

Running cows loose in this manner is an excellent method, where bedding is abundant and sufficient space is available, as the cows are more comfortable, and all fertility is saved. There is no waste from leaching, as when the manure lies exposed to the weather. This method saves the labor of cleaning the stable, as the manure is loaded into the spreader and hauled directly upon the land whenever convenient, and the land is in the best condition to receive it. [C]

[C] For a more detailed discussion of the advantages of keeping cows in this manner, see Illinois Agricultural Experiment Station Circular No. 93.

Three gates are hung on posts at the outside wall, and when box stalls are needed, these are swung around to the manger, as shown in Fig. 18. The south door in the cow stable can be closed by slatted gates, thus affording an abundance of fresh air and sunshine on nice days, without letting the cows out of the barn.

SYSTEM OF VENTILATION

[Illustration: FIG. 21. CONTINUED.]

The system of ventilation is the "King." To economize space and lumber, the hay chute is used for a ventilator. This chute, which extends to the cupola, is 2-1/4 x 3-1/2 feet, having a cross section area of 8 sq. ft., which, with a good draft, is sufficient for 40 cows. In order that this combination of ventilator and hay chute prove practical, doors thru which the hay could be thrust were placed at intervals in the side of the chute. These doors are hinged at the top, opening in, and close immediately after the hay drops, thus maintaining a closed ventilator chute. The air is drawn in at the bottom, the amount being regulated by means of a sliding door in the side. As this chute is 50 feet high, it creates a strong suction.

THE MILK ROOM

To economize space, the milk room, 12 x 16 feet, is located under the north driveway. The brick walls under the drive form the sides of this room, and the floor of the drive, which is made of 2 x 6s grooved on both edges, forms the roof. The grooves in the flooring were filled with white lead, and a wooden strip, fitted to fill the grooves of both planks, was driven in, forming a water-tight floor. This floor was covered with hot tar and sand 1/2 inch thick. The milk room is plastered on the inside, the plaster being applied directly to the brick walls, excepting in the case of the ceiling, which is lathed. The floor and cooling tank are of cement. The passage from the barn to the milk room is thru a small hallway, which is open to the outside, thus preventing the stable air getting into the milk room.

[Illustration: FIG. 22. FEED ALLEY, SHOWING COMBINED HAY CHUTE AND VENTILATOR. A DOOR ON THE SIDE WHICH IS HINGED AT THE BOTTOM, 3 FEET FROM THE FLOOR, IS LET IN TOWARD THE SILO, SLIDING THE HAY ONTO THE FLOOR. IN HOT WEATHER THIS OPENING TAKES THE HEAT OUT OF THE BARN; DURING THE WINTER THIS DOOR IS KEPT CLOSED AND THE VENTILATION IS REGULATED BY RAISING THE SLIDE, AS SHOWN IN THE CUT.]

BARN SATISFACTORY

This round dairy barn above described has been in use for over two years at the University of Illinois, and has given entire satisfaction.

[Illustration: FIG. 23. NORTHEAST VIEW, SHOWING DAIRY UNDER DRIVEWAY. THE BARN IS ON THE SAME SCALE AS THE DRAWING ON PAGE 28.]

[Illustration: FIG. 24. INTERIOR OF DAIRY; COOLING TANK ON LEFT.]