



Beef Cattle Housing & Equipment

As a rule, all ages of cattle can stay on pasture during the warm weather months. Pastured or grass fed beef is a growing trend with New England beef producers and the consumer's demand for this product is increasing.

A one or two-sided structure with a roof can provide shelter to cattle during periods of intense cold. Structures should be built with the open sides facing the south or east (depending upon prevailing winds) to maximize effects of solar radiation during the winter.

Cattle on average can consume 1 gallon of water per 100 pounds live weight per day.

Introduction:

In New England, beef enterprises are cow/calf, feeder, or a combination of both. Cow/calf enterprises usually require less financial investment in facilities than feeder operations. Feeder cattle facilities require more confinement pens, more automation of feeding systems and less need for roofed shelters. Each type of facility must be designed accordingly.

Several different designs for housing and handling facilities are suitable for beef operations taking into consideration the weather, topography, and the availability of feed and pasture. It is important to know all the rules and regulations with respect to location, design, and type of operation. Check with your local Building Inspector to obtain the required permits prior to building or renovating your existing facility. You should also talk to an experienced builder or contractor to ensure the cost of the facility is within the objectives of the operation.

It is important to choose a location for buildings and handling facilities that is on well-drained soil with properly designed surface water drainage situated away from streams, other bodies of water and is not close to population centers. Check with your county Natural Resources and Conservation Service (NRCS) office for recommended guidelines.

Some Recommended Structures for Beef Cattle Housing:

Open sided, single slope roof shed - This type of housing is most typical of structures used and is suitable for all cattle on the farm. This is the least expensive of new structures and very easy to build. Open sheds should face the south for winter sun and block the prevailing winds. Pole barns of this design can be partitioned for groups of animals without complicated interior construction.



Open sided, clear span pole shed - The clear span provides more space for equipment to remove manure and thus any side of the building can be open to the environment. The gable end of the barn is recommended to be open so that the discharge of rain and snow is not over the open side of the building. When the gable end is open, the bays areas are usually deeper and provide more protection from the wind. The back end of the structure may be dark and damp and may need additional design attention for ventilation and lighting. This type of housing is more practical for smaller sized herds (under 20 head of cattle).



Former Dairy Barns - Today there are many unused dairy barns due to dairy farmers either retiring or dispersing. The renovation costs are usually less than the cost of a new structure. Lighting and ventilation are usually adequate in former dairy facilities for use by beef cattle.

Manure removal is a major piece of the renovation plan.

Conventional tie stalls that are used on New England dairy farms with a



gutter are not recommended. Free stall barns are the ideal dairy facility for use with beef cattle since the manure handling is already set-up.

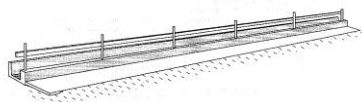
Hoop Barns – One of the least expensive structures for housing cattle is the hoop barn. Hoop barns are similar to greenhouses. One disadvantage is the heat and



ventilation problems during the summer months, but this should not pose an issue if you are planning on grazing your cattle during the warmer climate months.

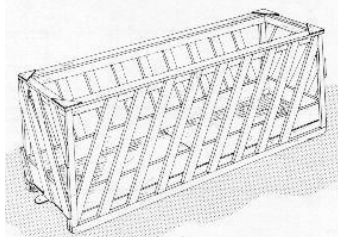
Feeding Equipment:

Feed Bunks - The main requirements for feed bunks are that they are practical, good quality, rugged, and economical. The bunk length and capacity should meet livestock requirements.



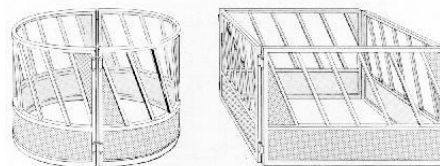
Portable Hay Feeders - This portable feeder is a proven hay-saving design for free-choice

supplementary hay feeding in a field, feedlot, or loose housing barn. The sloping spacers allow cattle of varying sizes to



feed comfortably with their heads inside the feeder. This helps to reduce waste since cattle do not have to withdraw their heads to stand and chew.

Round and big bale feed racks are easy to load, move, and also prevent hay wastage. The round version requires a bender to reform the square tube rails, but the round shape makes it easier to roll it from place to place. The square version is easier to build in the farm shop, and it can be completely collapsed for transport in



a pickup truck. Important feed-saving features are the solid lower section and the slanted

divider bars above.

Water Equipment - Many watering equipment system options are available. Different systems may be used throughout the year. If you are grazing animals, you may want portable water tanks to reduce the impact of cattle in one location. In the winter, depending upon your climate, you may need heated units for use in pasture. There are many things to consider when selecting a system for use on your farm. The most important factor to understand your livestock' water needs and ensure that the current system can meet those requirements.

Headgate - The headgate is the most important part of the entire working facility. It should be sturdy, safe, easy to operate, and work smoothly and quietly. Headgates come in four basic types; self catching, scissors-stanchion, positive-control and fully opening stanchion. The self-catching headgate closes automatically due to the movement of the animal. The scissors-stanchion type has biparting halves that pivot at the bottom. The positive-control type locks firmly around the animal's neck. The fully opening stanchion consists of two biparting halves that work like a pair of sliding doors. The self-catching, scissor-stanchion and the fully opening stanchion are available with either straight or curved stanchion bars. The straight-bar stanchion is extremely safe and will rarely choke an animal. The disadvantage is animals can move their heads up and down unless a nose bar is used. The curved-bar stanchion offers more control of the animal's head but is more likely to choke the animal than the straight-bar type. Both types are safer than the positive-control headgate. No matter which type of headgate is selected, proper adjustment for the type of cattle being worked is necessary to prevent injury to the animals.

Holding Chute - The holding chute is secured to the head gate and located immediately behind it. The holding chute should generally not be any wider than 26 inches but should be adjustable in order to compensate for different-size animals. The sides should be solid so that animals are not able to look out and be scared by their surroundings.

Working Chute - The working chute connects the holding chute with the holding pen. It should be long enough to hold five to six animals at a time.

Crowding Pen - The crowding pen is located at the back of the working chute. Size should be about 150 square feet. This area will hold five or six head of cattle.

Holding Pens - Holding pens should mesh conveniently with the rest of the facility. Each holding pen should provide approximately 20 square feet of space per animal.

Scales - Scales are optional depending on your size operation but can be useful in weighing cattle. The scales should be located so cattle can be easily moved on and off. Do not locate scales in highly trafficked areas.

Loading Chute - The loading chute may be optional if a trailer is used to transport animals. The loading chute should be located directly off the crowding pen.

Conclusion:

While improving your ability to handle cattle efficiently and safely does cost both time and money, it is an investment that provides an excellent and often immediate return. A number of options are available if you want to install a new facility or improve an existing one, enabling you to improve your facility so that it meets your needs without exceeding your resources.

Resources:

Bartlett, Ben. "The ABC's of Livestock Watering Systems". Michigan State University. 2006.
<http://www.lpes.org/SmallFarms/9_Watering.pdf. >

Government of Saskatchewan Agriculture. "Beef Cattle Housing and Feedlot Facilities". 2008.
<www.agriculture.gov.sk.ca/Beef_Cattle_Housing >

For more information visit www.umass.edu/cdl
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