Layout of a dairy premise

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FIGURE 1

PLAN of MILKING SHED

38 ft x 36 ft.
LAYOUT OF DAIRY PREMISES
A COMPACT AND CONVENIENT DESIGN
By A. E. BAKER, B.Sc., Agric., Agricultural Adviser

As the average dairyman spends a large proportion of his working time in the milking shed throughout the year, careful attention to the layout of these premises will give good returns in time saved, and will enable the task of milking to be carried out efficiently and with a minimum of discomfort.

This article is submitted in an endeavour to assist the dairyman to construct a shed which will comply with the Health Authorities by-laws and at the same time be convenient to operate and reasonably easy to construct.

When considering the erection of milking sheds or the remodelling of existing premises it is always advisable to approach the District Dairy Officer who will assist in the selection with a suitable site and may have useful contributions to make concerning the details of layout and construction.

It is imperative that the building should be situated on high ground, and preferably on a slope, so that the arrangement of the holding-yard allows drainage away from the milking shed.

In determining the aspect of the milking shed the direction of the prevailing winds should be taken into account, and it is usual for the open side of the shed to face east as this affords protection from winter winds and allows morning sunlight to penetrate. The direction of the prevailing winds will also have an effect on the quantities of dust entering the shed and this important factor should not be overlooked.

SHED LAYOUT
The plan shown in Fig. 1 illustrates the layout of a three-unit milking shed which includes an engine room, a separator and cream or milk storage room and a washing-up section. The overall dimensions of this shed are 38ft. x 16ft. although additional units may be added by extending the length of the building.

A gable roof affords good protection from the weather on both sides of the shed, and if the minimum height of the eaves from the floor level is 8ft., good light and ventilation will be obtained. Corrugated “Super Six” asbestos is an excellent material for the roofs of farm buildings and its price is comparable with that of locally manufactured galvanised iron.

The positions of windows are shown in the plan and references are made to these items farther on in the text.

FLOORS AND DRAINS
A continuous cement floor is used throughout the shed and the directions of slope of the various sections are shown by arrows on the plan (Fig. 1). The general drainage pattern is served by the wide shallow drain which runs almost down the full length of the centre of the shed floor and continues as an open cement drain for a distance of at least 20 ft. from the shed. It is essential that the direction of drainage be from the separator room towards the bails and never in the opposite direction.

SEPARATOR AND CREAM OR MILK STORAGE ROOM
This room houses the separator, milk receiving vat and milking machine releaser and also serves as a cream or milk storage room. A rack along the walls provides storage space for cans and releaser parts.

The walls and ceiling should be lined with an impervious material such as asbestos-cement sheeting and the ceiling height should not be less than 8ft. A fly-wire door is necessary, and provision for a window in one of the outside walls should be kept in mind during construction.

ENGINE ROOM
The engine and vacuum pump are situated in this compartment between the separator room and the milking bails. A window in the back of this compartment and another window in the opposite wall, above the washtroughs, provide adequate light and through-draft ventilation.

WASH-UP SECTION
The positions of the wash-up troughs and the drainage racks are also shown in Fig 1. A copper or boiler is located in such a position that hot water is conveniently placed for both the milking machine in the bails and for the washing of utensils from the separator room.

MILKING BAILS
The type of bail shown in the accompanying diagrams (Figs. 2 and 3) has the following advantages:—

(a) Walk-through design.
(b) The cow is secured by the head.
(c) The design has a minimum number of posts set into the floor.

The only posts set into the concrete floor are the 4in. x 4in. posts at the end of the bails partitions and the 4in. x 4in. post in the centre of the bail on which the two gates are hung. Construction details of these bails are shown in Fig. 2 and the general view of the setup is shown in Fig. 3.
Fig. 3.—Perspective view of the walk-through ball.
EXITS FROM BAILS

The openings in the back wall of the shed through which the cows pass after milking may or may not be equipped with doors. This point is one to be decided by personal preference.

If doors are not fitted, a hedge or board fence situated along the outside edge of the cement path at the rear of the shed would act as a windbreak. By confining the cows to this cemented strip at the rear of the shed until they are dispersed into the race, boggy conditions at the exits are avoided.

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Grateful acknowledgment is made to Mr. C. Armstrong of Margaret River who supplied details of the construction of the head-secured, walk-through bails.

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