

# Developing a Manure Storage Area

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## Why You May Need a Manure Storage Area

If you have livestock, you will have manure. Manure accumulated in coops, pens, and stables needs to be removed and handled in some manner until it can either be applied to your property, or hauled away. Unless the manure can be applied or hauled away each time you clean a pen, you will need to temporarily store your manure. For small farms, the most likely options are stockpiling the manure, or composting it.

You will also need to decide how and when the manure will be used. Will the manure, or compost, be applied to your property? Will other people use your manure or compost? The amount of storage that you will need will be based on when, and how, you use your manure. The following items can help you as you develop a manure storage area:

## Considerations as you Develop a Manure Storage Area

### ***Size of manure storage area needed.***

- Determine the volume of manure and bedding that will be stored and the size of storage structure needed.
- Do you want to stockpile the manure? Compost it? If you plan to compost the manure, you may need additional space to adequately access the compost piles and turn them. Regardless of how you handle the manure, make sure that you have adequate storage and room to maneuver any equipment needed.



Figure 1. Calculate the amount of manure that will need to be stored

Image by M W from Pixabay

### ***Siting your manure storage area.***

- Check your local ordinances. Comply with any setbacks, etc. As a general rule, manure storages should be at least 50' from the property boundary, and a minimum of 200' from any residences.
- Site your manure storage area to protect wells and water sources. Manure storage areas should be a minimum of 100' from any well head and water ways.
- Consider the direction of the prevailing winds. Place your manure storage area so the prevailing winds carry any odors away from any residences.
- Site your manure storage area close to where the manure is produced. Having your manure storage area located close to where the manure is produced will help minimize the time and effort it takes to handle the manure. It also will help minimize the amount of manure that is spilled as it is moved.

- Manure storage areas should not have any run-on, or any runoff. Siting your manure storage area on a slightly elevated area, can help prevent any run-on. Berms can be used to help contain any potential runoff.
- As a general rule, manure storage areas should be placed out of view, and not in a direct line of sight from your neighbor's property. Tall shrubs or trees can provide a good screen.

### ***Type of storage structure.***

- If stockpiling the manure, will you place the manure on a concrete pad? Packed dirt? Do not place manure on gravel or crushed rock. These can get mixed in with the manure, or compost, and create problems during application.
- Will there be sidewalls? Will it be covered? Sidewalls help contain the manure and prevent runoff. Covered areas protect the manure from rain and snowfall which can result in runoff.



Figure 2. Manure storage area with a concrete pad and sidewalls

- Size the manure storage structure for easy access with manure handling equipment. Having adequate room to maneuver any equipment is essential for making your manure storage facility work efficiently.

- If composting, make sure that there is adequate space to turn piles or windrows and room for any equipment.

### ***Manage your manure storage area to minimize negative impacts.***

Odors and flies are often associated with manure piles, and are a primary source of complaints from neighbors. Active composting (composting with frequent turning and temperatures between 120-160 degrees) can help reduce these issues.

#### Odors

- Foul odors are associated with anaerobic conditions. Active composting maintains aerobic conditions and breaks the organic raw materials into simple compounds, then reforms them into new complex compounds. In this process, the manure is changed and odors are reduced.
- Disperse the airflow. Forcing the air to move upwards and disperse such as by planting trees or tall shrubs around the manure storage area can help reduce the impact of odors.

#### Flies

- Flies are often a problem around manure piles. Active composting also reduces fly populations as the high temperatures in the active composting process kill the fly larvae. Sprays and beneficial insects can also be used to help reduce fly populations.

#### Dust

- In some of the drier areas of the state, dust from manure piles can be an issue. The use of bins, sidewalls, shrubs or trees can help reduce wind speed by the manure storage area, and minimize any dust movement. Spraying water on top of the manure pile will also help reduce dust formation.



Figure 3. Dust from manure piles can be an issue in drier areas of the state

### ***Composting Areas.***

- Manure should be composted on a solid base. A concrete pad or packed dirt works well if putting compost in a windrow. Do not compost on gravel or crushed rock. The gravel or rock can get mixed in with the compost and create problems.

- Compost areas should not have any run-on or runoff. Placing the compost area on a slightly elevated area will prevent run-on. Berms can help contain any potential runoff.
- Make sure there is adequate room for turning and moving piles, and for any equipment to maneuver. You will also need a place for the compost piles to cure.

Manure, and how it is stored, is often a source of neighbor complaints. A properly designed manure storage area can help make it easier to handle the manure and help minimize any negative impacts.