



Construction and Layout



When it comes to building or renovating a feed center, it can be difficult to know where to start. This section will discuss a variety of factors to consider when evaluating the general construction and layout of the feed center. To gather further insights and view some examples, please refer to the Virtual Tours section.

Stationary or mobile mixer: There are two basic options for mixing TMR - stationary or mobile mixer. The type of mixer used will dictate the design and layout of the feed center.



Mobile mixer



Stationary mixer

Distance to cows: When evaluating feed center efficiency with the GPS Feed Lean program, it was found that approximately 30-50% of the mixer's time is spent driving and delivering feed. One of the factors that adds to this time is the distance from the feed center to the barns. If a dairy has 10 loads of TMR to deliver per day and it takes 4 minutes to drive to the barn, the math on labor and equipment usage becomes obvious. The feed center location is generally dependent on existing structures and topography.

Distance from forages to commodity shed: Generally, the TMR is comprised of forages and concentrates. The storage type and placement of both primary ingredients must be considered when building and renovating. For example, if the forages are stored a long distance from the commodities, this will mean either the mixer will have to move in between the two locations or one group of ingredients will need to be staged.

Staging areas: When the commodity and forages are located far from each other, staging ingredients is a common strategy. Having a location to stage forages close to the loading location may be useful. Large bays, 1- or 2-sided outside walls, and piles are common strategies for staging forages. Making premix is another strategy to increase the efficiency of the feeding process and reduce the distance of commodity and forage loading. A space to stage "hand-add" ingredients is also important. These often include

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Feed Center Design
Construction and Layout Overview



bagged mineral and fats. A small flat storage area next to the mixer is a common placement for these ingredients.



Haylage stored in large bay by loading area.



Corn silage staged on the outside wall of the feed center.



Premix stored in an outside two-wall bay. This allows for quick and convenient loading of commodity.

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Small bag storage area. Often placed next to the loading area.

Loading area: With the increasing size of mixers, different strategies are used to increase the speed and safety of loading. Drive-through subways, back-down pits, and drive-up loading ramps are all utilized for this purpose.



A back-down loading pit.



A back-down loading pit.

Safety considerations: There are various safety considerations when laying out a feed center such as:

1. Limit blind corners and added convex mirrors where applicable
2. Add appropriate staircase to loading pit
3. Ensure there are enough lights on equipment and buildings. Outside lighting is critical for early-morning feeding operations.
4. Limit the delivery of incoming ingredients during feeding
5. Allow trucks and tractors plenty of room to make turns
6. Install “No Entry” signs in all confined spaces



Small staircase for safe climbing out of a loading pit.

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Access to small office: It may be convenient to allocate a small space or office to run dry matters and computer access to make changes on feeding software