What Is Loose Housing?

1. The dairy cows run loose in a pen or open lot except when they are being milked. On many farms pen doors are left open all the time so that cows may enter and leave the barn at will. A well-bedded area is provided for them to lie on.

2. The dairy cows are fed hay and silage from simple bunks or racks. A central tank supplies them with drinking water.

3. They are milked and fed grain in a separate milking room.

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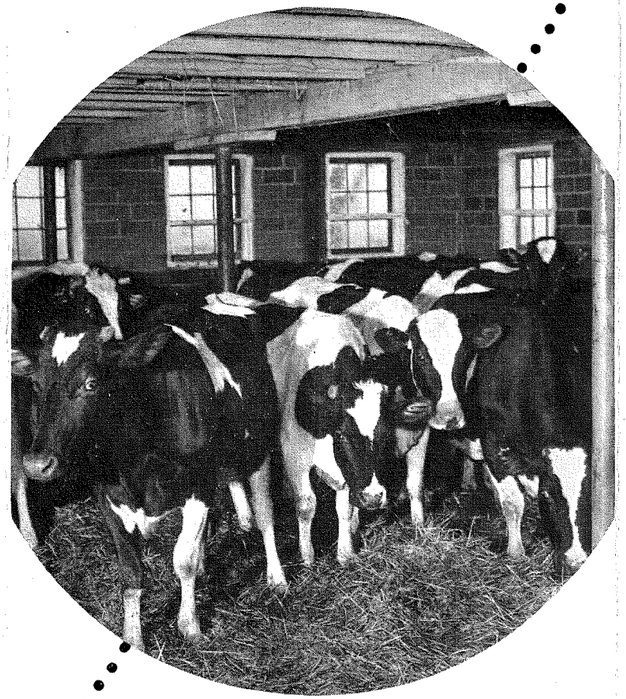
LOOSE HOUSING ... FOR DAIRY CATTLE



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Pros and Cons of Loose Housing

WHY LOOSE HOUSING?

Many farmers are adopting loose housing because of its effect on:

- herd health
- cost of barn construction
- cost of equipment
- cost of labor

Loose housing is now more practical than ever before because of new ideas in housing, new types of equipment, and new methods of herd management. The system has many advantages. It also has many disadvantages. Each farmer must study his own conditions and decide which type of barn will most effectively meet his needs.

This folder is based upon experimental work and the experience of farmers. It is not complete, because many things remain to be learned about loose housing. But the ideas presented here can be used when planning to build or to remodel a barn.

Advantages

1. **Milking is done in a clean, compact, efficient milking room.** The cows come to the milker, saving many steps for the worker. Stooping is eliminated—the cows can be milked while standing on elevated stalls. It is easier to keep milk clean—the cows' udders can be washed thoroughly with little effort; there is no bedding and little manure in the milking stalls; the stalls can be easily swept and washed.
2. **There is flexibility of herd size.** Room for more cows can be readily made by lengthening the hay and silage bunks and by enlarging the pens. More cows can be added temporarily by crowding the cows in the feeding and loafing areas.
3. **There is flexibility of use of buildings.** The barn can be used for beef cattle, sheep, and hogs with minor changes in arrangement and equipment.
4. **The manure is well preserved.** By providing ample headroom in the loafing area, manure can be accumulated until the farmer can use it in the field. All droppings and urine, with generous amounts of bedding, are kept under a roof and are well compacted, thus reducing losses.
5. **Injuries to cows are kept at a minimum.** There are no gutters to injure udders and legs and no stanchion curbs to injure knees. Cows lie on a deeply bedded surface, keeping udders warm; the temperature at the bedded surface may be as high as 100 degrees even on the coldest days.
6. **It is easy to detect cows in heat,** because the cows are free to mingle most of the time.
7. **The building construction can be of an inexpensive type.** The feeding and loafing shed need not be insulated; it must merely protect the cows from wind and rain. The floors in the feeding and loafing shed are simple and no elaborate forming is needed. The milking room is small and the construction is simple.

Disadvantages

1. **It may be cold for the workers.** If the barn is not insulated and if doors are left open the temperature inside the barn may be only 10 or 20 degrees above the outside temperature. Artificial heat may be needed in the milking room, at least on the coldest days.
2. **The herd cannot be displayed easily.** Many sellers of dairy breeding stock prefer to tie their cattle in rows for display to customers.
3. **More bedding is needed.** Two or three times as much bedding as in a stanchion barn may be needed. Loose housing barns must be bedded liberally to maintain sanitary conditions. This is a serious drawback in areas where bedding is scarce and expensive. It also increases the amount of time needed for spreading the bedding. For ample bedding, about 3,500 pounds of straw per cow will be needed for one season, compared with 1,500 pounds in a stanchion barn.
4. **Cows in heat disturb the herd.** This can be minimized by providing a pen into which the cow in heat can be placed.
5. **A larger building is needed.** The total floor area for a loose housing barn will be 10 to 25 per cent more than for a stanchion barn.
6. **It may reduce the sale or rental value of the farm.** Most buyers and renters are familiar with the stanchion barn; they may be reluctant to accept a new type of barn. Others may not plan to keep dairy cows and may value highly the flexibility in the use of the loose housing barn.
7. **Milk inspectors in some areas may not approve the loose housing barn.** With too little bedding or careless management the cow becomes dirty and the quality of the milk can be seriously reduced. It is advisable to consult the milk inspector (if there is one) before constructing a loose housing barn.

The Milking Room

Locate the milking room so that doors will open into both the loafing and feeding areas, or into any two large pens. This makes it possible to keep the milked and unmilked cows separate at milking time.

Most farmers prefer to feed grain in the milking room.

Use 4 stalls with 2 milking units if grain is fed. Use 2 or 3 stalls if grain is not fed.

Elevate the stalls to a height of 30 inches. This permits the worker to do the washing and milking without squatting or stooping.

Place the stalls in tandem or parallel arrangements.

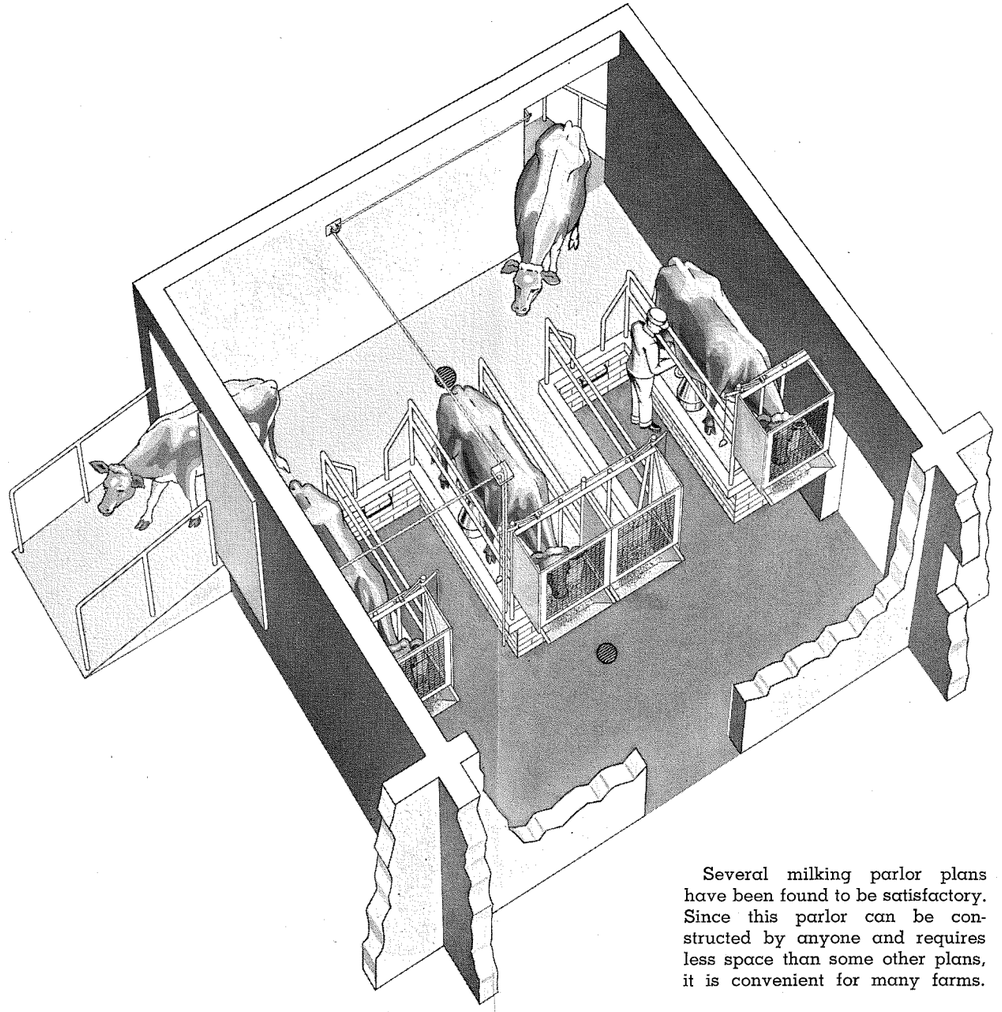
A holding alley about 12 feet long at the entry door will cause the cows to line up ready to come into the milking room.

Use gates operated by ropes from the working area to let the cows in and out of the milking room.

Provide a small feedbox for each stall. Use a solid shield or heavy screen around the feedbox to prevent the cows from spilling grain into the milking area.

Provide several drains in the floor, to permit easy washing.

Locate the milking room and milkhouse so that the path for carrying milk is as short as possible.



Several milking parlor plans have been found to be satisfactory. Since this parlor can be constructed by anyone and requires less space than some other plans, it is convenient for many farms.

The Milking Routine

Use an efficient milking routine. The following is effective for a milking room such as shown at the left.

- **1.** Drive cows into a holding area (this may be the feeding area).
- **2.** Admit 4 cows to milking stalls.
- **3.** Feed grain.
- **4.** Wash cow No. 1 (side stall), then wash cow No. 4 (on opposite side) while cow No. 1 lets down her milk.
- **5.** Put milker on cow in stall 1, then on cow in stall 4.
- **6.** Do other work for a minute.
- **7.** Wash cow in stall 2 (next to stall 1), machine-strip cow in stall 1 and remove milker.
- **8.** Release cow in stall 1.
- **9.** Change milker head to empty pail and put milker on cow in stall 2.
- **10.** Admit new cow to stall 1 and feed her grain.
- **11.** Carry milk to milkhouse.

Repeat steps 7 through 10 for cows in stalls 3 and 4.

With this system, both milking machines are working continuously. Time is lost if all cows are released at the same time.

Sweep or wash the milking room after each milking.

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7. **Milk inspectors in some areas may not approve the loose housing barn.** With too little bedding or careless management the cow becomes dirty and the quality of the milk can be seriously reduced. It is advisable to consult the milk inspector (if there is one) before constructing a loose housing barn.

Plan the Loose Housing Arrangement Carefully

Several Areas Needed

The loose housing barn should have a separate . . .

- **Loafing Area**
- **Feeding Area**
- **Milking Area**
- **Maternity, calf, and bull pens**

The loafing and feeding areas can be combined, but that will require more bedding and more careful management. The young stock can run with the cows or can have separate loafing and feeding areas.

The Loafing Area

Allow 50 to 75 square feet per cow, exclusive of the space set aside for the feeding area.

Have few or no posts, to make cleaning easy. The floor can be dirt or concrete.

Use materials and types of construction for foundations and walls that will permit manure to accumulate to a depth of 4 feet.

Provide 10 to 12 feet of headroom. The manure can then accumulate for a full year.

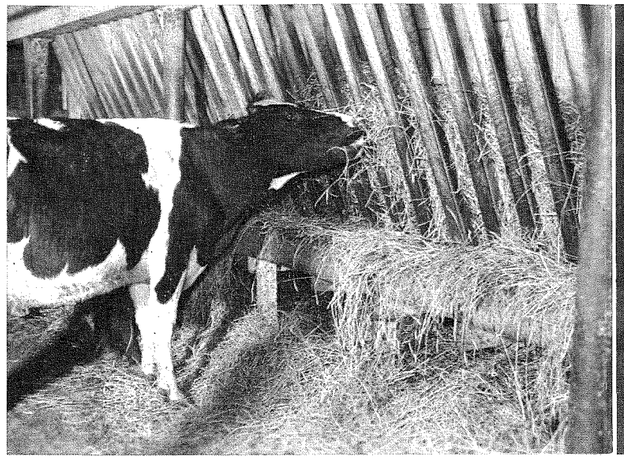
Provide large doors for easy cleaning with tractor-mounted loaders.

Provide at least one square foot of window space for 30 square feet of floor space. The cows will use the loafing area more freely if it is adequately lighted.

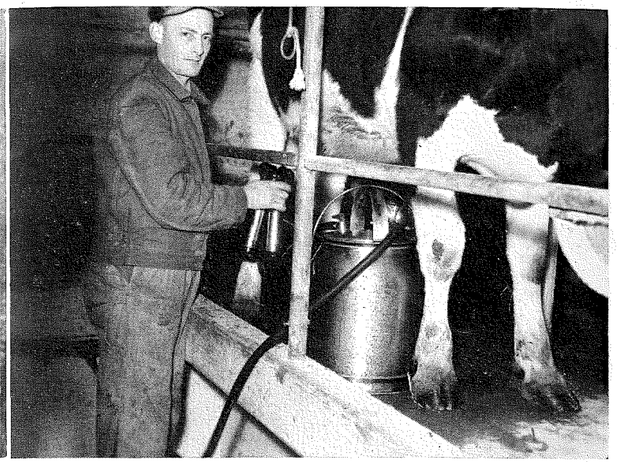
An uninsulated building should be used. Ventilation can then be provided by doors or windows. The cows will be comfortable on the warm, bedded area even though the air may be cold. If the shelter is insulated, a ventilating system must be provided.

Arrange doors, windows, and partitions to avoid drafts. If a door is to be left open for cattle to go in and out freely, a baffle in front of the door will reduce drafts inside the building.

Store bedding overhead or in an adjoining shed or stack.



Hay is wasted in bunks such as above



Milking is easier when the worker can stand erect

Feeding Area

If possible, use area separate from, but close to, the loafing area. This will prevent tramping of the bedding in the loafing area, thereby saving bedding and making it easier to keep cows clean.

Provide 2½ feet of manger length per cow.

Provide a paved strip, 8 to 10 feet wide, along the manger. Do not bed this area. Clean it at least every other day.

Hay and silage can be fed in the same manger or in separate mangers.

Hay will be used most efficiently if fed from a deep manger. Provide adequate guards to prevent cows from falling into the mangers.

Store hay above mangers or in an adjoining shed.

Locate the silo near the manger.

Arrange feed bunks for easy feeding of hay and silage. Many dairymen prefer to provide feed alleys; they find it inconvenient to walk among the cattle when carrying feed.

Provide a water tank in the feeding area. Make some provisions to prevent water from freezing. A heater in a well-insulated tank will work. Others prefer to let water run continuously on cold days.

Special Areas

Maternity stalls may be formed by gate partitions in the loafing areas. Permanent stalls may be provided if desired. These pens should be about 10 feet by 10 feet.

Calf pens

Locate calf pens close to the milking room and milkhouse to facilitate feeding and watering. Provide about 20 square feet of pen space for each small calf.

Bull pen

If a bull is kept, locate the pen near the feed supply and where an outside exercise yard can be built and cows can be brought in easily.

The pen should be about 10 feet by 12 feet and the outside yard at least 15 by 40 feet.

Young stock

A separate loafing and feeding area may be provided for the young stock, close to the cows if possible, to reduce walking by the workers. Locate the feeding area near the feed supply.

Provide 1½ to 2 feet of manger space and 30 to 50 square feet of loafing area per head.

In small herds the young stock may run with the milk cows.

Tips on Management

Keep hay before the cows at all times. Some farmers prefer to feed the hay outside on pleasant days.

Doors may be left open. The open doors provide ventilation for uninsulated loafing sheds. When the doors are open, the cows will go outside frequently. Some farmers prefer to shut the cows in the barn at night to prevent them from lying on the cold ground for long periods.

Clean the paved feeding area frequently. Haul the manure directly to the field or pile it for later hauling.

Use bedding generously. Spread it at least once a day. With ample bedding, the cows will be clean and the workers will find it pleasant to work in the barn. The bedding will absorb and preserve the urine. The loafing area will be easier to clean if the bedding is chopped.

Bedding can be saved by (1) arranging the barn to reduce traffic across the bedded area, and (2) throwing droppings to the edge of the bedded area once or twice a day.

If space permits, clean the loafing area only once a year. If it must be cleaned during the winter, leave part of the bedding, if possible, to provide a warm surface for the cows.

Dehorn all cows. Extremely bossy cows may have to be sold. This will not happen very often.

Feed grain while milking. The grain will bring the cows into the milking room. The quantity of grain fed to each cow can then be adjusted easily.

For herds of up to 30 cows, labor will be used most efficiently if one man does the milking, using two single units. With a well-organized routine, he can milk 20 or more cows an hour.

Milk cows on an "assembly line" basis. That is, release the milked cows and bring in the unmilked cows one or two at a time, while the milking machines are working on other cows. Time is wasted if all of the cows in the milking room are milked, then all are released at the same time. See the section on "The Milking Routine" for details.

Train the cows to enter the milking stalls by leaving the doors open and keeping grain in the feedboxes for a few days before milking them there. Avoid forcing the cows in by unpleasant means.

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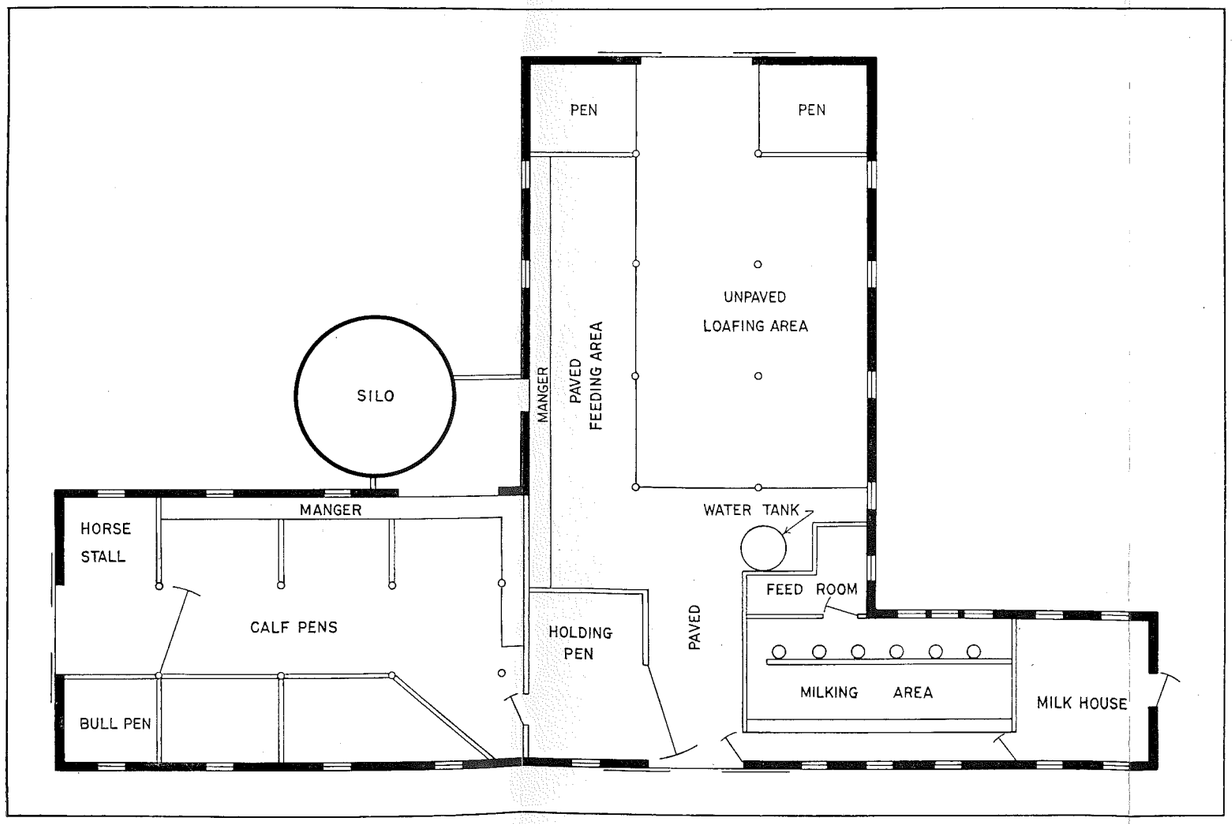
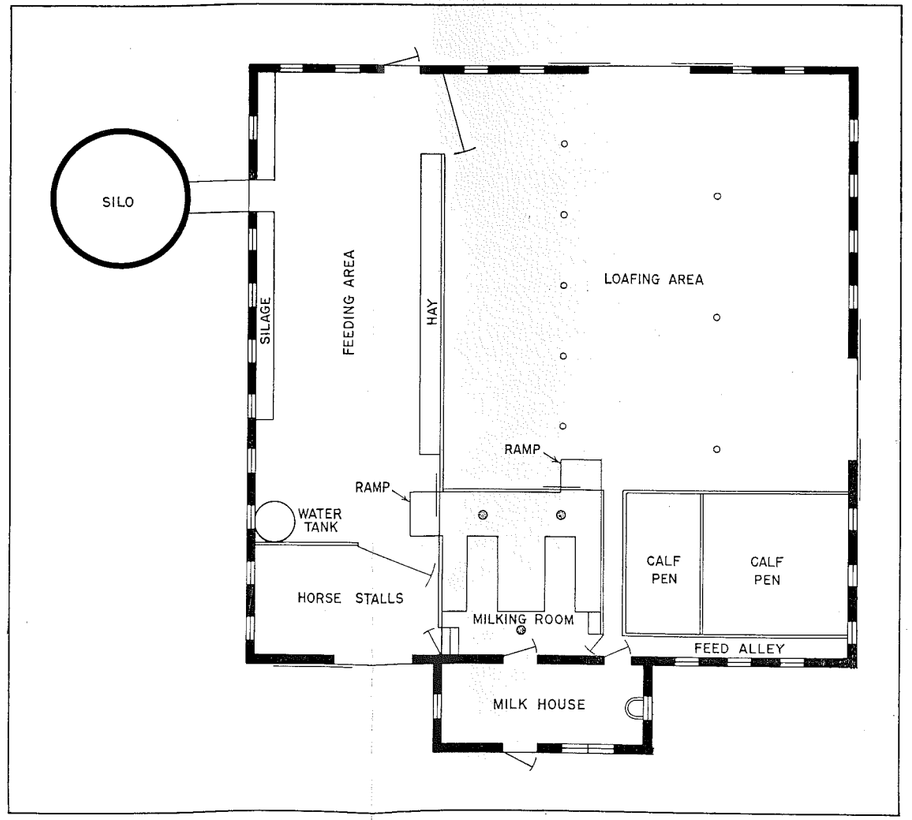


This loose housing barn was remodeled from an old building. The feeding and loafing area is a small barn with hay storage overhead. The calf pens are located in a one-story building. The milking room and milk house are in a shed-roofed lean-to.



Another loose housing barn was made by moving outward the side wall of an old barn. The gabled roof was continued downward to cover the new area. Hay and bedding are stored above.