2011 FEMS - LIVESTOCK MODULE

LT01 1. In 2011, what types of livestock or poultry production did you have on your operation? *(Mark all that apply)*

[1] O Dairy cattle and/or milk production
[2] O Beef cattle (cow/calf)
[3] O Beef cattle (feedlot or background)
[4] O Pork production
[5] O Poultry and/or egg production
[6] O Other livestock or poultry production, excluding pets
[7] O Crops only, no livestock production *(Go to Q93)*

Poultry *includes broilers, roasters, laying hens, chicks intended for laying, turkeys.*

Other livestock *includes bison, sheep, goats, horses, ponies, mink, emus, ducks, roosters, ostriches etc.*

LT02 2. Which type of livestock or poultry production contributed most to your gross farm receipts?

[1] O Dairy cattle and/or milk production
[2] O Beef cattle, including feedlot
[3] O Pork production
[4] O Poultry and/or egg production
[5] O Other livestock or poultry production (please specify): _____ LT03

Section 1: Livestock inventories and buildings

*A **building** is any structure with a roof and some walls that confines or provides protection for livestock in one location. It does not include calf hutches, portable shelters or windbreaks used in an open field.*

*An **outdoor confined area** is an outdoor area where the livestock's manure deposits are eventually removed offsite and applied to other land (includes pens, corrals).*

*An **open field** is one where manure deposited directly by livestock is not removed from the site, although the manure may or may not be spread out by harrowing.*

BI22 3. In 2011, how many buildings housed **^LT02** on your operation?
_____ *(If Q2 = 1 go to Q4, if Q2 = 2 go to Q24, if Q2 = 3 go to Q49, if Q2 = 4 go to Q62, if Q2 = 5 go to Q75).*

BI01 4. In 2011, how many milking cows were kept on your operation?
_____ *(If 0, go to Q9)*

5. For how many months of the year were the milking cows typically kept…
BI02[1] … inside a building?_____
BI02[2] … in an outdoor, confined area? _____
BI02[3] … in an open field? _____

BI23 6. In 2011, how many milking cows were housed in the largest building?
_____ *(If Q3 = 1, go to Q9)*

BI27 7. In 2011, how many milking cows were housed in the second largest building?
_____ *(If Q3 = 2, go to Q9)*

BI31 8. In 2011, how many milking cows were housed in the third largest building?
_____

BI03 9. In 2011, how many dry cows were kept on your operation?
_____ *(If 0, go to Q14)*

10. For how many months of the year were the dry cows typically kept…
BI04[1] … inside a building?_____
BI04[2] … in an outdoor, confined area? _____
BI04[3] … in an open field? _____

BI24 11. In 2011, how many dry cows were housed in the largest building?
_____ *(If Q3 = 1, go to Q14)*

BI28 12. In 2011, how many dry cows were housed in the second largest building?
_____ *(If Q3 = 2, go to Q14)*

BI32 13. In 2011, how many dry cows were housed in the third largest building?
_____

BI05 14. In 2011, how many replacement heifers (more than 1 year old) were kept on your operation?
_____ *(If 0, go to Q19)*

15. For how many months of the year were the replacement heifers typically kept…
BI06[1] … inside a building?_____
BI06[2] … in an outdoor, confined area? _____
BI06[3] … in an open field? _____

BI25 16. In 2011, how many replacement heifers were housed in the largest building?
_____ *(If Q3 = 1, go to Q19)*

BI29 17. In 2011, how many replacement heifers were housed in the second largest building?
_____ *(If Q3 = 2, go to Q19)*

BI33 18. In 2011, how many replacement heifers were housed in the third largest building?
_____

BI07 19. In 2011, how many calves (less than 1 year old) were kept on your operation?
_____ *(If 0, go to Q79)*

20. For how many months of the year were the calves typically kept…
BI08[1] … inside a building?_____
BI08[2] … in an outdoor, confined area? _____
BI08[3] … in an open field? _____
(If Q3 = 0, go to Q91)

BI26 21. In 2011, how many calves were housed in the largest building?
_____ *(If Q3 = 1, go to Q79)*

BI30 22. In 2011, how many calves were housed in the second largest building?
_____ *(If Q3 = 2, go to Q79)*

BI34 23. In 2011, how many calves were housed in the third largest building?
_____ *(Go to Q79)*

BI09 24. In 2011, how many beef cows were kept on your operation?
_____ *(If 0, go to Q29)*

25. For how many months of the year were the beef cows typically kept…
BI10[1] … inside a building?_____
BI10[2] … in an outdoor, confined area? _____
BI10[3] … in an open field? _____

BI36 26. In 2011, how many beef cows were housed in the largest building?
_____ *(If Q3 = 1, go to Q29)*

BI41 27. In 2011, how many beef cows were housed in the second largest building?
_____ *(If Q3 = 2, go to Q29)*

BI46 28. In 2011, how many beef cows were housed in the third largest building?
_____

BI11 29. In 2011, how many calves (less than 1 year old) were kept on your operation?
_____ *(If 0, go to Q34)*

30. For how many months of the year were the calves typically kept…
BI12[1] … inside a building?_____
BI12[2] … in an outdoor, confined area? _____
BI12[3] … in an open field? _____

BI37 31. In 2011, how many calves were housed in the largest building?
_____ *(If Q3 = 1, go to Q34)*

BI42 32. In 2011, how many calves were housed in the second largest building?
_____ *(If Q3 = 2, go to Q34)*

BI47 33. In 2011, how many calves were housed in the third largest building?
_____

BI13 34. In 2011, how many steers were kept on your operation?
_____ *(If 0, go to Q39)*

35. For how many months of the year were the steers typically kept…
BI14[1] … inside a building?_____
BI14[2] … in an outdoor, confined area? _____
BI14[3] … in an open field? _____

BI38 36. In 2011, how many steers were housed in the largest building?
_____ *(If Q3 = 1, go to Q39)*

BI43 37. In 2011, how many steers were housed in the second largest building?
_____ *(If Q3 = 2, go to Q39)*

BI48 38. In 2011, how many steers were housed in the third largest building?
_____

BI15 39. In 2011, how many heifers (over 1 year old) were kept on your operation?
_____ *(If 0, go to Q44)*

40. For how many months of the year were the heifers typically kept…
BI16[1] … inside a building?_____
BI16[2] … in an outdoor, confined area? _____
BI16[3] … in an open field? _____

BI39 41. In 2011, how many heifers were housed in the largest building?
_____ *(If Q3 = 1, go to Q44)*

BI44 42. In 2011, how many heifers were housed in the second largest building?
_____ *(If Q3 = 2, go to Q44)*

BI49 43. In 2011, how many heifers were housed in the third largest building?
_____

BI17 44. In 2011, how many bulls were kept on your operation?
_____ *(If 0, go to Q79)*

45. For how many months of the year were the bulls typically kept…
BI18[1] … inside a building?_____
BI18[2] … in an outdoor, confined area? _____
BI18[3] … in an open field? _____
(If Q3 = 0, go to Q91)

BI40 46. In 2011, how many bulls were housed in the largest building?
_____ *(If Q3 = 1, go to Q79)*

BI45 47. In 2011, how many bulls were housed in the second largest building?
_____ *(If Q3 = 2, go to Q79)*

BI50 48. In 2011, how many bulls were housed in the third largest building?
_____ *(Go to Q79)*

BI19 49. Are your pigs always kept inside a building?
[1] O Yes
[3] O No

BI52 50. In 2011, how many boars were housed in the largest building?
_____ *(If Q3 = 1, go to Q53)*

BI56 51. In 2011, how many boars were housed in the second largest building?
_____ *(If Q3 = 2, go to Q53)*

BI60 52. In 2011, how many boars were housed in the third largest building?
_____

BI53 53. In 2011, how many sows and gilts were housed in the largest building?
_____ *(If Q3 = 1, go to Q56)*

BI57 54. In 2011, how many sows and gilts were housed in the second largest building?
_____ *(If Q3 = 2, go to Q56)*

BI61 55. In 2011, how many sows and gilts were housed in the third largest building?
_____

BI54 56. In 2011, how many nursing and weaner pigs were housed in the largest building?
_____ *(If Q3 = 1, go to Q59)*

BI58 57. In 2011, how many nursing and weaner pigs were housed in the second largest building?
_____ *(If Q3 = 2, go to Q59)*

BI62 58. In 2011, how many nursing and weaner pigs were housed in the third largest building?
_____

BI55 59. In 2011, how many grower and finishing pigs were housed in the largest building?
_____ *(If Q3 = 1, go to Q79)*

BI59 60. In 2011, how many grower and finishing pigs were housed in the second largest building?
_____ *(If Q3 = 2, go to Q79)*

BI63 61. In 2011, how many grower and finishing pigs were housed in the third largest building?
_____ *(Go to Q79)*

BI20 62. Are your poultry always kept inside a building?
[1] O Yes
[3] O No

BI65 63. In 2011, how many broilers, roasters and Cornish hens were housed in the largest building?
_____ *(If Q3 = 1, go to Q66)*

BI69 64. In 2011, how many broilers, roasters and Cornish hens were housed in the second largest building?
_____ *(If Q3 = 2, go to Q66)*

BI73 65. In 2011, how many broilers, roasters and Cornish hens were housed in the third largest building?
_____

BI66 66. In 2011, how many pullets under 19 weeks were housed in the largest building?
_____ *(If Q3 = 1, go to Q69)*

BI70 67. In 2011, how many pullets under 19 weeks were housed in the second largest building?
_____ *(If Q3 = 2, go to Q69)*

BI74 68. In 2011, how many pullets under 19 weeks were housed in the third largest building?
_____

BI67 69. In 2011, how many laying hens, 19 weeks and over were housed in the largest building?
_____ *(If Q3 = 1, go to Q72)*

BI71 70. In 2011, how many laying hens, 19 weeks and over were housed in the second largest building?
_____ *(If Q3 = 2, go to Q72)*

BI75 71. In 2011, how many laying hens, 19 weeks and over were housed in the third largest building?
_____

BI68 72. In 2011, how many turkeys were housed in the largest building?
_____ *(If Q3 = 1, go to Q79)*

BI72 73. In 2011, how many turkeys were housed in the second largest building?
_____ *(If Q3 = 2, go to Q79)*

BI76 74. In 2011, how many turkeys were housed in the third largest building?
_____ *(Go to Q79)*

BI21 75. Are your ^**LT03** (other livestock) always kept inside a building?
[1] O Yes
[3] O No

BI78 76. In 2011, how many ^**LT03** (other livestock) were housed in the largest building?
_____ *(If Q3 = 1, go to Q79)*

BI79 77. In 2011, how many ^**LT03** (other livestock) were housed in the second largest building?
_____ *(If Q3 = 2, go to Q79)*

BI80 78. In 2011, how many ^**LT03** (other livestock) were housed in the third largest building?
_____

BI81 79. How was ventilation controlled in the largest building? *(Mark all that apply)*
[1] O Forced ventilation
[2] O Passive/natural ventilation *(If Q3>1, go to Q83, else go to Q91)*
[3] O Other (please specify): _____ BI82

Passive ventilation *includes the use of side curtains or vent panels.*

BI87[1] 80. For your forced ventilation, how was the ventilation rate controlled? *(Mark all that apply)*
[1] O With fans switched on automatically
[2] O With fans switched on manually
[3] O Other (please specify): _____ BI88[1]

BI89[1] 81. For your forced ventilation, did you have any of the following? *(Mark all that apply)*
[1] O Mechanical/conventional filter
[2] O Biofilter
[3] O No filter *(If Q3>1, go to Q83, else go to Q91)*
[4] O A vegetative buffer outside building *(If Q3>1, go to Q83, else go to Q91)*

*A **mechanical filter** is a filter made of manufactured or synthetic materials that is installed within the building's ventilation duct work and exhaust fan system to remove dust and odorous compounds.*

*A **biofilter** is a filter made of biological material where bacteria capture and eliminate odorous compounds from livestock building exhaust air.*

*A **vegetative buffer** is a row of trees or shrubs along the side of a building where fans exhaust air.*

BI90[1]

82. How often did you change, clean or service the filter?
[1] O Once a month
[2] O More than twice a year
[3] O Twice a year
[4] O Once a year
[5] O Less than once a year

BI83

83. How was ventilation controlled in the second largest building? *(Mark all that apply)*
[1] O Forced ventilation
[2] O Passive/natural ventilation *(If Q3>2, go to Q87, else go to Q91)*
[3] O Other (please specify): _____ BI84

BI87[2]

84. For your forced ventilation, how was the ventilation rate controlled? *(Mark all that apply)*
[1] O With fans switched on automatically
[2] O With fans switched on manually
[3] O Other (please specify): _____ BI88[2]

BI89[2]

85. For your forced ventilation, did you have any of the following? *(Mark all that apply)*
[1] O Mechanical/conventional filter
[2] O Biofilter
[3] O No filter *(If Q3>2, go to Q87, else go to Q91)*
[4] O A vegetative buffer outside building *(If Q3>2, go to Q87, else go to Q91)*

BI90[2]

86. How often did you change, clean or service the filter?
[1] O Once a month
[2] O More than twice a year
[3] O Twice a year
[4] O Once a year
[5] O Less than once a year

BI85

87. How was ventilation controlled in the third largest building? *(Mark all that apply)*
[1] O Forced ventilation
[2] O Passive/natural ventilation *(Go to Q91)*
[3] O Other (please specify): _____ BI86

BI87[3]

88. For your forced ventilation, how was the ventilation rate controlled? *(Mark all that apply)*
[1] O With fans switched on automatically
[2] O With fans switched on manually
[3] O Other (please specify): _____ BI88[3]

BI89[3]

89. For your forced ventilation, did you have any of the following? *(Mark all that apply)*
[1] O Mechanical/conventional filter
[2] O Biofilter
[3] O No filter *(Go to Q91)*
[4] O A vegetative buffer outside building *(Go to Q91)*

BI90[3]

90. How often did you change, clean or service the filter?
[1] O Once a month
[2] O More than twice a year
[3] O Twice a year
[4] O Once a year
[5] O Less than once a year

Section 2: Manure and nutrient management

LMS30a

91. Are there wells on your operation?
    [1] O Yes
    [3] O No

LMS32a

92. Is there surface water on your operation?
    [1] O Yes
    [3] O No

LM01

93. Between fall 2010 and summer 2011, which did you spread more of on your operation: solid manure or liquid or semi-solid manure (e.g. pumpable)?
    [1] O Solid manure *(Go to Q140)*
    [2] O Liquid or semi-solid manure
    [3] O Spread the same amount of both solid and liquid or semi-solid manure
    [4] O Did not spread manure

Liquid or semi-solid manure

LMS01

94. In 2011, did you store any liquid or semi-solid manure (e.g. pumpable) on your operation?
    [1] O Yes
    [3] O No *(Go to Q140)*

LMS02

95. In 2011, how many liquid or semi-solid manure storage systems were on your operation?
    _____ *(If Q95 = 0, go to Q126)*

The following questions relate to the three largest liquid or semi-solid manure storage systems on your operation.

Storage system 1: ***(ask only if Q95 > 0)***

LMS03

96. What type of system is your <u>largest</u> liquid or semi-solid manure storage system?
    [1] O Earthen lagoon, pit
    [2] O Below-ground tank (outside of building)
    [3] O Above-ground tank (outside of building)
    [4] O Pit/tank below slats in building
    [5] O Other (please specify): _____ LMS04

LMS09[1] 97. The following question is about the size of your largest liquid or semi-solid manure storage system. Would you like to report the surface area, the diameter, or the length and width?

[1] O Surface area
[2] O Diameter
[3] O Length and width

Surface area: _____ LMS10[1] [1] O square feet [2] O square metres LMS11[1]

OR

Length: _____ LMS14[1] x Width: _____ LMS15[1] [1] O feet [2] O metres [3] O yards LMS16[1]

OR

Diameter: _____ LMS12[1] [1] O feet [2] O metres [3] O yards LMS13[1]

LMS17[1] 98. What is the volume of this storage system?

LMS18[1]

_____ [1] O imperial gallons [2] O litres [3] O other (specify): _____ LMS19[1]

LMS20[1] 99. What was the depth (at the deepest part) of this storage system?

_____ [1] O feet [2] O metres [3] O yards LMS21[1]

LMS22[1] 100. What was the storage capacity of this storage system in days, weeks or months?

_____ [1] O days [2] O weeks [3] O months LMS23[1]

LMS24[1] 101. What was the covering material for this storage system?

[1] O Straw
[2] O Crust
[3] O Tarp
[4] O Concrete
[5] O Lid
[6] O Geomembrane
[7] O No cover
[8] O Other (please specify): _____ LMS25[1]

LMS26[1] 102. What material was used for the floor or floor lining of this storage system?

[1] O Clay
[2] O Steel
[3] O Concrete
[4] O Geomembrane
[5] O Other (please specify): _____ LMS27[1]

LMS28[1] 103. What material was used for the walls of this storage system?

[1] O Clay
[2] O Steel
[3] O Concrete
[4] O Geomembrane
[5] O Other (please specify): _____ LMS29[1]

LMS30[1] 104. What was the distance from this storage system to the nearest well?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres LMS31[1]

LMS32[1] 105. What was the distance from this storage system to the nearest surface water?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres LMS33[1]

Storage system 2: ***(ask only if Q95 > 1)***

LMS05 106. What type of system is your second largest liquid or semi-solid manure storage system?

[1] O Earthen lagoon, pit
[2] O Below-ground tank (outside of building)
[3] O Above-ground tank (outside of building)
[4] O Pit/tank below slats in building
[5] O Other (please specify): _____ LMS06

LMS09[2] 107. The following question is about the size of your second largest liquid or semi-solid manure storage system. Would you like to report the surface area, the diameter, or the length and width?

[1] O Surface area
[2] O Diameter
[3] O Length and width

Surface area: _____ LMS10[2] [1] O square feet [2] O square metres LMS11[2]

OR

Length: _____ LMS14[2] x Width: _____ LMS15[2] [1] O feet [2] O metres [3] O yards LMS16[2]

OR

Diameter: _____ LMS12[2] [1] O feet [2] O metres [3] O yards LMS13[2]

LMS17[2] 108. What is the volume of this storage system?

LMS18[2]

_____ [1] O imperial gallons [2] O litres [3] O other (specify): _____ LMS19[2]

LMS20[2] 109. What was the depth (at the deepest part) of this storage system?

_____ [1] O feet [2] O metres [3] O yards LMS21[2]

LMS22[2] 110. What was the storage capacity of this storage system in days, weeks or months?

_____ [1] O days [2] O weeks [3] O months LMS23[2]

LMS24[2] 111. What was the covering material for this storage system?

[1] O Straw
[2] O Crust
[3] O Tarp
[4] O Concrete
[5] O Lid
[6] O Geomembrane
[7] O No cover
[8] O Other (please specify): _____ LMS25[2]

LMS26[2] 112. What material was used for the floor or floor lining of this storage system?

[1] O Clay
[2] O Steel
[3] O Concrete
[4] O Geomembrane
[5] O Other (please specify): _____ LMS27[2]

LMS28[2] 113. What material was used for the walls of this storage system?

[1] O Clay
[2] O Steel
[3] O Concrete
[4] O Geomembrane
[5] O Other (please specify): _____ LMS29[2]

LMS30[2] 114. What was the distance from this storage system to the nearest well?

_____ [1] O metres [2] O feet [3] O yards [4] O miles [5] O kilometres LMS31[2]

LMS32[2] 115. What was the distance from this storage system to the nearest surface water?

_____ [1] O metres [2] O feet [3] O yards [4] O miles [5] O kilometres LMS33[2]

Storage system 3: ***(ask only if Q95 > 2)***

LMS07 116. What type of system is your <u>third largest</u> liquid or semi-solid manure storage system?

[1] O Earthen lagoon, pit
[2] O Below-ground tank
[3] O Above-ground tank (outside barn)
[4] O Pit/tank below slats in building
[5] O Other (please specify): _____ LMS08

LMS09[3] 117. The following question is about the size of your third largest liquid or semi-solid manure storage system. Would you like to report the surface area, the diameter, or the length and width?

[1] O Surface area
[2] O Diameter
[3] O Length and width

Surface area: _____ LMS10[3] [1] O square feet [2] O square metres LMS11[3]

OR

Length: _____ LMS14[3] x Width: _____ LMS15[3] [1] O feet [2] O metres [3] O yards LMS16[3]

OR

Diameter: _____ LMS12[3] [1] O feet [2] O metres [3] O yards LMS13[3]

LMS17[3] 118. What is the volume of this storage system?

LMS18[3]

_____ [1] O imperial gallons [2] O litres [3] O other (specify): _____ LMS19[3]

LMS20[3] 119. What was the depth (at the deepest part) of this storage system?

_____ [1] O feet [2] O metres [3] O yards LMS21[3]

LMS22[3] 120. What was the storage capacity of this storage system in days, weeks or months?

_____ [1] O days [2] O weeks [3] O months LMS23[3]

LMS24[3] 121. What was the covering material for this storage system?

[1] O Straw
[2] O Crust
[3] O Tarp
[4] O Concrete
[5] O Lid
[6] O Geomembrane
[7] O No cover
[8] O Other (please specify): _____ LMS25[3]

LMS26[3] 122. What material was used for the floor or floor lining of this storage system?

[1] O Clay
[2] O Steel
[3] O Concrete
[4] O Geomembrane
[5] O Other (please specify): _____ LMS27[3]

LMS28[3] 123. What material was used for the walls of this storage system?

[1] O Clay
[2] O Steel
[3] O Concrete
[4] O Geomembrane
[5] O Other (please specify): _____ LMS29[3]

LMS30[3] 124. What was the distance from this storage system to the nearest well?

_____ [1] O metres [2] O feet [3] O yards [4] O miles [5] O kilometres LMS31[3]

LMS32[3] 125. What was the distance from this storage system to the nearest surface water?

_____ [1] O metres [2] O feet [3] O yards [4] O miles [5] O kilometres LMS33[3]

LMS34 126. Which of the following treatments or practices were used for the liquid or semi-solid manure stored on your operation in 2011? (*Mark all that apply).*

[01] O Aerated or agitated
[02] O Filtered through a marsh or constructed wetland
[03] O Digested in an anaerobic system
[04] O Methane capture
[05] O Mixed with additives to modify odour, pH or nutrient content
[06] O Mixed or turned to accelerate composting
[07] O Processed to separate liquid from solid
[08] O Dried
[09] O Other (please specify): _____ LMS35
[10] O None

*An **anaerobic digestion system** is a manure storage system that is sealed from the atmosphere and actively managed to produce and capture methane gas.*

LMS36

127. What became of the liquid or semi-solid manure that was stored on your operation prior to the 2011 growing season? *(Mark all that apply)*

[1] O Spread on your operation
[2] O Removed from your operation *(Go to Q140)*
[3] O Remained in storage in 2011 *(Go to Q140)*

128. In 2011, what were your two largest crops, by area, grown on land that had liquid or semi-solid manure spread on it?
[We are interested in manure spread between harvest 2010 and summer 2011]

LM02[1] Crop 1: _____ Other (please specify): _____ LM03[1]

LM02[2] Crop 2: _____ Other (please specify): _____ LM03[2]

LM04[1]

129. What was the area of ^**Crop 1** that liquid or semi-solid manure was applied to?

_____ [1] O acres [2] O hectares [3] O arpents LM05[1]

LM06[1]

130. Which of the following methods were used to apply liquid or semi-solid manure to the land where ^**Crop 1** was grown in 2011? *(Mark all that apply)*

[1] O Direct injection into the soil *(Go to Q132)*
[2] O Low boom applicator, below crop canopy (e.g. sleighfoot or sidedress) *(Go to Q132)*
[3] O Spread and not worked into the soil *(Go to Q132)*
[4] O Spread and worked into the soil

LM07[1]

131. In general, was the liquid or semi-solid manure worked into the soil…

[1] O on the same day as it was spread?
[2] O 1-2 days after it was spread?
[3] O 3-5 days after it was spread?
[4] O more than 5 days after it was spread?

132. Thinking of all your liquid or semi-solid manure spread on the land where ^**Crop 1** was grown, what percent of that manure was applied …

LM08[1]… right after harvest 2010? _____
LM09[1]… during winter? _____
LM10[1]… before crop growth began in 2011? _____
LM11[1]… after crop growth began in 2011? _____
(Percent values for this question should add up to 100)

LM12[1] 133. In general, how often is liquid or semi-solid manure applied to the land where **^Crop 1** was grown?

[1] O More than twice a year
[2] O Twice a year
[3] O Once per year
[4] O Once every two years
[5] O Less than once every two years

LM04[2] 134. What was the area of **^Crop2** that liquid or semi-solid manure was applied to?

_____ [1] O acres [2] O hectares [3] O arpents LM05[2]

LM06[2] 135. Which of the following methods were used to apply liquid or semi-solid manure to the land where **^Crop 2** was grown in 2011? *(Mark all that apply)*

[1] O Direct injection into the soil *(Go to Q137)*
[2] O Low boom applicator, below crop canopy (e.g. sleighfoot or sidedress) *(Go to Q137)*
[3] O Spread and not worked into the soil *(Go to Q137)*
[4] O Spread and worked into the soil

LM07[2] 136. In general, was the liquid or semi-solid manure worked into the soil…

[1] O on the same day as it was spread?
[2] O 1-2 days after it was spread?
[3] O 3-5 days after it was spread?
[4] O more than 5 days after it was spread?

137. Thinking of all your liquid or semi-solid manure spread on the land where **^Crop 2** was grown, what percent of that manure was applied …

LM08[2]… right after harvest 2010? _____
LM09[2]… during winter? _____
LM10[2]… before crop growth began in 2011? _____
LM11[2]… after crop growth began in 2011? _____
(Percent values for this question should add up to 100)

LM12[2] 138. In general, how often is liquid or semi-solid manure applied to the land where **^Crop 2** was grown?

[1] O More than twice a year
[2] O Twice a year
[3] O Once per year
[4] O Once every two years
[5] O Less than once every two years

LM13 139. In 2011, was the liquid or semi-solid manure tested for its nutrient content before being applied to the land?

[1] O Yes
[3] O No

Solid Manure

SMS01 140. In 2011, did you produce and/or store solid manure on your operation?

[1] O Yes
[3] O No *(Go to Q180)*

(At this point, the respondent should have answered "yes" for at least one of questions 94 or 140. If the answer to both was "no", a supplemental question should be asked to determine why manure was not stored or produced on this operation. The answer should be recorded as a comment.)

SMS02 141. Which type of solid manure storage system did you have on your operation in 2011? *(Mark all that apply)*

[1] O Manure on bedding pack in barns *(Go to Q142)*
[2] O Manure pack in outdoor pens, corrals or feeding sites *(Go to Q145)*
[3] O Piled on ground outside barn *(Go to Q151)*
[4] O Pit below slats in livestock building *(Go to Q157)*
[5] O Other (please specify): _____ SMS03 *(Go to Q160)*

SMS04[1] 142. Was the manure on bedding packs in barns stored on a concrete or other impermeable pad?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS08[1] 143. What was the typical distance of the bedding packs in barns to the nearest well?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS09[1]

SMS10[1] 144. What was the typical distance of the bedding packs in barns to the nearest surface water?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS11[1]

(Go to Q166)

SMS04[2] 145. Was the manure pack in outdoor pens, corrals or feeding sites stored on a concrete or other impermeable pad?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS05[1] 146. Did you have run-off containment for that storage system?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS06[1] 147. Was there a roof or cover over the manure pack in outdoor pens, corrals or feeding sites?

[1] O Yes, all
[2] O Yes, some
[3] O No *(Go to Q149)*

SMS07[1] 148. What was the covering material?

_____

SMS08[2] 149. What was the typical distance of the manure pack in outdoor pens, corrals or feeding sites to the nearest well?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS09[2]

SMS10[2] 150. What was the typical distance of the manure pack in outdoor pens, corrals or feeding sites to the nearest surface water?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS11[2]

(Go to Q166)

SMS04[3] 151. Was the manure piled on ground outside barn stored on a concrete or other impermeable pad?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS05[2] 152. Did you have run-off containment for that storage system?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS06[2] 153. Was there a roof or cover over the manure piled on ground outside barn?

[1] O Yes, all
[2] O Yes, some
[3] O No *(Go to Q155)*

SMS07[2] 154. What was the covering material?

_____

SMS08[3] 155. What was the typical distance of the manure piled on ground outside barn to the nearest well?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS09[3]

SMS10[3] 156. What was the typical distance of the manure piled on ground outside barn to the nearest surface water?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS11[3]

SMS04[4] 157. Was the manure in pits below slats in livestock building stored on a concrete or other impermeable pad?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS08[4] 158. What was the typical distance of the manure in pits below slats in livestock building to the nearest well?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS09[4]

SMS10[4] 159. What was the typical distance of the manure in pits below slats in livestock building to the nearest surface water?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS11[4]

SMS04[5] 160. Was the ^**SMS03** stored on a concrete or other impermeable pad?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS05[3] 161. Did you have run-off containment for that storage system?

[1] O Yes, all
[2] O Yes, some
[3] O No

SMS06[3] 162. Was there a roof or cover over the ^**SMS03**?

[1] O Yes, all
[2] O Yes, some
[3] O No *(Go to Q164)*

SMS07[3] 163. What was the covering material?

_____

SMS08[5] 164. What was the typical distance of the ^**SMS03** to the nearest well?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS09[5]

SMS10[5] 165. What was the typical distance of the ^**SMS03** to the nearest surface water?

_____ [1] O feet [2] O metres [3] O yards [4] O miles [5] O kilometres SMS11[5]

SMS12 166. Which of the following treatments or practices were used for the solid manure stored on your operation in 2011? *(Mark all that apply)*

[1] O Mixed with additives to modify odour, pH or nutrients
[2] O Mixed or turned to accelerate composting
[3] O Added to an anaerobic digestion system
[4] O Other (please specify): _____ SMS13
[5] O None

SMS14 167. What became of the solid manure that was stored on your operation prior to the 2011 growing season? *(Mark all that apply)*

[1] O Spread on your operation
[2] O Removed from your operation *(Go to Q180)*
[3] O Remained in storage in 2011 *(Go to Q180)*

168. In 2011, what were your two largest crops, by area, grown on land that had solid manure spread on it?
[NOTE: we are interested in manure spread between harvest 2010 and summer 2011]

SM01[1] Crop 1: _____ Other (please specify): _____ SM02[1]

SM01[2] Crop 2: _____ Other (please specify): _____ SM02[2]

SM03[1] 169. What was the area of ^**Crop 1** that solid manure was applied to?

_____ [1] O acres [2] O hectares [3] O arpents SM04[1]

SM05[1] 170. Which of the following methods were used to apply solid manure to the land where ^**Crop 1** was grown in 2011? *(Mark all that apply)*

[1] O Spread and not worked into the soil *(Go to Q172)*

[2] O Spread and worked into the soil

SM06[1] 171. In general, was the solid manure worked into the soil…

[1] O less than 2 hours after application?

[2] O more than 2 hours after application on the same day as it was spread?

[3] O 1-2 days after it was spread?

[4] O 3-5 days after it was spread?

[5] O more than 5 days after it was spread?

172. Thinking of all your solid manure spread on the land where ^**Crop 1** was grown, what percent of that manure was applied …

SM07[1]… right after harvest 2010? _____

SM08[1]… during winter? _____

SM09[1]… before crop growth began in 2011? _____

SM10[1]… after crop growth began in 2011? _____

(Note: percent values for this question should add up to 100)

SM11[1] 173. How often is solid manure applied to the land where ^**Crop 1** is grown?

[1] O More than twice a year

[2] O Twice a year

[3] O Once per year

[4] O Once every two years

[5] O Less than once every two years

SM03[2] 174. What was the area of ^**Crop 2** that solid manure was applied to?

_____ [1] O acres [2] O hectares [3] O arpents SM04[2]

SM05[2] 175. Which of the following methods were used to apply solid manure to the land where ^**Crop 2** was grown in 2011? *(Mark all that apply)*

[1] O Spread and not worked into the soil *(Go to Q177)*

[2] O Spread and worked into the soil

SM06[2] 176. In general, was the solid manure worked into the soil…

[1] O less than 2 hours after application?
[2] O more than 2 hours after application on the same day as it was spread?
[3] O 1-2 days after it was spread?
[4] O 3-5 days after it was spread?
[5] O more than 5 days after it was spread?

177. Thinking of all your solid manure spread on the land where ^**Crop 2** was grown, what percent of that manure was applied …

SM07[2]… right after harvest 2010? _____
SM08[2]… during winter? _____
SM09[2]… before crop growth began in 2011? _____
SM10[2]… after crop growth began in 2011? _____
(Note: percent values for this question should add up to 100)

SM11[2] 178. How often is solid manure applied to the land where ^**Crop 2** is grown?

[1] O More than twice a year
[2] O Twice a year
[3] O Once per year
[4] O Once every two years
[5] O Less than once every two years

SM12 179. In 2011, was the solid manure tested for its nutrient content before being applied to the land?

[1] O Yes
[3] O No

Section 3: Grazing management

For the following questions, consider the grazing season from spring to fall 2011.

GR01 180. Did any of your ^LT02 graze on your operation between spring and fall 2011?
[1] O Yes
[3] O No *(Go to Q195)*

GR02 181. What was the total area of tame or seeded pasture used by **^LT02** for grazing between spring and fall 2011?

_____ [1] O acres [2] O hectares [3] O arpents GR03
(If Q181 = 0, go to Q188)

The next set of questions has to do with how you typically manage grazing on your tame or seeded pasture. Think about one specific paddock when answering these questions. We suggest you choose the northernmost paddock but you may choose another paddock if you wish.

GR04 182. What is the area of the tame or seeded pasture paddock you have chosen?

_____ [1] O acres [2] O hectares [3] O arpents GR05
(If the area changes over time, ask the respondent to report the area of the paddock at its largest.)

GR06 183. Do you use temporary fencing on this paddock?
[1] O Yes
[3] O No

GR07 184. What was the average number of ^LT02 grazing in that paddock at one time? Do not include any livestock that have not been weaned.

_____

GR08 185. Between spring and fall 2011, what was the average length of time that ^LT02 remained in that paddock before moving to another one?

_____ [1] O days [2] O weeks [3] O months GR09

(If the respondent has difficulty answering, ask them to report the length of one grazing cycle.)

GR10 186. How often is this paddock used for grazing?

[1] O More than three times a year
[2] O Three times a year
[3] O Two times a year
[4] O Once a year
[5] O Less than once a year

(If the respondent has difficulty answering, ask them to report the frequency of grazing cycles)

GR11 187. What was the grass or forage height on the paddock when the livestock were finished grazing the area in 2011?

_____ [1] O centimetres [2] O millimetres [3] O inches [4] O feet [5] O metres GR12

GR13 188. What was the total area of native or natural pasture used by ^**LT02** for grazing between spring and fall 2011?

_____ [1] O acres [2] O hectares [3] O arpents GR14

(If Q188 = 0, go to Q195).

The next set of questions is about how you typically manage grazing on your native or natural pasture. Think about one specific paddock when answering these questions. We suggest you choose the northernmost paddock but you may choose another paddock if you wish.

GR15 189. What is the area of the native or natural pasture paddock you have chosen?

_____ [1] O acres [2] O hectares [3] O arpents GR16

(If the area changes over time, ask the respondent to report the area of the paddock at its largest.)

GR17 190. Do you use temporary fencing on this paddock?

[1] O Yes
[3] O No

GR18 191. What was the average number of ^LT02 grazing in that paddock at one time? Do not include any livestock that have not been weaned.

_____

GR19 192. Between spring and fall 2011, what was the average length of time that ^LT02 remained in that paddock before moving to another one?

_____ [1] O days [2] O weeks [3] O months GR20

(If the respondent has difficulty answering, ask them to report the length of one grazing cycle.)

GR21 193. How often is this paddock used for grazing?

[1] O More than three times a year
[2] O Three times a year
[3] O Two times a year
[4] O Once a year
[5] O Less than once a year

(If the respondent has difficulty answering, ask them to report the frequency of grazing cycles.)

GR22 194. What was the grass or forage height on the paddock when the livestock were finished grazing the area in 2011?

_____ [1] O centimetres [2] O millimetres [3] O inches [4] O feet [5] O metres GR23

The following questions are related to <u>all</u> of your grazing land.
Consider the late fall 2010 to winter 2011 grazing season (when plants are dormant).

GR24 195. Did you have ^LT02 feeding or grazing in an open field setting during late fall 2010 or winter 2011??

[1] O Yes
[3] O No *(Go to Section 4)*

*An **open field** is one where manure deposited directly by livestock is not removed from the site, although the manure may or may not be spread out by harrowing.*

GR25 196. How many ^LT02 were in an open field setting between late fall 2010 and winter 2011 (i.e. after the typical grazing season)? (note: for any amount of time in that period)

_____

GR26 197. What did they feed or graze on during the late fall or winter season while in an open field setting? *(Mark all that apply)*

[01] O Residues from harvested annual crops, including stubble, straw, chaff, and weed growth
[02] O Swathed or cut/windrowed crops (e.g. swath grazing)
[03] O Standing dormant vegetation (e.g. forages, standing corn plants, other crops)
[04] O Whole bales of hay or straw (e.g. bale grazing)
[05] O Unrolled bales of hay or straw
[06] O Processed hay, silage, or straw fed on the ground in a windrow or pile
[07] O Processed hay, silage, or straw fed in a trough
[08] O Other (please specify): _____ GR27

(If Q197 = 04, 05, 06 or 07, go to Q198. Otherwise, go to Q199)

GR28 198. Which of the following best describes how you manage the feeding of hay, straw or silage in an open field during the late fall or winter season?

[1] O Feed in one area year after year
[2] O Feed in one area for one year, but move to a new area each year
[3] O Feed in different areas within one year and move to new areas each year
[4] O Other (please specify): _____ GR29

GR30 199. Which of the following methods are used to provide shelter to livestock while in an open field setting during the late fall and winter season? *(Mark all that apply)*

[1] O Natural tree bluffs and wooded areas in field
[2] O Planted shelterbelts in field
[3] O Stationary windbreaks in field
[4] O Portable windbreaks moved to different locations in field
[5] O Livestock walk to farmyard for shelter (e.g. farmstead shelterbelt, stationary windbreak, barn)
[6] O Other (please specify): _____ GR31
[7] O None

GR32 200. In 2011, were any pastures or grazing paddocks adjacent to surface water?

[1] O Yes
[3] O No *(Go to Section 4)*

GR33 201. In 2011, what type of access did grazing livestock have to surface water bodies?

[1] O Unlimited year round access *(Go to Section 4)*
[2] O Unlimited access for the entire grazing season *(Go to Section 4)*
[3] O Unlimited access for the winter feeding season *(Go to Section 4)*
[4] O Limited access
[5] O No access

GR34 202. Which of the following practices were used to restrict access to surface water bodies? *(Mark all that apply)*

[1] O Fencing along shoreline
[2] O Remote or offsite water system to a trough
[3] O Access ramps for direct watering
[4] O Stream crossings
[5] O Limited or controlled grazing in riparian areas or adjacent to surface water
[6] O Other (please specify): _____ GR35

Section 4: Wildlife damage

The following questions refer to wildlife damage on your operation.

Only ask if dairy cattle selected in Q2

WD07 203. In 2011, how many dairy cattle were killed or injured by wildlife?

_____

Only ask if beef cattle selected in Q2

WD08 204. In 2011, how many beef cattle were killed or injured by wildlife?

_____

Only ask if pork production selected in Q2

WD09 205. In 2011, how many pigs were killed or injured by wildlife?

_____

Only ask if poultry and/or egg production selected in Q2

WD10 206. In 2011, how many poultry were killed or injured by wildlife?

_____

Only ask if other livestock selected in Q2

WD11 207. In 2011, how many ^**LT03** (other livestock) were killed or injured by wildlife?

_____

WD12 208. In 2011, were any of the following practices used to reduce the impact of wildlife damage or injury to the livestock on your operation? *(Mark all that apply)*

01 O Fencing to protect stored feed and livestock
02 O Scaring devices or repellent systems
03 O Shooting or trapping by yourself or others
04 O Night penning near barn
05 O Guardian animals
06 O Other (please specify): _____ WD13
07 O No practices done

Section 5: Land and water management practices

The following questions refer to land and water management practices on your operation.

209. In 2011, were any of the following practices used on your operation?

LU01
- Cover or companion crops

[1] O Yes
[3] O No

LU02 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU03

LU04
- Winter cover or green manure

[1] O Yes
[3] O No

LU05 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU06

LU07
- Terracing, contour or across the slope cropping

[1] O Yes
[3] O No

LU08 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU09

LU10
- Permanent perennial forages on erodible land

[1] O Yes
[3] O No

LU11 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU12

LU13
- Adding straw to improve soil condition (e.g., mulching)

[1] O Yes
[3] O No

LU14 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU15

LU16
- Placing eroded soil back on hilltops

[1] O Yes
[3] O No

LU17 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU18

LU22 • Field shelterbelts/windbreaks
[1] O Yes
[3] O No

LU23 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU24

LU25 • Surface or sub-surface drainage of land
[1] O Yes
[3] O No

LU26 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU27

LU28 • Restore or plug previously drained wetlands to natural condition
[1] O Yes
[3] O No

LU29 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU30

LU31 • Other (please specify): _____ LU32
[1] O Yes
[3] O No

LU33 Over what area? _____ [1] O acres [2] O hectares [3] O arpents LU34

The following questions are about land use changes.

LU38 210. In 2011, what was the total woodland area on your operation?

_____ [1] O acres [2] O hectares [3] O arpents LU39

Woodlands *include woodlots, tree windbreaks, shelterbelts, bush, forest, shrubs, tree bluffs.*

LU40 211. Since 2006, how much of your land area was changed FROM woodland TO pasture or cultivated cropland?

_____ [1] O acres [2] O hectares [3] O arpents LU41

LU42 212. Since 2006, how much of your land area was changed FROM pasture or cultivated cropland TO woodland?

_____ [1] O acres [2] O hectares [3] O arpents LU43

LU44 213. In 2011, how much of your land area was changed FROM cultivated cropland TO pasture?

_____ [1] O acres [2] O hectares [3] O arpents LU45

LU46 214. In 2011, how much of your land area was changed FROM pasture TO cultivated cropland?

_____ [1] O acres [2] O hectares [3] O arpents LU47

Wetlands and water management

LU48 215. Do you have any cropland on your farm operation? Cropland includes annual field crops for grain, seed or feed, perennial forages for hay, silage or seed, fruits, nuts, vegetables, and potatoes.

[1] O Yes
[3] O No *(Go to Q228)*

Seasonal wetlands

LU49 216. Were there any seasonal wetlands on your cropland in 2011?

[1] O Yes
[3] O No *(Go to Q220)*

Seasonal wetlands *normally have water present until mid-summer or early fall and, in most years it is too wet to plant a crop in these areas. Examples include ponds, sloughs, potholes, marshes and treed wet swamps. Don't consider permanent wetlands.*

LU50 217. Did you maintain a riparian buffer around or beside the seasonal wetlands?

[1] O Yes, all
[2] O Yes, some
[3] O No *(Go to Q220)*

A ***riparian buffer*** *is permanent planted or natural vegetation adjacent to a seasonal or permanent wetland or waterway, extending upslope from the normal shoreline.*

LU51 218. What type of vegetation was your riparian buffer composed of? *(Mark all that apply)*

[1] O Trees
[2] O Shrubs
[3] O Grasses
[4] O Legumes
[5] O Other (please specify): _____ LU52

LU53 219. Was the riparian buffer harvested or left idle?

[1] O Harvested, all
[2] O Harvested, some
[3] O Left idle

Permanent wetlands

LU54 220. Were there any permanent wetlands on your cropland in 2011?

[1] O Yes
[3] O No *(Go to Q224)*

Permanent wetlands *are similar to seasonal wetlands, except they are usually flooded year-round, except for during periods of extreme drought. They also include lakes, reservoirs and dugouts.*

LU55 221. Did you maintain a riparian buffer around or beside the permanent wetlands?

[1] O Yes, all
[2] O Yes, some
[3] O No *(Go to Q224)*

LU56 222. What type of vegetation was your riparian buffer composed of? *(Mark all that apply)*

[1] O Trees
[2] O Shrubs
[3] O Grasses
[4] O Legumes
[5] O Other (please specify): _____ LU57

LU58 223. Was the riparian buffer harvested or left idle?

[1] O Harvested, all
[2] O Harvested, some
[3] O Left idle

Waterways

LU59 224. Were there any waterways on your cropland in 2011?
[1] O Yes
[3] O No *(Go to Q228)*

Waterways *are channels that contain flowing water year round or for at least part of the year, usually in spring. Examples include drainage ditches, draws or coulees, grassed waterways, streams, creeks and rivers.*

LU60 225. Did you maintain a riparian buffer around or beside the waterways?
[1] O Yes, all
[2] O Yes, some
[3] O No *(Go to Q228)*

LU61 226. What type of vegetation was your riparian buffer composed of? *(Mark all that apply)*
[1] O Trees
[2] O Shrubs
[3] O Grasses
[4] O Legumes
[5] O Other (please specify): _____ LU62

LU63 227. Was the riparian buffer harvested or left idle?
[1] O Harvested, all
[2] O Harvested, some
[3] O Left idle

Domestic water

LU64 228. In 2011, were there any wells on your operation that are no longer used?
[1] O Yes
[3] O No *(Go to Q230)*

LU65 229. Have these wells been decommissioned?
[1] O All decommissioned
[2] O Some decommissioned
[3] O None

Energy

LU66

230. Do you use or generate any of the following alternative or renewable energy sources on your operation? *(Mark all that apply)*

[1] O Solar
[2] O Wind
[3] O Biogas or methane
[4] O Biomass (e.g. wood, crop residue, other organic based fuels)
[5] O Hydro electricity generated on your operation
[6] O Other (please specify): _____ LU67
[7] O None

Section 6: Waste management and hazardous materials

The following questions refer to waste management and hazardous materials on your operation.

WM05 231. In 2011, did you store fuel (diesel or gasoline) on your operation?
[1] O Yes
[3] O No *(Go to Q233)*

WM06 232. Did the fuel storage site have a containment system to handle spills?
[1] O Yes
[3] O No

WM07 233. In 2011, did you store other petroleum products (oil, grease or waste oil) on your operation?
[1] O Yes
[3] O No *(Go to Q235)*

WM08 234. Did the storage site have a containment system to handle petroleum product spills?
[1] O Yes
[3] O No

WM09 235. In 2011, how was wastewater managed on your operation? *(Mark all that apply)*
[01] O Discharged to a constructed retention or holding pond
[02] O Discharged to a septic or sewer system
[03] O Discharged into a vegetative filter strip or constructed wetland
[04] O Applied to agricultural land by gravity release, pumping, spreading, or irrigation system
[05] O Included in the liquid manure system
[06] O Collected in holding or storage tank
[07] O Other (please specify): _____ WM10
[08] O Not actively managed. Wastewater removed through natural drainage.
[09] O Not applicable/ no wastewater.

Wastewater *includes water from cleaning sprayers and other farm equipment, water from washing farm produce, milkhouse, pens or facilities, silage leakage or runoff from livestock pens, etc…*

Only ask if dairy cattle selected in Q2.

236. In 2011, how many dead dairy cattle were disposed of using each of the following methods?

WM11[1] … buried: _____
WM11[2] … incinerated: _____
WM11[3] … composted: _____
WM11[4] … off-farm collection service: _____
WM11[5] … other: _____ (please specify): _____ WM12
(Go to Q240)

Only ask if beef cattle selected in Q2.

237. In 2011, how many dead beef cattle were disposed of using each of the following methods?

WM13[1] … buried: _____
WM13[2] … incinerated: _____
WM13[3] … composted: _____
WM13[4] … off-farm collection service: _____
WM13[5] … other: _____ (please specify): _____ WM14
(Go to Q240)

Only ask if pork production selected in Q2.

238. In 2011, how many dead pigs were disposed of using each of the following methods?

WM15[1] … buried: _____
WM15[2] … incinerated: _____
WM15[3] … composted: _____
WM15[4] … off-farm collection service: _____
WM15[5] … other: _____ (please specify): _____ WM16
(Go to Q240)

Only ask if poultry and/or egg production selected in Q2.

239. In 2011, how many dead poultry were disposed of using each of the following methods?

WM17[1] … buried: _____
WM17[2] … incinerated: _____
WM17[3] … composted: _____
WM17[4] … off-farm collection service: _____
WM17[5] … added to manure storage: _____
WM17[6] … other: _____ (please specify): _____ WM18
(Go to Q240)

Section 7: Environmental Farm Plan

EP01 240. Does your farm have a formal, written environmental farm plan?

[1] O Yes, plan is developed
[2] O Yes, plan is in development and being reviewed
[3] O No *(Go to end)*

*An **Environmental Farm Plan** is a formal, written overall assessment of environmental issues or concerns related to your operation and can include individual and/or group planning processes.*

EP02 241. When was this Environmental Farm Plan developed or last updated?

[1] O Less than 1 year ago
[2] O 1-3 years ago
[3] O 4-5 years ago
[4] O More than 5 years ago

EP03 242. To what extent were the Beneficial Management Practices identified in the action plan of your Environmental Farm Plan implemented on your operation?

[1] O Practices fully implemented *(Go to Q244)*
[2] O Practices partially implemented
[3] O Practices not implemented

***Beneficial Management Practices** are practices that improve environmental benefit or reduce environmental risk on farms. These practices may be eligible for funding under environment programs.*

EP04 243. What is the main reason that you have not implemented the Beneficial Management Practices in your action plan? *(Mark only one)*

[1] O Economic pressures
[2] O Lack of time
[3] O Lack of information
[4] O Don't accept recommendations
[5] O Other (please specify): _____ EP05

EP06

244. Did you receive any technical assistance from any of the following groups to help implement the Beneficial Management Practices identified in the action plan? *(Mark all that apply)*

01 O Government agency
02 O Industry (input supplier, processors, etc.)
03 O Environmental non-governmental organization (conservation authority, watershed coordinator, etc).
04 O Producer association
05 O College/university
06 O Environmental Farm Plan advisor
07 O Other (please specify): _____ EP07
08 O No assistance

EP08

245. Did you receive any financial assistance to offset costs for implementation of the Beneficial Management Practices identified in your action plan?

1 O Yes
3 O No

Comments:

THANK YOU FOR YOUR PARTICIPATION