



Version 3 Data Collection Prep

ENVIRONMENTAL STEWARDSHIP



ABOUT THIS DOCUMENT

This document summarizes data to gather before a FARM Environmental Stewardship (ES) Version 3 assessment. FARM ES Version 3 contains minimum data inputs that are similar to Version 2. It also has optional data inputs that can be entered for more tailored results.

This document focuses on the **minimum data inputs**, but additional data collection may be needed (e.g. certain housing or manure treatment systems trigger follow-up questions). It does not include the optional animal management and field portions of FARM ES Version 3.

EVALUATION PERIOD

The evaluation period is the 12-month period that the data represents. *For example, all data could represent the calendar year January 2024 to December 2024.*

PRODUCTION AND HERD INFO

Data Point	Value
Total Annual Milk Production	lbs
Avg Milk Protein Content <i>Use true protein content</i>	%
Avg Milk Fat Content	%
Total Adult Herd <i>Use the running herd average of lactating and dry cows.</i>	
Optional - Times Milked Per Day <i>Default is 3.</i>	
On-site Pre-weaned Calves	
Off-site or Purchased Pre-weaned Calves	
On-site Post-weaned Heifers	
Off-site or Purchased Post-weaned Heifers	
Optional – Breed <i>If the herd is a mix or contains other breed(s), pick breed that most closely matches animal size. If the herd is 50-50 split, choose Holstein.</i>	Options – Holstein or Jersey
Adult Animals Sold <i>Total sold cows divided by average adult animals herd size. Does not include heifers.</i>	%
Adult Animals that Died <i>Total died cows divided by average adult animals herd size. Does not include heifers.</i>	%



FEED

This section focuses on the lactating cow ration. To make data collection easier, you can focus on the corn grain and forages, then enter a regional byproduct mix and a mineral mix to fill out the rest. If multiple feeding groups, try to average across. If that is not feasible, focus on the high cow ration.

Feed Ingredient	Amount Fed (lbs / day)	As-fed or dry matter basis?	Homegrown, Purchased, Both?
<i>Regional Byproduct Mix (or enter each byproduct)</i>			
<i>Mineral Mix (or enter each mineral)</i>			

Farms using 3NOP or Monensin (ionophores) in the lactating cow ration can also specify this information. Optional inputs include the calf, heifer, and dry cow rations.

NUTRIENT MANAGEMENT AND MANURE

Does the farm have a written Nutrient Management Plan	Yes or No
If Yes:	
Which type(s) of written Nutrient Management Plan does the farm have? <i>Circle all that apply.</i>	NMP, CNMP, MMP
Does the farm maintain the Nutrient Management Plan? <i>Maintained means it is reviewed regularly and updated as needed. Indicate 'Yes' if the NMP is reviewed at least every five years to determine if updates are needed. State or local regulations may require the plan to be updated more frequently.</i>	Yes or No
Does the farm implement the Nutrient Management Plan? <i>Implementation means that the farm follows the NMP's guidance around nutrient testing, nutrient application, recordkeeping and any other requirements.</i>	Yes or No

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MANURE

Information needed for each animal class and housing / manure management system:

Number of Animals	
Housing	Pasture, Free stall, Tie stall, Dry lot / open lot, Compost bedded pack barn, Deeping bedding > 1 month, Deep bedding < 1 month
<p><i>If pasture is selected, the below questions will not appear, however users will have to specify manure management information for the holding area as well as time on pasture.</i></p> <p><i>If the user selects compost bedded pack or deep bedding >1 month, users will not have to enter bedding type, the model assumes sawdust.</i></p>	
Bedding Type	Sand, Straw, Sawdust, Manure solids, None
Months per Year If different systems are used at different times in a calendar year, enter how many months it is managed this way.	months
Manure Handling <i>Manual scraping should be chosen for any type of manure removal that involves a vehicle (skidsteer scraping, vacuum cleaner, etc.)</i>	Manual scraper, Alley scraper, Flush
Separation before Treatment / Storage, if applicable <i>Select up to 2 solid-liquid separation methods</i>	None, Sand lane / gravity lane, Settling basin, Weeping wall, Roller press, Belt press, Sloped screen, Screw press, Rotary screen, Custom
Storage / Treatment <i>If separation occurs, then only liquid manure management options will appear.</i>	Daily spread, Solid stack, Composting, Slurry storage underfloor, Slurry with crust, Slurry without crust, Open lot / dry lot, Covered anaerobic lagoon, Uncovered anaerobic lagoon, Cap and flare, Anaerobic digester
Storage Time <i>Enter number of days between emptying manure storage</i>	days
For lactating cows only: is manure from the holding area handled differently?	Yes or No <i>If yes, the same questions will appear for holding area manure management.</i>



Some manure management systems trigger additional data inputs. Those are included here for awareness:

If this is selected	This input appears
Housing type: Composted bedded pack barn	Tillage frequency per day
Housing type: Pasture	Months per year; Hours per day
Housing type: Dry / Open lot	Specify Feed Alley / Parlor Manure Management
Storage / treatment: Composting	Composting type (Intensive windrow, passive windrow, or static pile); Turning frequency
Custom Solid-Liquid separation	% dry solids; total solids removal efficiency; volatile solids removal efficiency; nitrogen removal efficiency; total ammoniacal nitrogen removal efficiency; phosphorus removal efficiency; potassium removal efficiency
Storage / treatment: Anaerobic Digestion	Solid-liquid separation post-digestion (if applicable); effluent management (covered or uncovered lagoon)

ENERGY

	Amount used in 12 month period	% on dairy activities
Electricity <i>Do not include electricity generated from solar / wind / digester if it is exported or sold off-site. Include if it is used on the dairy.</i>	kWh	
Diesel	gallon	
Biodiesel	gallon	
Propane	gallon	
Natural Gas	therm OR ccf	
Gasoline	gallon	
Fuel Oil	gallon	

Renewable energy questions, if relevant:

Question		Value
Annual solar energy generated on-site		kWh
	Does the farm own the REC associated with the solar energy?	Yes/No
	How much of the solar energy is used on-site?	kWh

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Annual wind energy generated on-site		kWh
	Does the farm own the REC associated with the wind energy?	Yes/No
	How much of the wind energy is used on-site?	kWh
If the farm has an anaerobic digester: Does the farm own the carbon credits, REC or other carbon / energy credits associated with the digester?		Yes/No
	RNG generated by digester	MMcf
	RNG generated by digester used on-site	MMcf
	Electricity generated by digester	kWh
	Electricity generated by digester used on-site	kWh

CARBON TRADING

Question	Follow-up Question	Units
Has the farm sold any carbon emission reduction credits this year?		Yes/No
	If yes, how many tons of CO ₂ e were sold as credits during the evaluation period?	metric tons
	If known, were the carbon reduction credits sold as insets or offsets?	Multiple Choice (Insets, Offsets, Unsure)
Has the farm sold any credits related to carbon sequestration this year?		Yes/No
	If yes, how many metric tons of sequestered CO ₂ e were sold as credits during the 12 month evaluation period?	metric tons
	If known, were the carbon sequestration credits sold as insets or offsets?	Multiple Choice (Insets, Offsets, Unsure)