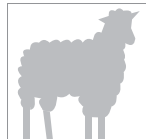


MANURE

Management Assessment

Reference TIPS
brochure, pg. 3, 5, 10

Worksheet



The way livestock owners manage animal manure can have a dramatic effect on the quality of surface and ground water—including the water you drink. Livestock owners should evaluate the concentration of animals on the property, the amount and timing of manure applications to crop fields and the area's soils, slope, precipitation and water table. These and other factors contribute to the risks that animal waste might present to the soil, water, air quality, plant health and wildlife habitat—as well as to livestock and human health. This worksheet can help you assess your operation and identify areas for improvement.

Instructions: Complete the following assessment if you own horses, cattle, goats, sheep or other animals. Each of the 16 assessment areas below addresses a different aspect of animal waste management. For each question that relates to your operation, select the statement that best describes practices and conditions on your land.

Site

Date

1. Do you use a nutrient management plan for balanced manure applications to meet crop and pasture needs?

N/A

High Risk

There is no nutrient management plan. (See definition below.)

High-Moderate Risk

Only commercial fertilizers are accounted for in the nutrient management plan.

Moderate-Low Risk

Commercial fertilizers and soil residual nutrients are accounted for in the nutrient management plan.

Low Risk

Commercial fertilizers, soil residual nutrients, irrigation water nitrates, legumes and manure are accounted for in the nutrient management plan.

What you can do:

A nutrient management plan is an assessment of manure produced on a farm, how much of that manure is appropriate to apply on crops, and how to safely apply, remove or store it. For assistance in developing a nutrient management plan that promotes vigorous plant growth and a healthy environment, contact your local Oregon State University Extension office, Soil and Water Conservation District (SWCD), or Natural Resources Conservation Service (NRCS).

Notes:

2. Soil tests:

N/A

High Risk

No soil testing is done.

High-Moderate Risk

Soil tests occur infrequently.

Moderate-Low Risk

Soil tests are done every 2 to 5 years.

Low Risk

Soil tests are done every year.

What you can do:

Contact your local Extension office or a natural resource professional for information on how to have soil tests done for your operation. Refer to the **Soil Assessment & Management Options** worksheet (page 47) for more information.

Notes:

¹ The Manure Management Assessment worksheet was adapted, with permission, from the University of Nebraska Cooperative Extension publications, EC 98-750-S, EC 98-752-S, EC 98-756-S, EC 98-758-S, EC 98-761-S, *Farm*A*Syst* (University of Nebraska, Lincoln, Nebraska, July 1998, 16 pages.

² Contact information is provided in the **Resources** section beginning on page 57 of this packet.



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3. Knowledge of the nutrient content in manure:

<input type="checkbox"/>	<input type="checkbox"/> High Risk	<input type="checkbox"/> High-Moderate Risk	<input type="checkbox"/> Moderate-Low Risk	<input type="checkbox"/> Low Risk
N/A	No manure analysis or book value estimate of nutrient value is used.	Book value for estimating nutrients is used.	Manure analysis is done once per year.	Manure analysis is done prior to each primary period of land application.

What you can do: To get a manure analysis or information on book value estimates, contact your local Extension, SWCD or NRCS office.

Notes: _____

4. Records on application of manure to fields:

<input type="checkbox"/>	<input type="checkbox"/> High Risk	<input type="checkbox"/> High-Moderate Risk	<input type="checkbox"/> Moderate-Low Risk	<input type="checkbox"/> Low Risk
N/A	Records of manure application are not kept.	Records of individual field applications for the past year are available.	Records of individual field manure applications for the past three years are available.	Permanent records of individual field manure applications are maintained and used in decision-making.

What you can do: Records of manure applications help growers track and make informed decisions on the amount of nutrients to apply for healthy plants while avoiding unintended nutrient loading in water bodies. Contact your local SWCD, NRCS or Extension office for examples of how to keep and use manure application records.

Notes: _____

5. Manure application rate (manure applied on fields):

<input type="checkbox"/>	<input type="checkbox"/> High Risk	<input type="checkbox"/> High-Moderate Risk	<input type="checkbox"/> Moderate-Low Risk	<input type="checkbox"/> Low Risk
N/A	Application rates for manure spreading equipment are not known.	A rough estimate of the manure application rate based on equipment settings is available.	A good estimate of the manure application rate is known. You have assessed the accuracy of your equipment settings and usage.	Manure application equipment has been calibrated within the past three years.

What you can do: Contact the equipment manufacturer or dealer for more information on the application rates for your equipment. Another option is to calibrate manure application equipment following procedures outlined in the associated NRCS job sheet. Contact your local NRCS office for more information.

Notes: _____

6. Field conditions during manure applications:

- | | | | | |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>
N/A | <input type="checkbox"/> High Risk
Manure is applied to ponded or saturated soils under winter conditions to snow-covered or frozen fields from which runoff is common. | <input type="checkbox"/> High-Moderate Risk
Manure is applied under winter conditions to snow-covered or frozen fields with minimum slope and limited runoff potential. | <input type="checkbox"/> Moderate-Low Risk
Application is avoided in winter or when soil is saturated. Manure is applied in late summer or fall on land to be planted with spring crops. | <input type="checkbox"/> Low Risk
Manure is applied primarily to growing crops or within several weeks prior to planting. |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|

What you can do: Time manure applications to avoid or reduce nutrient-laden runoff and to provide for optimal crop use. Contact your local NRCS, SWCD or Extension office for more information.

Notes:

7. Manure stacked in-field or on bare soil:

- | | | | | |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <input type="checkbox"/>
N/A | <input type="checkbox"/> High Risk
Manure is stacked for more than 30 days OR is stacked on coarse-textured soils (gravels, sands or sandy loams).
- AND -
Fractured bedrock or water table is shallower than 20 feet OR the upslope surface water is not diverted. | <input type="checkbox"/> High-Moderate Risk
Manure is stacked for less than 30 days
- AND -
is stacked on medium- or fine-textured soils (silt loam, loam, clay loam, silty clay).
- AND -
Water table is deeper than 20 feet, and upslope water is diverted around the pile. | <input type="checkbox"/> Moderate-Low Risk
Manure is stacked for less than 30 days
- AND -
is stacked on medium- or fine-textured soils (silt loam, loam, clay loam, silty clay).
- AND -
Water table is deeper than 20 feet, and upslope water is diverted around the pile.
- AND -
The pile is relocated each year. | <input type="checkbox"/> Low Risk
Manure is never stacked on a field or bare soil. |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|

What you can do: Contact your local SWCD, NRCS or Extension office for information on the soils, slope and water table in your area. A natural resource professional can help you assess conditions on your land and develop solutions that are right for you.

Notes:

8. Manure stacked in a feed yard:

- | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> N/A
The feedlot has no surface runoff containment and upslope surface flow of water is not diverted from flowing over the feed yard. | <input type="checkbox"/> High Risk
There is containment of surface runoff on the feedlot and upslope surface flow is partially diverted. | <input type="checkbox"/> High-Moderate Risk
All feedlot surface runoff is directed to a settling basin and grass filter strip. All upslope surface flows during an average rainfall event are diverted. | <input type="checkbox"/> Moderate-Low Risk
All feedlot surface runoff is contained in an appropriately sized storage system designed to handle large or excessive rainfall events. All upslope surface flow is diverted. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

What you can do: Contact your local SWCD, NRCS or Extension office for information on the soils, slope and water table in your area. A natural resource professional can help you assess conditions on your land and develop solutions that are right for you.

Notes:

9. Manure stacked on concrete:

- | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> N/A
There is no roof over the stacked manure,
- AND -
liquid runoff is allowed to enter farm drainage, road ditches, intermittent or continuous streams, or natural wetlands. | <input type="checkbox"/> High Risk
There is no roof over the stacked manure,
- AND -
liquid runoff is diverted to pastures or crop land where it is absorbed into the soil. | <input type="checkbox"/> High-Moderate Risk
There is no roof over the stacked manure,
- AND -
liquid runoff is diverted to grass filter strips that are properly designed to handle the volume and direction of runoff flows. | <input type="checkbox"/> Moderate-Low Risk
A roof covers the stacked manure, AND no liquid exits the area. Upslope surface flow is diverted.
- OR -
There is no roof, but liquid runoff is collected in a liquid storage facility. Upslope surface flow is diverted. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

What you can do: Contact your local SWCD, NRCS or Extension office for information and assistance to develop animal waste storage and runoff solutions for your operation.

Notes:

10. Manure stored in animal housing:

<input type="checkbox"/> N/A	<input type="checkbox"/> High Risk Manure is stored on an earthen floor or coarse textured soils (gravels, sands or sandy loams) - AND - is subject to surface water runoff. - AND - Water table or fractured bedrock is shallower than 20 feet.	<input type="checkbox"/> High-Moderate Risk Manure is stored on a concrete or compacted earthen floor of medium- or fine textured soils (silt loam, loam, clay loam, silty clay) - AND - is subject to surface water runoff. - AND - Water or fractured bedrock is shallower than 20 feet.	<input type="checkbox"/> Moderate-Low Risk Manure is stored on a concrete or compacted earthen floor of medium- or fine textured soils (silt loam, loam, clay loam, silty clay) - AND - protected from surface water runoff. Water or fractured bedrock is deeper than 20 feet.	<input type="checkbox"/> Low Risk The building has a concrete floor, - AND - the site is protected from surface water runoff with curbs or walls.
-------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------

What you can do: Contact your local SWCD, NRCS or Extension office for information and assistance to develop animal waste storage and runoff solutions for your operation.

Notes:

11. Distance from livestock manure storage to nearest surface water source:

<input type="checkbox"/> N/A	<input type="checkbox"/> High Risk Less than 100 feet	<input type="checkbox"/> High-Moderate Risk 100 to 199 feet	<input type="checkbox"/> Moderate-Low Risk 200 to 500 feet	<input type="checkbox"/> Low Risk Greater than 500 feet
-------------------------------------	-----------------------------------------------------------------	-----------------------------------------------------------------------	----------------------------------------------------------------------	-------------------------------------------------------------------

What you can do: Contact your local SWCD, NRCS or Extension office for information and assistance on options to protect water bodies, fish and wildlife from nutrient-laden runoff.

Notes:

12. Location of livestock manure storage in relation to well or drinking water source:

- | | | | | |
|--------------------------|------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> High Risk | <input type="checkbox"/> High-Moderate Risk | <input type="checkbox"/> Moderate-Low Risk | <input type="checkbox"/> Low Risk |
| N/A | The well is within 100 feet of manure storage. | The well is 100 to 250 feet away AND downslope from manure storage. | The well is more than 250 feet away AND downslope from manure storage. | The well is more than 100 feet away AND upslope from manure storage. |

What you can do: Contact your local SWCD, NRCS or Extension office for information on how to protect drinking water from contamination.

Notes: _____

13. Yard runoff control system in holding lot or yard (not fields or pastures):

- | | | | | |
|--------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> High Risk | <input type="checkbox"/> High-Moderate Risk | <input type="checkbox"/> Moderate-Low Risk | <input type="checkbox"/> Low Risk |
| N/A | Runoff from the yard is uncontrolled and solids (manure) are rarely collected in a storage facility. | Most yard runoff is collected in a storage facility. The solids (manure/bedding) are settled out. There is no filter strip for released liquids. | All runoff is collected. Solids (manure/bedding) are settled out. Water is released directly onto a filter strip. | The yard is roofed
- OR -
all runoff is collected and held in a liquid waste storage facility
- OR -
there is no yard runoff. |

What you can do: Contact your local SWCD, NRCS or Extension office for information and assistance to develop a conservation system that addresses runoff issues.

Notes: _____

14. Manure mixed with milking center effluent/waste water (if you have a milking center):

- | | | | | |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> High Risk | <input type="checkbox"/> High-Moderate Risk | <input type="checkbox"/> Moderate-Low Risk | <input type="checkbox"/> Low Risk |
| N/A | Most manure, excess feed, and other solids from the milking parlor and holding pen are mixed with effluent from the milking center. | Some manure, excess feed, and other solids from the milking parlor are mixed with effluent from the milking center. | Most manure, excess feed, and other solids are scraped from the milking parlor before cleanup. Holding pen manure and cleanup water are not mixed with effluent from the milking center. | All manure, excess feed, and other solids are scraped from the milking parlor before cleanup. Holding pen manure and cleanup water are not mixed with effluent from the milking center. |

What you can do: Contact your local SWCD, NRCS or Extension office for information and assistance to develop solutions that are right for you and your operation.

Notes: _____



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15. Distance from silage storage to nearest surface water source:

- | | | | | |
|-------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> N/A | <input type="checkbox"/> High Risk
Less than 100 feet | <input type="checkbox"/> High-Moderate Risk
100 to 500 feet | <input type="checkbox"/> Moderate-Low Risk
Greater than 500 feet | <input type="checkbox"/> Low Risk
Silage effluent is collected and stored for field application. |
|-------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
- OR -**
- leachate drains into road ditch or surface water.

What you can do: Contact your local SWCD, NRCS or Extension office for information and assistance on options to protect water bodies, fish and wildlife from nutrient-laden runoff.

Notes:

16. Livestock water source:

- | | | | | |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> N/A | <input type="checkbox"/> High Risk
Livestock are allowed to drink directly from a live stream or irrigation ditch. | <input type="checkbox"/> High-Moderate Risk
Streams and ditches are fenced or livestock access is prevented. | <input type="checkbox"/> Moderate-Low Risk
Stock water is provided in troughs where overflow does not come in contact with manure. Stock are excluded from streams and ditches. | <input type="checkbox"/> Low Risk
Stock water is provided in troughs with overflow diverted to a liquid waste storage facility. |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|

What you can do: Contact your local SWCD, NRCS or Extension office for assistance developing livestock watering facilities and controlled access to surface water bodies. Ask about the availability of planning assistance and funding to help make improvements.

Notes:

The Next Steps for Better Manure Management:

Review your answers to the questions above and identify where you can make improvements to your animal waste handling procedures. If you would like to take additional steps to address issues with manure management, consider working with a natural resource professional to develop a nutrient management plan. Conservation planning assistance is available from your local SWCD, NRCS or Extension office, as well as through a number of private natural resource consultants.



Management Assessment

NOTES:
