portions of protein supplement  
(e.g. topdressing or computerized feeding systems).....  <sub>4(L00204)</sub>

Other, specify: \_\_\_\_\_ <sub>5(L00205)</sub>

3. In 2005, what proportion of your milking cow feed came from commercial feed suppliers?

More than 75%  <sub>1(L00301)</sub> → Answer questions 4 and 5

25% to 75% .....  <sub>2(L00302)</sub> → Answer questions 4 and 5

Less than 25%.  <sub>3(L00303)</sub> ↓ Go to question 6

None ...  <sub>4(L00304)</sub> ↓ Go to question 6

4. What commercial feed products did you obtain?

*Check all that apply*

Complete grain mix (pellets, mash, flaked) ..  <sub>1(L00401)</sub>

Protein supplements.....  <sub>2(L00402)</sub>

Amino acids .....  <sub>3(L00403)</sub>

Vitamin/mineral premixes .....  <sub>4(L00404)</sub>

Other, *specify*: \_\_\_\_\_ <sub>5(L00405)</sub>

Don't know  <sub>6(L00406)</sub>

5. How were grain mix or protein supplements used in your operation?

*Check all that apply.*

Did not use grain mix or protein supplements.  <sub>1(L00501)</sub>

Added to total mixed ration .....  <sub>2(L00502)</sub>

Top dress (tie stall barns) .....  <sub>3(L00503)</sub>

Fed in milking parlour .....  <sub>4(L00504)</sub>

Fed in standing yards or pasture.....  <sub>5(L00505)</sub>

Other, *specify*: \_\_\_\_\_ <sub>6(L00506)</sub>

<p>6. In 2005, what proportion of your <u>dry cow</u> and <u>heifer</u> feed came from commercial feed suppliers?</p> <p>More than 75% <input type="checkbox"/><sub>1(L00601)</sub> → Answer questions 7 and 8</p> <p>25% to 75% ..... <input type="checkbox"/><sub>2(L00602)</sub> → Answer questions 7 and 8</p> <p>Less than 25%. <input type="checkbox"/><sub>3(L00603)</sub> ↓ Go to question 9</p> <p>None..... <input type="checkbox"/><sub>4(L00604)</sub> ↓ Go to question 9</p>	<p>7. What commercial feed products did you obtain?</p> <p><i>Check all that apply</i></p> <p>Complete grain mix (pellets, mash, flaked) .. <input type="checkbox"/><sub>1(L00701)</sub></p> <p>Protein supplements ..... <input type="checkbox"/><sub>2(L00702)</sub></p> <p>Vitamin/mineral premixes ..... <input type="checkbox"/><sub>3(L00703)</sub></p> <p>Other, specify: _____ <sub>4(L00704)</sub></p> <hr/> <p>8. How were grain mix or protein supplements used in your operation?</p> <p><i>Check all that apply.</i></p> <p>Did not use grain mix or protein supplements. <input type="checkbox"/><sub>1(L00801)</sub></p> <p>Added to total mixed ration ..... <input type="checkbox"/><sub>2(L00802)</sub></p> <p>Calf starter .. ..... <input type="checkbox"/><sub>3(L00803)</sub></p> <p>Close up or pregnant cows ..... <input type="checkbox"/><sub>4(L00804)</sub></p> <p>Other, specify: _____ <sub>5(L00805)</sub></p>
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9. In 2005, what types of areas did you use for your milking cows, dry cows and heifers (*over one year*)?

*Check all that apply*

	<u>Milking cows</u>	<u>Dry cows, heifers</u>
Pasture(s), where grazing is a major source of feed for the cows .....	<input type="checkbox"/> <sub>1(L00901)</sub>	<input type="checkbox"/> <sub>2(L00902)</sub>
Exercise fields, small pastures where there is some feeding .....	<input type="checkbox"/> <sub>3(L00903)</sub>	<input type="checkbox"/> <sub>4(L00904)</sub>
Standing yard(s), such as corrals and unpaved yards where manure is removed	<input type="checkbox"/> <sub>5(L00905)</sub>	<input type="checkbox"/> <sub>6(L00906)</sub>
Paved yards where manure is removed.....	<input type="checkbox"/> <sub>7(L00907)</sub>	<input type="checkbox"/> <sub>8(L00908)</sub>
Barn(s) .....	<input type="checkbox"/> <sub>9(L00909)</sub>	<input type="checkbox"/> <sub>10(L00910)</sub>

10. During the 2005 **warm season** (from May to October), how many hours during each day did you keep your milking cows, dry cows and heifers (*over one year*) in each of the following areas?

*Give the most common.*

	<u>Milking cows</u>	<u>Dry cows, heifers</u>
On pasture.....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>1(L01001)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>2(L01002)</sub>
In exercise fields .....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>3(L01003)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>4(L01004)</sub>
In standing yards .....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>5(L01005)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>6(L01006)</sub>
In barns .....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>7(L01007)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>8(L01008)</sub>

11. During the 2005 **cold season** (from November to April), how many hours during each day did you keep your milking cows, dry cows and heifers (*over one year*) in each of the following areas?

*Give the most common.*

	<u>Milking cows</u>	<u>Dry cows, heifers</u>
On pasture.....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>1(L01101)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>2(L01102)</sub>
In exercise fields .....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>3(L01103)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>4(L01104)</sub>
In standing yards .....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>5(L01105)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>6(L01106)</sub>
In barns .....	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>7(L01107)</sub>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 20px; margin-right: 5px;"></div> hours <sub>8(L01108)</sub>

**\*For questions 12 to 16, please refer to a normal year\***

12. In which months do your milking cows, dry cows and heifers stay most of the time in pastures or in exercise fields?

Check all that apply.

	<u>Milking cows</u>		<u>Dry cows, heifers</u>
None of the time .....	<input type="checkbox"/> 1(L01201)	.....	<input type="checkbox"/> 2(L01202)
April to May .....	<input type="checkbox"/> 3(L01203)	.....	<input type="checkbox"/> 4(L01204)
June to August .....	<input type="checkbox"/> 5(L01205)	.....	<input type="checkbox"/> 6(L01206)
September to November .....	<input type="checkbox"/> 7(L01207)	.....	<input type="checkbox"/> 8(L01208)
December to March .....	<input type="checkbox"/> 9(L01209)	.....	<input type="checkbox"/> 10(L01210)

13. In which months do your milking cows, dry cows and heifers spend most of the time in standing yards?

Check all that apply.

	<u>Milking cows</u>		<u>Dry cows, heifers</u>
None of the time .....	<input type="checkbox"/> 1(L01301)	.....	<input type="checkbox"/> 2(L01302)
April to May .....	<input type="checkbox"/> 3(L01303)	.....	<input type="checkbox"/> 4(L01304)
June to August .....	<input type="checkbox"/> 5(L01305)	.....	<input type="checkbox"/> 6(L01306)
September to November .....	<input type="checkbox"/> 7(L01307)	.....	<input type="checkbox"/> 8(L01308)
December to March .....	<input type="checkbox"/> 9(L01309)	.....	<input type="checkbox"/> 10(L01310)

14. In which months do you keep your milking cows, dry cows and heifers most of the time in barns?

Check all that apply.

	<u>Milking cows</u>		<u>Dry cows, heifers</u>
None of the time .....	<input type="checkbox"/> 1(L01401)	.....	<input type="checkbox"/> 2(L01402)
April to May .....	<input type="checkbox"/> 3(L01403)	.....	<input type="checkbox"/> 4(L01404)
June to August .....	<input type="checkbox"/> 5(L01405)	.....	<input type="checkbox"/> 6(L01406)
September to November .....	<input type="checkbox"/> 7(L01407)	.....	<input type="checkbox"/> 8(L01408)
December to March .....	<input type="checkbox"/> 9(L01409)	.....	<input type="checkbox"/> 10(L01410)

15. During the **warm season** (from May to October), what percentage of the total feed (regardless of who grew it) for your cows and heifers come from the following (exclude commercial vitamin and mineral premixes and protein supplements)? What percentage is: ...?

	%		%
	<u>Milking cows</u>		<u>Dry cows, heifers</u>
Pasture unfertilized with little alfalfa or other legume .....	<input type="text"/> 1(L01501)	.....	<input type="text"/> 2(L01502)
Pasture fertilized or more than 25% alfalfa or other legume .....	<input type="text"/> 3(L01503)	.....	<input type="text"/> 4(L01504)
Whole corn, fresh or silage .....	<input type="text"/> 5(L01505)	.....	<input type="text"/> 6(L01506)
Cereal silage .....	<input type="text"/> 7(L01507)	.....	<input type="text"/> 8(L01508)
Grain: corn or cereal .....	<input type="text"/> 9(L01509)	.....	<input type="text"/> 10(L01510)
Silage with less than 25% alfalfa or other legume .....	<input type="text"/> 11(L01511)	.....	<input type="text"/> 12(L01512)
Silage with 25% or more alfalfa or other legume .....	<input type="text"/> 13(L01513)	.....	<input type="text"/> 14(L01514)
Hay with less than 25% alfalfa or other legume .....	<input type="text"/> 15(L01515)	.....	<input type="text"/> 16(L01516)
Hay with 25% or more alfalfa or other legume .....	<input type="text"/> 17(L01517)	.....	<input type="text"/> 18(L01518)
Other for milking cows, <i>specify</i> : _____	<input type="text"/> 19(L01519)		<input type="text"/> 20(L01520)

**Total must be 100%**

Other for dry cows, <i>specify</i> : _____	<input type="text"/> 21(L01521)		<input type="text"/> 22(L01522)
--------------------------------------------	---------------------------------	--	---------------------------------

**Total must be 100%**

16. During the **cold season** (from November to April), what percentage of the total feed (regardless of who grew it) for your cows and heifers come from the following (exclude commercial vitamin and mineral premixes and protein supplements)? What percentage comes from: ...?

	%	%						
	Milking cows	Dry cows, heifers						
Same as warm season .....	<input type="checkbox"/> 1(L01601)	<input type="checkbox"/> 2(L01602)						
Pasture unfertilized with little alfalfa or other legume .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 3(L01603)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 4(L01604)			
Pasture fertilized or more than 25% alfalfa or other legume .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 5(L01605)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 6(L01606)			
Whole corn chop, silage .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 7(L01607)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 8(L01608)			
Cereal silage .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 9(L01609)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 10(L01610)			
Grain: corn or cereal .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 11(L01611)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 12(L01612)			
Silage with less than 25% alfalfa or other legume .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 13(L01613)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 14(L01614)			
Silage with more than 25% alfalfa or other legume .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 15(L01615)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 16(L01616)			
Hay with less than 25% alfalfa or other legume .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 17(L01617)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 18(L01618)			
Hay with 25% or more alfalfa or other legume .....	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 19(L01619)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 20(L01620)			
Other for milking cows, specify: _____	<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 21(L01621)				<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 22(L01622)			
<b>Total must be 100%</b>								
Other for dry cows, specify: _____		<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 23(L01623)						
		<table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 24(L01624)						
<b>Total must be 100%</b>								

<p>17. In 2005, did you purchase commercial protein supplement for your <u>milking cows</u>?</p> <p>Yes..... <input type="checkbox"/> 1(L01701) → Answer questions 18 to 20</p> <p>No ..... <input type="checkbox"/> 2(L01702) ↓ Go to question 21</p>	<p>18. What was the percentage of crude protein content, on average, in the supplement? Give the most common.</p> <p style="text-align: center;"><table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> 1(L01801) % crude protein</p> <p style="text-align: center;">Do not know <input type="checkbox"/> 2(L01802)</p> <hr/> <p>19. On average, what quantity of commercial protein supplement did you feed your <u>milking cows</u> in a day?</p> <p style="text-align: center;"><table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> kg per cow per day 1(L01901)</p> <p style="text-align: center;">-----Or-----</p> <p style="text-align: center;"><table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> lb per cow per day 2(L01902)</p> <hr/> <p>20. What was the target crude protein feeding rate in the total diet for your <u>milking cows</u>? Give the most common.</p> <p>Top-yield cows</p> <p style="text-align: center;"><table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> kg per cow per day crude protein 1(L02001)</p> <p style="text-align: center;">-----Or-----</p> <p style="text-align: center;"><table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> lb per cow per day crude protein 2(L02002)</p> <p>Lower-yield cows</p> <p style="text-align: center;"><table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> kg per cow per day crude protein 3(L02003)</p> <p style="text-align: center;">-----Or-----</p> <p style="text-align: center;"><table border="1" style="display: inline-table; width: 30px; height: 20px;"><tr><td> </td><td> </td><td> </td></tr></table> lb per cow per day crude protein 4(L02004)</p> <p>Don't know <input type="checkbox"/> 5(L02005)</p>																					

21. Which best describes the barn used for your milking herd? (If there is more than one barn, answer for the largest milking herd barn). Check all that apply.

- Free stall with solid floor alley..... <sub>1(L02101)</sub>
- Free stall with slatted floor and manure pit..... <sub>2(L02102)</sub>
- Tie stall ..... <sub>3(L02103)</sub>
- Other, specify: \_\_\_\_\_ <sub>4(L02104)</sub>

22. In 2005, what was the average temperature in the barn used for your milking herd? (If there is more than one barn, answer for the largest milking herd barn). Check all that apply.

- About the same as outdoors..... <sub>1(L02201)</sub>
- Warmer than outdoors in summer by: ..... °C<sub>2(L02202)</sub> ---Or--- °F<sub>3(L02203)</sub>
- Cooler than outdoors in summer by: ..... °C<sub>4(L02204)</sub> ---Or--- °F<sub>5(L02205)</sub>
- Warmer than outdoors in winter by: ..... °C<sub>6(L02206)</sub> ---Or--- °F<sub>7(L02207)</sub>

23. In 2005, what type of ventilation system did you have in your milking herd barn(s)? Check all that apply.

- Fans switched on automatically with computer . ..... <sub>1(L02301)</sub>
- Fans switched on automatically with thermostat ..... <sub>2(L02302)</sub>
- Fans switched on manually ..... <sub>3(L02303)</sub>
- Passive ventilation (side curtains, free air or vent panels) ..... <sub>4(L02304)</sub>
- Other, specify: \_\_\_\_\_ <sub>5(L02305)</sub>

24. Which best describes the method used to remove manure from your dairy barn(s)? Check all that apply.

- Scraping, such as with a skid steer ..... <sub>1(L02401)</sub>
- Scraping with barn cleaner chain or shuttle ..... <sub>2(L02402)</sub>
- Flush with water ..... <sub>3(L02403)</sub>
- Other, specify: \_\_\_\_\_ <sub>4(L02404)</sub>

25. What is the main form of manure you collect from your milking cows, dry cows and heifers?

- |                                                            | <u>Milking cows</u>                           | <u>Dry cows, heifers</u>                      |
|------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| Slurry or liquid manure .....                              | <input type="checkbox"/> <sub>1(L02501)</sub> | <input type="checkbox"/> <sub>2(L02502)</sub> |
| Solid or semi-solid manure with little or no bedding ..... | <input type="checkbox"/> <sub>3(L02503)</sub> | <input type="checkbox"/> <sub>4(L02504)</sub> |
| Solid manure with a lot or some bedding .....              | <input type="checkbox"/> <sub>5(L02505)</sub> | <input type="checkbox"/> <sub>6(L02506)</sub> |
| None collected .....                                       | <input type="checkbox"/> <sub>7(L02507)</sub> | <input type="checkbox"/> <sub>8(L02508)</sub> |

<p>26. In 2005, did you use <u>bedding</u> in your barns for your <u>milking cows</u>?</p> <p>Yes..... <input type="checkbox"/><sub>1(L02601)</sub> → Answer questions 27 to 29</p> <p>No..... <input type="checkbox"/><sub>2(L02602)</sub> ↓ Go to question 30</p>	<p>27. What type of bedding did you use for your <u>milking cows</u>?</p> <p>Check all that apply.</p> <ul style="list-style-type: none"> <li>Straw or other crop residue .. <input type="checkbox"/><sub>1(L02701)</sub></li> <li>Sawdust, wood chips or shavings ..... <input type="checkbox"/><sub>2(L02702)</sub></li> <li>Paper crumb or other forest product . ..... <input type="checkbox"/><sub>3(L02703)</sub></li> <li>Sand, gravel or other mineral product..... <input type="checkbox"/><sub>4(L02704)</sub></li> <li>Other, specify: _____ <sub>5(L02705)</sub></li> </ul> <p>28. How often did you add fresh bedding for your <u>milking cows</u>? Specify the usual number of days between one addition and the next.</p> <p style="text-align: center;"><input type="text"/><input type="text"/><input type="text"/> Days<sub>1(L02801)</sub></p> <p>29. Usually how thick was it when you removed it?</p> <p style="text-align: center;"><input type="text"/><input type="text"/> Centimetres<sub>1(L02901)</sub> ---Or--- <input type="text"/><input type="text"/> Inches<sub>2(L02902)</sub></p>
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<p>30. In 2005, did you use <u>bedding</u> in your barns for your <u>dry cows and heifers</u>?</p> <p>Yes ..... <input type="checkbox"/> <sub>1(L03001)</sub> → Answer questions 31 to 33</p> <p>No ..... <input type="checkbox"/> <sub>2(L03002)</sub> ↓ Go to question 34</p>	<p>31. What type of bedding did you use <i>for your <u>dry cows and heifers</u></i>?</p> <p><i>Check all that apply.</i></p> <p>Straw or other crop residue .. <input type="checkbox"/> <sub>1(L03101)</sub></p> <p>Sawdust, wood chips or shavings ..... <input type="checkbox"/> <sub>2(L03102)</sub></p> <p>Paper crumb or other forest product.. <input type="checkbox"/> <sub>3(L03103)</sub></p> <p>Sand, gravel or other mineral product ..... <input type="checkbox"/> <sub>4(L03104)</sub></p> <p>Other, <i>specify</i>: _____ <sub>5(L03105)</sub></p> <hr/> <p>32. How often did you add fresh bedding <i>for your <u>dry cows and heifers</u></i>? Specify the usual number of days between one addition and the next.</p> <p style="text-align: center;"> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/>         Days <sub>1(L03201)</sub> </p> <hr/> <p>33. Usually how thick was it when you removed it?</p> <p style="text-align: center;"> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/>         Centimetres <sub>1(L03301)</sub> </p> <p style="text-align: center;">---Or---</p> <p style="text-align: center;"> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/>         Inches <sub>2(L03302)</sub> </p>
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34. Approximately how much bedding do you use per year for all your dairy cattle?

Cubic yards/metres <sub>1(L03401)</sub>

--Or--

Number of large bales <sub>2(L03402)</sub>

--Or--

Number of small bales <sub>3(L03403)</sub>

--Or--

Tonnes (*metric*) <sub>4(L03404)</sub>

--Or--

Tons (*imperial*) <sub>5(L03405)</sub>

--Or--

Other units <sub>6(L03406)</sub>  
*Specify units:* \_\_\_\_\_ <sub>7(L03407)</sub>

--Or--

Don't know  <sub>8(L03408)</sub>

35. In 2005, on average, how frequently did you remove manure from your milking herd barns?

*Give the most common.*

- Every day or less .....  <sub>1(L03501)</sub>
- Every few days to a week .....  <sub>2(L03502)</sub>
- Every few weeks to a month.....  <sub>3(L03503)</sub>
- Less frequently (*every few months or more*) .....  <sub>4(L03504)</sub>



36. In 2005, on average, how frequently did you remove manure from standing yards?  
 Answer only if respondent reported  in Box 5 or 6 for Question 9 and Question 10 or 11.

Give the most common.

- Every day or less .....  1(L03601)
- Every few days to a week.....  2(L03602)
- Every few weeks to a month.....  3(L03603)
- Less frequently (every few months or more) .....  4(L03604)

## Section 2 – Solid Manure Handling and Storage

**\*Please refer to a normal year\***

37. Do you store solid manure from your dairy operation?

- Yes.....  1(L03701) ↓ Please complete Section 2
- No .....  2(L03702) → Go to Section 3 (page 10)

38. How long do you usually store solid manure collected over **winter**? (*December to March*)

*Is it stored ...?*

- Less than 1 month .....  1(L03801)
- From 1 to less than 6 months ..  2(L03802)
- From 6 to less than 12 months .....  3(L03803)
- 12 months or longer.....  4(L03804)
- Not stored over winter. ....  5(L03805)

39. How long do you usually store solid manure collected from **spring to fall**? (*April to November*)

*Is it stored ...?*

- Less than 1 month .....  1(L03901)
- From 1 to less than 6 months ..  2(L03902)
- From 6 to less than 12 months .....  3(L03903)
- 12 months or longer.....  4(L03904)
- Not stored over spring to fall.....  5(L03905)

40. How do you usually store solid manure? *Is it ...?*

- Uncovered outdoor piles or bunkers.....  1(L04001)
- Piles or bunkers covered with tarp or straw.....  2(L04002)
- Piles or bunkers under a roof ..  3(L04003)
- Other storage, *specify*: \_\_\_\_\_ 4(L04004)

<p>41. Do you put any additives into the <u>solid manure</u>, to modify odour, pH or nutrient retention? Exclude litter.</p> <p>Yes ..... <input type="checkbox"/> 1(L04101) → Answer question 42</p> <p>No ..... <input type="checkbox"/> 2(L04102) ↓ Go to question 43</p>	<p>42. What types of additives do you use?  <i>Specify below:</i></p> <p>_____ 1(L04201)</p> <p>_____ 2(L04202)</p>
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43. How do you manage solid manure while it is in storage? *Is it ...?*

- Not moved or disturbed .....  1(L04301)
- Moved or disturbed once or twice  
*(e.g. to consolidate a pile or make room for more manure from the barn)*.....  2(L04302)
- Routinely and thoroughly mixed or turned *(e.g. to accelerate composting)*.....  3(L04303)

44. What is the percentage of solid manure handled through each method you use?

What percentage is ...?

	%			
Spread on land (by you or someone else).....				1(L04401)
Composted (then spread on land).....				2(L04402)
Removed by contractor (don't know how it is used).....				3(L04403)
Other, specify: _____				4(L04404) 5(L04405)
<b>Total must be 100%</b>				

### Section 3 – Land spreading of solid manure

**\*Please refer to a normal year\***

45. Is solid manure from your *dairy operation* spread on land (spread on any land by the operator or by someone else)?

Yes.....  1(L04501) ↓ Please complete Section 3

No .....  2(L04502) → Go to Section 4 (page 12)

46. When the manure is tilled into the soil, what amount would you estimate is still exposed to the air ...?

Less than 25% (such as with moldboard plow) .....  1(L04601)

25% to 50% (such as with disc or chisel plow).....  2(L04602)

More than 50% (such as with harrow).....  3(L04603)

47. Of the total amount of solid manure from your *dairy operation* applied on land, what percentage is spread on ...?

	%			
Tilled crop land (most crop residue tilled into soil) .....				1(L04701) → Answer questions 48 and 49
Reduced till crop land (most crop residue retained on surface).....				2(L04702) → Answer question 50
Land covered with perennial or forage crops .....				3(L04703) → Answer question 50
Other, specify: _____				4(L04704)..... 5(L04705) → Go to question 51
<b>Total must be 100%</b>				

If solid manure is applied on tilled crop land, answer questions 48 and 49. Else go to question 50.

48. Of the total (solid) manure applied on tilled soil, what percentage is usually applied each month?

What percentage is spread in: ...?

	%		
January .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
February .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
March .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
April .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
May .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
June .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
July .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
August .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
September .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
October .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
November .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
December .....	<input type="text"/>	<input type="text"/>	<input type="text"/>

Total must be 100%

All year round at regular intervals  13(L04813)

49. For each period, how many days after spreading is manure incorporated (tilled) into soil? If for different fields, give most common. (Incorporated same day=0 days).

Days

	Days		
January .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
February .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
March .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
April .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
May .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
June .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
July .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
August .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
September .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
October .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
November .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
December .....	<input type="text"/>	<input type="text"/>	<input type="text"/>

Not applicable (manure is not incorporated into soil)  13(L04913)

If solid manure is applied on reduced till, perennial or forage crop land, answer question 50. Else go to question 51.

50. Of the total (solid) manure applied on reduced till crop land, perennial or forage crop land, what percentage is applied in each month?

%

	%		
January .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
February .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
March .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
April .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
May .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
June .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
July .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
August .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
September .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
October .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
November .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
December .....	<input type="text"/>	<input type="text"/>	<input type="text"/>

Total must be 100%

All year round at regular intervals  13(L05013)

<p>51. In the past 3 years, has a chemical analysis of the <u>solid manure</u> been done for levels of Nitrogen, Phosphorus, Potassium, micronutrient or moisture content?</p> <p>Yes..... <input type="checkbox"/><sub>1(L05101)</sub> → Answer question 52</p> <p>No ..... <input type="checkbox"/><sub>2(L05102)</sub> ↓ Go to question 53</p>	<p>52. What were the lab results? (<b>Specify units of measure and range</b> e.g., 45 to 53 kg Nitrogen per tonne or 0.45 to 0.53% nitrate Nitrogen).</p> <p><b>Unit of measure codes:</b></p> <p>1 = Kilograms (kg) per (metric) tonne of manure  2 = Pounds (lb) per (imperial) ton of manure  3 = Percentage</p> <p>Enter range in first eight boxes and enter the decimal point if needed. Enter unit of measure in last box to right e.g.:</p> <table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; width: 20px; text-align: center;">0</td> <td style="border: 1px solid black; width: 20px; text-align: center;">.</td> <td style="border: 1px solid black; width: 20px; text-align: center;">4</td> <td style="border: 1px solid black; width: 20px; text-align: center;">5</td> <td style="border: none; padding: 0 10px;">to</td> <td style="border: 1px solid black; width: 20px; text-align: center;">0</td> <td style="border: 1px solid black; width: 20px; text-align: center;">.</td> <td style="border: 1px solid black; width: 20px; text-align: center;">5</td> <td style="border: 1px solid black; width: 20px; text-align: center;">3</td> <td style="border: 1px solid black; width: 20px; text-align: center;">3</td> </tr> </table> <p><b>Lab results (numbers) of chemical analysis:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><i>Moisture content</i></td> <td style="text-align: right;"><i>Unit of measure</i></td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="text-align: center;">1(L05201)</td> <td style="text-align: right;">3(L05203)</td> </tr> <tr> <td style="text-align: center;"><i>Dry matter content</i></td> <td></td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="text-align: center;">4(L05204)</td> <td style="text-align: right;">6(L05206)</td> </tr> <tr> <td style="text-align: center;"><i>Total Nitrogen (N)</i></td> <td></td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="text-align: center;">7(L05207)</td> <td style="text-align: right;">9(L05209)</td> </tr> <tr> <td style="text-align: center;"><i>Ammonium (NH<sub>4</sub>)</i></td> <td></td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="text-align: center;">10(L05210)</td> <td style="text-align: right;">12(L05212)</td> </tr> <tr> <td style="text-align: center;"><i>Phosphorus (P)</i></td> <td></td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="text-align: center;">13(L05213)</td> <td style="text-align: right;">15(L05215)</td> </tr> </table>	0	.	4	5	to	0	.	5	3	3	<i>Moisture content</i>	<i>Unit of measure</i>			1(L05201)	3(L05203)	<i>Dry matter content</i>				4(L05204)	6(L05206)	<i>Total Nitrogen (N)</i>				7(L05207)	9(L05209)	<i>Ammonium (NH<sub>4</sub>)</i>				10(L05210)	12(L05212)	<i>Phosphorus (P)</i>				13(L05213)	15(L05215)
0	.	4	5	to	0	.	5	3	3																																
<i>Moisture content</i>	<i>Unit of measure</i>																																								
1(L05201)	3(L05203)																																								
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10(L05210)	12(L05212)																																								
<i>Phosphorus (P)</i>																																									
13(L05213)	15(L05215)																																								

<p>53. Do you usually land spread (<i>solid</i>) manure at a particular time of day?</p> <p>Yes ..... <input type="checkbox"/><sub>1(L05301)</sub> → Answer question 54</p> <p>No, it is spread whenever possible... <input type="checkbox"/><sub>2(L05302)</sub></p> <p>↓ Go to question 55</p>	<p>54. Is it usually spread between: ...?</p> <p>10 a.m. and 6 p.m. .... <input type="checkbox"/><sub>1(L05401)</sub></p> <p>6 p.m. and 10 a.m. .... <input type="checkbox"/><sub>2(L05402)</sub></p>
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55. Do you land spread manure when the wind speed is ...?
- Calm, say below 5 km/hour (*a flag might hang or ripple gently at this wind speed*) ..... <sub>1(L05501)</sub>
- Brisk or strong, say about 5 to 9 km/hour (*a flag would fly straight out at this wind speed*) ..... <sub>2(L05502)</sub>
- Any speed, the job gets done whenever it is possible ..... <sub>3(L05503)</sub>

## Section 4 - Handling and storage of liquid manure

**\*Please refer to a normal year\***

56. Do you store liquid manure (slurry) from your *dairy operation*?
- Yes..... <sub>1(L05601)</sub> ↓ Please complete Section 4
- No ..... <sub>2(L05602)</sub> → Go to Section 5 (page 14)
57. How long do you usually store liquid manure collected over **winter** (*December to March*)? *Is it stored ...?*
- Less than 1 month ..... <sub>1(L05701)</sub>
- From 1 to less than 6 months .. <sub>2(L05702)</sub>
- From 6 to less than 12 months ..... <sub>3(L05703)</sub>
- 12 months or longer..... <sub>4(L05704)</sub>
- Not stored over winter. .... <sub>5(L05705)</sub>

58. How long do you usually store liquid manure collected from **spring to fall**? (*April to November*)

Is it stored ...?

- Less than 1 month .....  <sub>1(L05801)</sub>
- From 1 to less than 6 months ..  <sub>2(L05802)</sub>
- From 6 to less than 12 months .....  <sub>3(L05803)</sub>
- 12 months or longer.....  <sub>4(L05804)</sub>
- Not stored over spring to fall.....  <sub>5(L05805)</sub>

<p>59. Do you separate solids from liquid manure (<i>slurry</i>)?</p> <p>Yes..... <input type="checkbox"/> <sub>1(L05901)</sub> → Answer question 60</p> <p>No ..... <input type="checkbox"/> <sub>2(L05902)</sub> ↓ Go to question 61</p> <p>Not applicable <input type="checkbox"/> <sub>3(L05903)</sub> ↓ Go to question 61</p>	<p>60. What do you use to separate solids from liquid manure?</p> <p>Liquid drawn off top of tank ..... <input type="checkbox"/> <sub>1(L06001)</sub></p> <p>Settling ponds or weeping walls..... <input type="checkbox"/> <sub>2(L06002)</sub></p> <p>Screens .... <input type="checkbox"/> <sub>3(L06003)</sub></p> <p>Presses (belt, screw or other ) ..... <input type="checkbox"/> <sub>4(L06004)</sub></p> <p>Other, <i>specify</i>: _____ <sub>5(L06005)</sub></p>
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61. Which of the following describes the main (*or largest*) liquid manure storage space you use?

Is it a ...?

- Tank above ground.....  <sub>1(L06101)</sub>
- Lined or cement pit .....  <sub>2(L06102)</sub>
- Lagoon or dugout in ground ....  <sub>3(L06103)</sub>
- Other, *specify*: \_\_\_\_\_ <sub>4(L06104)</sub>

62. Is your main (*or largest*) liquid manure storage space ...?

- Open, so rain might get in .....  <sub>1(L06201)</sub>
- Covered with a roof.....  <sub>2(L06202)</sub>

63. On your main (*or largest*) liquid manure storage, is there ...?

- A floating crust formed by the manure.....  <sub>1(L06301)</sub>
- A floating cover such as a floating lid or tarp ....  <sub>2(L06302)</sub>
- A floating cover such as straw .....  <sub>3(L06303)</sub>
- No floating cover or crust.....  <sub>4(L06304)</sub>

64. How do you usually manage liquid manure while it is in storage? *Is it ...?*

- Not aerated or agitated until just before taken out .....  <sub>1(L06401)</sub>
- Aerated or agitated up to three times per month.....  <sub>2(L06402)</sub>
- Aerated or agitated four times or more per month .....  <sub>3(L06403)</sub>

65. What becomes of liquid manure on your operation? *Is it ...?*

Check all that apply.

- Spread on land (*by you or someone else*).....  <sub>1(L06501)</sub>
- Composted (*then spread on land*).....  <sub>2(L06502)</sub>
- Removed by contractor (*don't know how it is used*).....  <sub>3(L06503)</sub>
- Other, *specify*: \_\_\_\_\_ <sub>4(L06504)</sub>

66. What percentage of liquid manure (*from your dairy operation*) is handled through each method you use?

What percentage is ...?

- |                                                                 | %                                                                                                                                                                                                                                                                                                                             |  |  |  |                      |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|----------------------|
| Spread on land ( <i>by you or someone else</i> ).....           | <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> |  |  |  | <sub>1(L06601)</sub> |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
| Removed by contractor ( <i>don't know how it is used</i> )..... | <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> |  |  |  | <sub>2(L06602)</sub> |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
| Other, <i>specify</i> : _____ <sub>3(L06603)</sub>              | <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> <table border="1" style="display: inline-table; width: 30px; height: 20px;"> <tr><td> </td></tr> </table> |  |  |  | <sub>4(L06604)</sub> |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |
|                                                                 |                                                                                                                                                                                                                                                                                                                               |  |  |  |                      |

**Total must be 100%**

<p>67. Do you put any additives into the <u>liquid manure</u>, to modify odour, pH or nutrient retention? Exclude litter.</p> <p>Yes..... <input type="checkbox"/><sub>1(L06701)</sub> → Answer question 68</p> <p>No ..... <input type="checkbox"/><sub>2(L06702)</sub> ↓ Go to question 69</p>	<p>68. What types of additives do you use?</p> <p>Specify below:</p> <p>_____ 1(L06801)</p> <p>_____ 2(L06802)</p>
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69. What are the dimensions of the surface area of your main (or largest) liquid manure storage space ...? (If oval give length and width. If round give diameter in Box 5 or 6).

<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> feet <sub>1(L06901)</sub>	by	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> feet <sub>2(L06902)</sub>
-----Or-----		
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> metres <sub>3(L06903)</sub>	by	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> metres <sub>4(L06904)</sub>
-----Or-----		
<b>(Box 5)</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> diameter in feet <sub>5(L06905)</sub>	<b>(Box 6)</b> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> diameter in metres <sub>6(L06906)</sub>	

70. What is the depth (pit capacity) of your main (or largest) liquid manure storage?

<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> feet <sub>1(L07001)</sub>	-----Or-----	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> metres <sub>2(L07002)</sub>
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### Section 5 – Land spreading of liquid manure (slurry)

**\*Please refer to a normal year\***

71. Is liquid manure (slurry) from your dairy operation usually spread on land (spread on any land by the operator or by someone else)?

Yes..... <sub>1(L07101)</sub> ↓ Please complete Section 5

No ..... <sub>2(L07102)</sub> → Go to Section 6 (page 17)

72. Of the total amount of liquid manure from your dairy operation applied on land, what percentage is spread on ...?

	%	
Tilled crop land (most crop residue tilled into soil) .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	1(L07201) → Answer questions 73 and 74
Reduced till crop land ..... (most crop residue retained on surface)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	2(L07202) → Answer question 75
Land covered with perennial crops or forage crops .....	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	3(L07203) → Answer question 75
Other, specify: _____	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	4(L07204)..... 5(L07205) → Go to question 76
<b>Total must be 100%</b>		

**\*\*If applied on tilled land answer questions 73 and 74. Else go to question 75\*\***

73. Of the total (*liquid*) manure applied on tilled soil, what percentage is usually applied in each month?

What percentage is applied in ...?

	%			
January .....				1(L07301)
February .....				2(L07302)
March .....				3(L07303)
April .....				4(L07304)
May .....				5(L07305)
June .....				6(L07306)
July .....				7(L07307)
August .....				8(L07308)
September .....				9(L07309)
October .....				10(L07310)
November .....				11(L07311)
December .....				12(L07312)

**Total must be 100%**

All year round at regular intervals  13(L07313)

74. For each period, how many days after spreading is manure incorporated (*tilled*) into soil? **If different for different fields, give the most common** (Less than 2 hours = 0 days. From 2 to 24 hours = 0.5 days).

	Days			
January .....				1(L07401)
February .....				2(L07402)
March .....				3(L07403)
April .....				4(L07404)
May .....				5(L07405)
June .....				6(L07406)
July .....				7(L07407)
August .....				8(L07408)
September .....				9(L07409)
October .....				10(L07410)
November .....				11(L07411)
December .....				12(L07412)

Not applicable (*manure is not incorporated into soil*)  13(L07413)

**\*\*If applied on reduced till or perennial crop land, answer question 75. Else go to question 76\*\***

75. Of the total (*liquid*) manure applied on reduced till or perennial or forage crop land, what percentage is applied in each month:

	%			
January .....				1(L07501)
February .....				2(L07502)
March .....				3(L07503)
April .....				4(L07504)
May .....				5(L07505)
June .....				6(L07506)
July .....				7(L07507)
August .....				8(L07508)
September .....				9(L07509)
October .....				10(L07510)
November .....				11(L07511)
December .....				12(L07512)

**Total must be 100%**

All year round at regular intervals  13(L07513)

<p>76. Do you usually land spread (<i>liquid</i>) manure at a particular time of day?</p> <p>Yes..... <input type="checkbox"/><sub>1(L07601)</sub> → Answer question 77</p> <p>No, manure is spread whenever possible <input type="checkbox"/><sub>2(L07602)</sub></p> <p>↓ Go to question 78</p>	<p>77. Is it usually spread between: ...?</p> <p>10 a.m. and 6 p.m. .... <input type="checkbox"/><sub>1(L07701)</sub></p> <p>6 p.m. and 10 a.m. .... <input type="checkbox"/><sub>2(L07702)</sub></p>
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78. What best describes the consistency of the liquid manure on your operation?

Runny like water ..... <sub>1(L07801)</sub>

Pea soup..... <sub>2(L07802)</sub>

Toothpaste..... <sub>3(L07803)</sub>

79. What method do you usually use to spread liquid manure?

Give the approximate percentage of total liquid manure spread by each method. What percentage is ...?

	%			
Broadcast over soil surface, over stubble or residue .....	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table> <small>1(L07901)</small>			
Narrow bands on soil surface such as with drop hoses or a sleighfoot .....	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table> <small>2(L07902)</small>			
Shallow injected, where some of the manure remains on the soil surface .....	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table> <small>3(L07903)</small>			
Deep injected, where little of the manure remains on the soil surface .....	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table> <small>4(L07904)</small>			
Irrigated (e.g. with a pivot gun) .....	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table> <small>5(L07905)</small>			
Other, <i>specify</i> : _____	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table> <small>6(L07906) ..... 7(L07907)</small>			

**Total must be 100%**

<p>80. Does the method you use to spread <u>liquid manure</u> change from season to season?</p> <p>Yes..... <input type="checkbox"/><sub>1(L08001)</sub> → Answer question 81</p> <p>No, same method used all year <input type="checkbox"/><sub>2(L08002)</sub> ↓ Go to question 82</p>	<p>81. Do you usually ...?</p> <p>Inject in spring or fall, broadcast in summer <input type="checkbox"/><sub>1(L08101)</sub></p> <p>Other, <i>specify</i>: _____ <input type="checkbox"/><sub>2(L08102)</sub></p>
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82. Do you usually land spread (*liquid*) manure when wind speed is ...?

Calm, say below 5 km/hour (*a flag might hang or ripple gently at this wind speed*)..... <sub>1(L08201)</sub>

Brisk or strong, say about 5 to 9 km/hour (*a flag would fly straight out at this wind speed*) ..... <sub>2(L08202)</sub>

Any speed, the job gets done whenever it is possible..... <sub>3(L08203)</sub>



<p>83. In the past 3 years, has a chemical analysis of the liquid manure been done for levels of Nitrogen, Phosphorus, Potassium, micronutrient or moisture content?</p> <p>Yes..... <input type="checkbox"/><sub>1(L08301)</sub> → Answer question 84</p> <p>No ..... <input type="checkbox"/><sub>2(L08302)</sub> ↓ Go to question 85</p>	<p>84. What were the lab results? (<b>Specify units of measure and range</b> e.g., 45 to 53 kg Nitrogen per tonne or 0.45 to 0.53% nitrate Nitrogen).</p> <p><b>Unit of measure codes:</b></p> <p>1 = Kilograms (kg) per (metric) tonne of manure  2 = Pounds (lb) per (imperial) ton of manure  3 = Percentage</p> <p>Enter range in first eight boxes and enter the decimal point if needed. Enter unit of measure in last box to right e.g.:</p> <table style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;">0</td> <td style="border: 1px solid black; width: 20px; height: 20px;">.</td> <td style="border: 1px solid black; width: 20px; height: 20px;">4</td> <td style="border: 1px solid black; width: 20px; height: 20px;">5</td> <td style="font-size: 20px;">to</td> <td style="border: 1px solid black; width: 20px; height: 20px;">0</td> <td style="border: 1px solid black; width: 20px; height: 20px;">.</td> <td style="border: 1px solid black; width: 20px; height: 20px;">5</td> <td style="border: 1px solid black; width: 20px; height: 20px;">3</td> <td style="border: 1px solid black; width: 20px; height: 20px;">3</td> </tr> </table> <p><b>Lab results (numbers) of chemical analysis:</b></p> <table style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td colspan="4"><i>Moisture content</i></td> <td colspan="3"><i>Unit of measure</i></td> </tr> <tr> <td style="border: 1px solid black; 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## Section 6 - Odour management and nutrient conservation

**\*Please refer to a normal year\***

85. At what stage of your dairy operation's cycle, if any, is the odour of manure stronger than it is usually?  
*Is it more often stronger during ...?*

Check all that apply.

- Barn cleaning ..... <sub>1(L08501)</sub>
- Land spreading ..... <sub>2(L08502)</sub>
- Agitation of manure ..... <sub>3(L08503)</sub>
- Mixing or composting ..... <sub>4(L08504)</sub>
- Other, specify: \_\_\_\_\_ <sub>5(L08505)</sub>
- No differences throughout the year ..... <sub>6(L08506)</sub>

**\*\*If no differences in odour throughout the year, go to question 88.\*\***

86. How many times per year is the odour of manure from your (dairy) operation stronger than it is usually?

			Times <sub>1(L08601)</sub>
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87. Usually, how many days per year does this stronger odour of manure last?

			Days <sub>1(L08701)</sub>
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88. What is the vegetation within 300 metres (1000 feet) to the **north and west** of your barns?

*Check all that apply.*

- Nothing tall, there are no trees or tall shrubs (nothing taller than corn, for example) .....  1(L08801)
- Shelterbelt with leafed trees that shed leaves in fall ... .....  2(L08802)
- Shelterbelt with evergreen trees .....  3(L08803)
- Woodlot or forest .....  4(L08804)

89. What is the vegetation within 300 metres (1000 feet) to the **south and east** of your barns?

*Check all that apply.*

- Nothing tall, there are no trees or tall shrubs (nothing taller than corn, for example) .....  1(L08901)
- Shelterbelt with leafed trees that shed leaves in fall ... .....  2(L08902)
- Shelterbelt with evergreen trees .....  3(L08903)
- Woodlot or forest .....  4(L08904)

**Agreement to share data**

Thank you for taking the time to participate in our survey. In order to avoid duplication, Statistics Canada has entered into a data sharing agreement under Section 12 of the Statistics Act with Agriculture and Agri-Food Canada to share responses from this survey. The Department will not be given your name, address or other identifiers and is required to keep the information confidential and use it only for statistical and research purposes.

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90. Do you agree to share this information with Agriculture and Agri-Food Canada?

Yes.....  1(L09001)

No .....  2(L09002)

91. Would you like to receive a summary report of the survey results?

- Yes.....  1(L09101) ↓ Answer question 92
- No .....  2(L09102) ↓ Go to section 7

92. What is your e-mail address? Your address will not be shared with any government department.

*Enter "MAIL" if the respondent prefers to receive the report by mail.*

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**Section 7 - Operator or interviewer comments**

1 Check if comments are written

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Thank you for your cooperation.