

BEEF Operations Input Data (Paper Version)

For using the
NAQSAT (National Air Quality Site Assessment Tool (NAQSAT))

The NAQSAT is a web-based tool that can't be downloaded. Site evaluation is best done with a mobile device that has wireless access at the site location. Areas without wireless should have the data recorded on a paper version and entered back at the office. This on-line tool is interactive and some answers will generate additional questions. These are indented from the original question, in this form.

There are seven areas to be completed after the Housing questions.

<input type="checkbox"/> Feed and Water
<input type="checkbox"/> Collection and Transfer
<input type="checkbox"/> Manure Storage
<input type="checkbox"/> Land Application
<input type="checkbox"/> Mortalities
<input type="checkbox"/> On-farm Roads
<input type="checkbox"/> Perception

BEEF HOUSING

Four types of housing is provided. Based on the housing type chosen - you will need to provide additional information. See below.

1.0 Underroof - Enclosed Pens - no bedding (confinement barns with underfloor pits; hoop barns)

Pen Conditions:

- Deep, wet manure, matted manure on hides



Partially manure covered floor, animals hides dirty



- Some manure accumulation, mostly clean hides



- Clean floor, clean hides



Percentage of floor manure covered:

- Up to 25%
- 26 to 50%
- > 50%

2.0 Underroof - Enclosed Pack - bedding is added (hoop, monoslope, etc.)

Bedding conditions:

- accumulation wet, matted manure on hides



<25% bedding visible, moderate manure accumulation, animal hides dirty



- 25-75% bedding visible, little manure accumulation, mostly clean hides



- >75% bedding visible, little manure accumulation, clean hides



Feed and Water

1.00 Do you phase feed?

- Yes
- No

There are seven areas to be completed after the Housing questions.

2.00 How often are feed ingredients analyzed?

- Weekly or with every load
- Twice monthly
- Monthly or less frequently
- Never
- I don't know

3.00 What is your roughage source? (Check all that apply)

- Fermented forages
- Unfermented forages
- Coproduct feeds (cottonseed hulls, pulps)

4.00 Using ionophores (i.e. Rumensin)?

- Yes
- No

5.00 Use B-agonists, such as ractopamine or zilpaterol?

- Yes
- No

6.00 Administer implants

- Yes
- No

7.00 MGA

- Yes
- No

8.00 Tylan

- Yes
- No

9.00 Formulating for crude protein or metabolizable protein?

- Metabolizable protein
- Crude protein
 - $\geq 13\%$
 - $< 13\%$
- I don't know

10.00 What percent of distillers grains are fed (including dry and wet sources as a % of diet on dry basis)?

- 0
- 1-10%
- 10-20%
- 20-40%
- $> 40\%$

11.00 Do you notice a sulfur odor (rotten eggs) in your water?

- Yes
Is sulfur from water supply considered in feed ration?
 - Yes
 - No
- No

12.00 What is your diet fat content on a dry matter basis?

- < 5%
- 5-8%
- > 8%
- I don't know

13.00 What ration inputs are processed onsite, not including crop harvest? (Check all that apply)

- Roughage
Are you doing anything to try to control dust when processing?
 - Yes
 - No
- Grain grinding/processing
Are you doing anything to try to control dust when processing?
 - Yes
 - No
- Other products (i.e. Total Mixed Ration)
Are you doing anything to try to control dust when processing?
 - Yes
 - No

Do you implement good manufacturing processes (GMPs) in the feedmill?

- Yes
- No

14.00 Which best describes grain delivery to the feedmill?

- Choke flow
- Free flow / rear discharge / other
- I don't know

15.00 How are fermented and wet feeds (hays, grains, co-products) stored onsite? (Check all that apply)

- Upright silo
- Uncovered bunker/piles
- Covered bunker/piles
- Commodity barn
- Bags/wraps
- No fermented feeds onsite

16.00 How is water supplied to your animals in the under roof - enclosed pens facility?

- Cups, bowls, or bells
- Stock tank or circulating tank
- Overflow waterers (seasonal and run continuously)

17.00 How often are all waterers checked then repaired for leaks?

- Daily
- At least weekly
- Weekly or less frequently

Collection & Transfer

Note to User: Many farms may use more than one of the listed choices below. In order to allow the use of NAQSAT as a "What If" tool only one of the choices can be selected at a time. If only a general overview is desired, identifying the predominant practice will accomplish that result.

1.00 Which best describes your manure handling system? (Check all that apply)

There are several options:

- Deep pit
 Solid Removal

How often does a complete clean-out occur?

- More than once per year
 Yearly
 Less than once per year

2.00 What method is used to transfer the majority of manure from storage to the field?

- Pipe, closed channel, hose or drag hose
 Open channel
 Tank-type spreader or tanker

If a truck or spreader is used to transport manure to fields, is the manure transferred to the land application equipment in a closed transfer system?

- Yes
 No
 Not applicable

- Open spreader or truck

If a truck or spreader is used to transport manure to fields, is it covered (whether the truck leaves the farm and goes on a public road or not)?

- Yes
 No

- Does not apply

3.00 Is the manure spilled at the loading station/area?

- Yes

Is it tracked offsite?

- Yes
 No

- No

Manure Storage

Note to User: Many farms may use more than one of the listed choices below. In order to allow the use of NAQSAT as a "What If" tool only one of the choices can be selected at a time. If only a general overview is desired, identifying the predominant practice will accomplish that result.

1.00 Do you haul manure daily?

There are seven areas:

- Yes
 No

What percent of your farm's manure is stored as a liquid or slurry (does not stack) in your predominant housing type?

Please enter value in percentage: _____ %

Do any of these processes occur onsite? (Check all that apply)

- Storage/stockpile*
How often is seepage noticed?
 Rarely
 Commonly

Does water pond around the base of compost piles (From rainfall events or leachate) for greater than 24 hours?

- Ponding or standing water is not present more than 24hr after a rainfall event
 Ponding or standing water is present more than 24hr after a rainfall event

How often are maggots noticed?

- Rarely
 Commonly

How often are flies noticed?

- Rarely
 Commonly

- Composting*
How often is seepage noticed?
 Rarely
 Commonly

Does water pond around the base of compost piles (From rainfall events or leachate) for greater than 24 hours?

- Ponding or standing water is not present more than 24hr after a rainfall event
 Ponding or standing water is present more than 24hr after a rainfall event

Are you following a specific recipe?

- Yes
 No

What is average of the highest two consecutive weekly temperature readings of your compost pile?

- I don't know
 < 120F
 120F to 140F
 > 140F

How often is compost cover added?

- With each manure addition
- At least once daily
- Less frequently than each manure addition

How often are maggots noticed?

- Rarely
- Commonly

How often are flies noticed?

- Rarely
- Commonly

- Pelletizing*
- Gasification*
- Incineration/burn*

Do you have a scrubber in place for gas emissions?

- Yes
- No

For each stage of manure storage you have, click the "Add Stage" button below and complete the questions for each stage. For example, if you have a 3-stage manure storage system, you will need to complete the first stage below, and then add 2 stages (click the "Add stage" button twice).

Stage 1

Does your manure contain greater or less than 5 lb of nitrogen per 1000 gallons (600 mg/kg) or less than 4% solids?

- Less than 5 lbs/1000 gallons or 600 mg/kg and be less than 4% total solids
- Greater than 5 lb N / 1000 gal and greater than 4% total solids
- I don't know

Stage 2

Does your manure contain greater or less than 5 lb of nitrogen per 1000 gallons (600 mg/kg) or less than 4% solids?

- Less than 5 lbs/1000 gallons or 600 mg/kg and be less than 4% total solids
- Greater than 5 lb N / 1000 gal and greater than 4% total solids
- I don't know

Stage 3

Does your manure contain greater or less than 5 lb of nitrogen per 1000 gallons (600 mg/kg) or less than 4% solids?

- Less than 5 lbs/1000 gallons or 600 mg/kg and be less than 4% total solids
- Greater than 5 lb N / 1000 gal and greater than 4% total solids
- I don't know

Land Application

1.00 Where does manure go?

- Moved offsite (sold or given away) directly from the housing
- There are seven areas** Composted or stockpiled, then sold or given away
- Land applied

2.00 What form of manure is land applied? (Check all that apply)

- Solid
 - How long are solids piled, or staged, on the field prior to application?*
 - < 3 days
 - >= 3 days
 - Directly land applied; not piled or staged
 - Are the majority of your solids composted prior to land application?*
 - Yes
 - No
- Liquid
 - Do you typically... (Select the predominant practice)*
 - Inject?
 - What portion of the field is manure left exposed on the surface?*
 - 100% of the manure is covered
 - All manure is covered except on the headlands where manure is left exposed
 - left exposed
 - Manure is left exposed in the injection slot
 - Manure is left exposed in the injection slot and the headlands
 - Incorporate within 24 hours?
 - Incorporate 24 hours or greater following application?
 - Irrigate?
 - Choose your irrigation method
 - Flood or furrow irrigation
 - High pressure sprinkler or gun
 - Low pressure sprinkler (drop drag line)
 - Low Pressure Sprinkler (low canopy system)
 - Does ponding occur following irrigation?
 - Yes
 - No
 - Is freshwater added?
 - Yes
 - No
 - Surface applied and not incorporated

Mortalities

1.00 Other than during freezing weather, how long before carcasses are picked up or put into the disposal system?

Within 24 hours of death

There are seven ~~also~~ Within a week of death

Less frequently

2.00 How is mortality handled? (Check all that apply)

Managed offsite (such as rendered or landfilled, or offsite composting)

Buried onsite

Is cover added to the burial pit or pile every time mortality is added?

Yes

No

Composted onsite

How often is seepage noticed?

Rarely

Commonly

Does water pond around the base of compost piles (from rainfall events or leachate) for greater than 24 hours?

Ponding or standing water is not present more than 24 hr after a rainfall event

Ponding or standing water is present more than 24 hr after a rainfall event

Are you following a specific compost recipe?

Yes

What is your recipe?

3:1 or greater carbon source (stalks, sawdust, straw, etc): mortality

< 3:1 carbon source (stalks, sawdust, straw, etc): mortality

No

What is average of the highest two consecutive weekly temperature readings of your compost pile?

I don't know

< 120F

120F to 140F

> 140F

How often are maggots noticed?

Rarely

Commonly

How often are flies noticed?

- Rarely
- Commonly

How often are uncovered carcass parts visible or noticed?

- Rarely
- Commonly

How often is compost cover added?

- Immediately after each carcass addition
- At least once daily
- Less frequently than each carcass addition

On-farm Roads

1.00 Are unpaved roads used for any of the following activities? (check all that apply)

- Routine service traffic (feed delivery, milk truck, renderer)
- Less frequent service traffic (manure handling)
- General transportation (veterinarians, maintenance, nutritionists, managers, employees, farm tours)
- Does not apply

2.00 Unpaved roads are surfaced with: (Check all that apply)

- Caliche/limestone
- Unimproved dirt road
- Washed gravel
- Gravel

3.00 Which is the predominant road-surface treatment used?

- Petroleum products, resins, emulsions as per manufacturer recommendations
- Salts or hygroscopic materials (e. g., magnesium chloride)
- Fresh water
- Holding pond wastewater
- None

4.00 Are speed limits strictly enforced, or is speed controlled by passive means (e. g., speed bumps)?

- Speed limits are not present or are not enforced by management
- Speed limits are enforced by management
- Speed is controlled by speed bumps or other passive means

5.00 Do you restrict public access to private roads?

- Yes
- No

6.00 Are most roads lined with windbreaks or shelterbelts?

- No
- Some or all roads are lined with vegetation

Perception

1.00 Do you employ the following to reduce nuisance issues?

- Property line vegetative buffers

There are seven means Cleaning up spilled manure from roads

- None of the above

2.00 Do you practice "track-out control" (manure on tires) of manure or mud on vehicles leaving the property? (Do you have a means of controlling how much manure/mud leaves your property on the tires of all vehicles leaving your property?)

- Yes
- No

3.00 Are most roads lined with windbreaks or shelterbelts?

- No
- Some or all roads are lined with vegetation

4.00 Are you mindful of neighbors when timing manure removal from housing or storage?

- Yes
- No

5.00 Do you consider how the following impact nuisance conditions when planning manure applications?

- Timing relative to neighbor activities
- Time of day
- Season
- Weather forecasts (wind direction relative to neighbor location)
- None of the above

6.00 Are compost piles, mortalities, or manure storage visible from public roads?

- Yes
- No

7.00 Are efforts made to ensure a pleasing roadside appearance?

- Yes
- No