



United States Department of Agriculture



Watershed Inspector Training: Inspecting Ag Properties

November 8, 2022 -- Jim Hyde, USDA NRCS CT Agronomist

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Animals and Farms



What kinds of animals and farms are we working with?

Common animal farms in the area:

Dairy

Beef

Horse

Sheep

Goats

Alpaca

Llama

Poultry: chicken, geese, quail, pheasant, turkey....

Ag Products:

Nursery & Greenhouse

Vegetable

Aquaculture (fish)



Farm Goals



**Often – regardless of goals – there is a common interest
to care for the land
to be good stewards of the land,
to leave land as good or better for the next generation.**

**What does that mean when
environmental problems come up ?**

**Many times – once a producer understands a problem,
They often come up with the best solutions.**



Farm Goals



THE fastest way to get booted off a farm and shut down conversation.....

Tell a farmer they aren't taking care of their land.



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Farm Tour



What is generally okay or expected to see on a farm or farm fields?



- Grazing Animals on Grass
- Manure applications for plant growth
- Limited soil exposure
- Prescribed use of chemicals or managements to appropriately develop their crop



Farm Tour



What is not okay or expected to see on a farm or farm fields for Water Quality?



- Exposed soils
- Gullies or washouts
- Dumping – trash or manures
 - manures are generally productive if used for their plant nutrient value
- Over-use of products or chemical spraying on a schedule vs spraying for need or documented threat or pressure (scouting/weather modeling)



Farm Tour



Of all the differences among our valued farms, there are a number of similarities when it comes to waste streams and potential loss off the farm.

Six go-to topics to consider related to managing waste streams on animal farms:

Barnyards

Manure Storage

Feed Storage

Mortality Management

Products Water (i.e. Dairy, Milkhouse Water)

Stormwater



Farm Tour



Of the six common points for waste loss on farms, general goal is to capture and contain the waste, so the waste streams can be used for their fertilizer value to grow crops or plants.

Capture – Contain – Reuse

Creating a more sustainable farm operation – reducing inputs / costs such as fertilizer and feed.

A cyclical system of crops – feed – manure – crops and reduced waste stream loss from the farmstead



Farm Tour



Of the six common points for waste loss on farms, one of the goals is to capture and contain the waste, so the waste streams can be used for their fertilizer value to grow crops or plants.

Capture – Contain – Reuse

**Creating a more sustainable farm operation –
reducing inputs / costs such as fertilizer and feed.**

**A cyclical system of crops – feed – manure – crops
and reduced waste stream loss from the farmstead**



Common captures



Barnyard

Manure

Feed

Mortality

Products

Stormwater

- Roof & concrete pad
- Bedded Pack
- Capture runoff (tank)
- Daily scrape/pick up
- Grazing land
- Grass / Harvested



Barnyards



Before



After

Clean Healthy animals
No mud



Barnyards



Bedded Area

Frequent Moves



Barnyards



Armored soil (but no restriction)



Armored soil + Gutters + Fence



Common captures



Barnyard

Manure

Feed

Mortality

Products

Stormwater

Tank

Building

Manure Stack

w/ cover & protections



Manure Storage



Tank



Covered Stack



Plastic covered dry manure

Roofed Storage
or Compost



Manure Storage



Not so good.



Better...



Better still....



Very Good



Very Good

Common captures



Barnyard

Manure

Feed

Mortality

Products

Stormwater

Under cover/roof
Solid Surface for
wet weather access
Managed runoff
Grazing



Feed Storage



Covered storage



Solid surface and
runoff management

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Common captures



Barnyard

Manure

Feed

Mortality

Products

Stormwater

Compost building

Compost outside
with protections

Burial

no soil water within 2 ft

Removal from farm

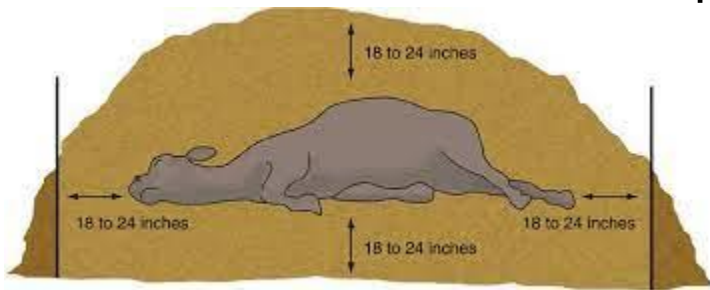


Mortality Management



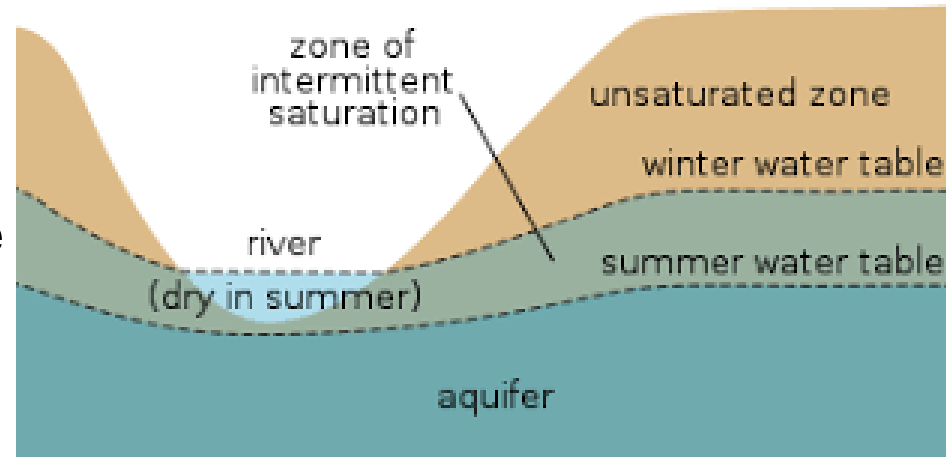
Composting Roofed or Open

~ 2 ft of material in all directions
of highly compostable materials
(waste hay, manure, unfinished compost)



Burial:

Top – at least 2 feet below surface
Bottom - at least 2 feet of dry soil
below the grave



Common captures



Barnyard

Manure

Feed

Mortality

Products

Stormwater

Tank w/ manure

Tank (separate, no manure)

Septic System

Municipal

sewer connection



Common captures



Barnyard

Manure

Feed

Mortality

Products

Stormwater

Diversion

Waterway

Pipes / Gutters

Outlet to clean water

- Divert clean water around the work area to prevent it from becoming dirty water.



Stormwater Management



Diverting Water around the work or animal area



Capturing and diverting roof water



Captured – now what!?

Once the wastestreams have been captured and contained, the next step is re-use.

Use the materials for its agronomic value:

Organic Matter

Microbiology

Trace Minerals

Water

Fertilizer

If there is no land available for spreading or other reasons not to apply to the farms land, then a good disposal plan is need – export the materials to land or a user in need of nutrients and organic matter.



Value of Waste



The waste streams from animal farms have terrific value for crop growth – if the soil can use the nutrients.

Test the Manure for nutrients available

Test the Soil for nutrients in need

Balance the soil need with manure available nutrients



Options for help



There are quite a few organizations involved in
Agriculture or the Environment...

USDA

Natural Resources Conservation Service

Farm Service Agency

Rural Development

National Institute of Food and Agriculture

Sustainable Ag Research and Education

US EPA

Clean Water Act

State Department of Agriculture (DoAg)

State Department of Energy & Environmental Protection (DEEP)

Water Permitting

Watershed Planning

CT Resource Conservation & Development (RC&D)

Conservation Districts – (5) in CT

University of Connecticut



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USDA – NRCS: EQIP Program

Environmental Quality Incentive Program

The EQIP program is designed to help improve
- existing - environmental concerns

Soil Erosion

Manure Management

Pasture Management

Forestry Management

Irrigation Management





Inspecting Ag Properties

Questions ?

