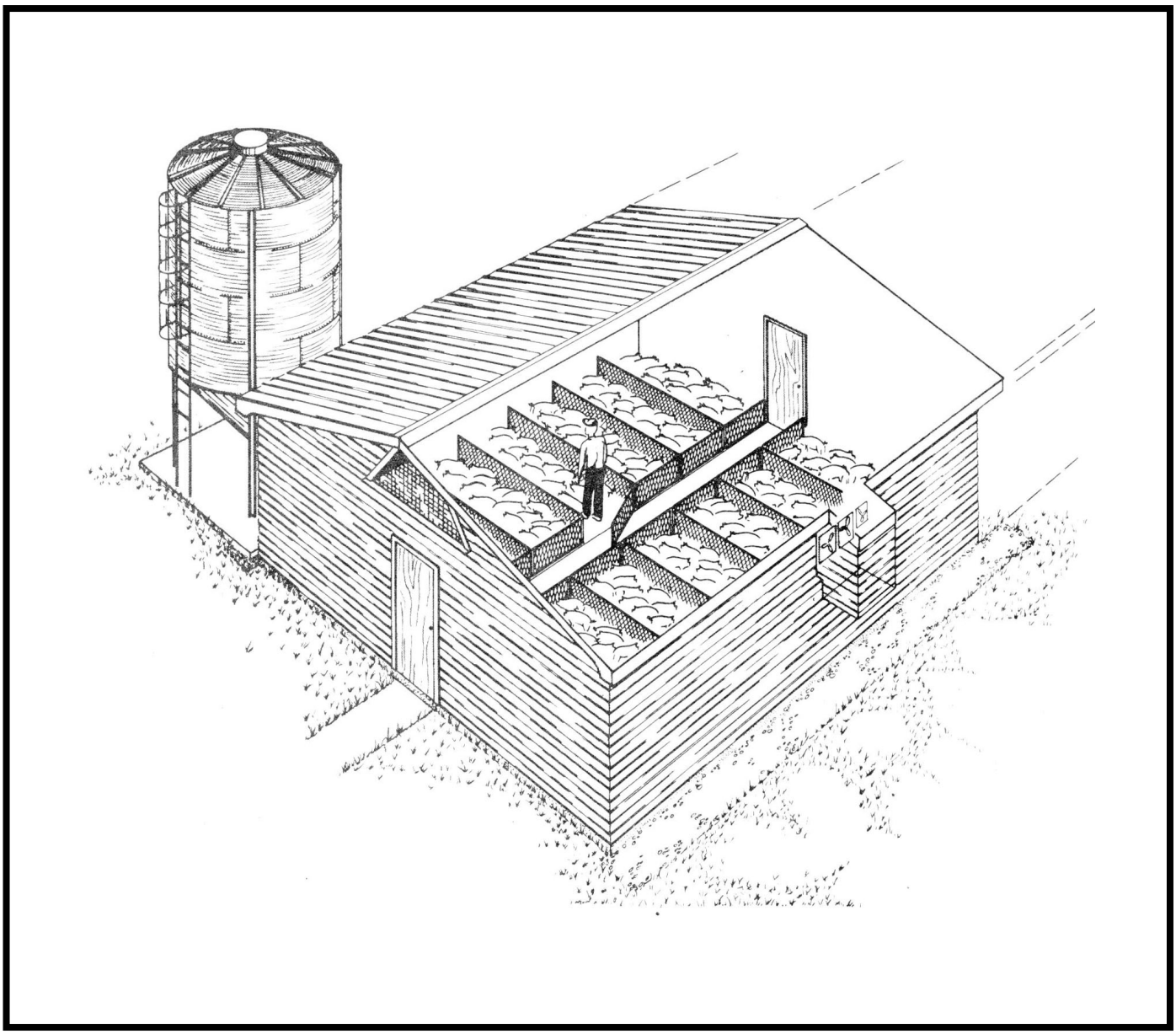
BRITISH COLUMBIA Ministry of Agriculture, Food and Fisheries
Agricultural Building Systems Handbook
PLAN
362-41

WEANER UNIT – 28 FEET WIDE



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362-41

WEANER UNIT, 28' WIDE

CPS
PLAN 3449 REVISED 78:03

This is a detailed plan set for a weaner barn. Two rows of 4 x 12-ft pens fit into a 28-ft clear span building 30 ft long. The 28-ft width matches plan 362-31 – a farrowing unit with front creeps. The pen space per weaner has been reduced from earlier versions of the plan to give 2.4 sq ft per weaner based on 20 weaners per pen.

COMPONENT BUILDINGS FOR A SWINE PRODUCTION SYSTEM

Plan 362-41 may be built separately or in connection with other units. Some operators prefer connected units for better weather protection and easier installation of services (feed, water, power, etc.). Refer to Publication 1451, *Confinement Swine Housing*, for more information on planning the complete swine housing system including breeding/gestation, farrowing, growing/finishing and service sections.

The following calculations show how to estimate the number of pens for weanling pigs 3 to 10 weeks old (7 week weanling period); for adjustments substitute your own figures in these calculations. Assuming a 100-sow breeding herd averages 8 pigs per litter, annual weanling pig production is:

$$\frac{100 \text{ sows}}{} \times \frac{2.3 \text{ litters}}{\text{yr}} \times \frac{8 \text{ weanlings}}{\text{litter}} = \frac{1840 \text{ weanlings}}{\text{yr}}$$

$$\text{Weanling Pens} = \frac{1840 \text{ pigs/yr}}{20 \text{ pigs/pen}} \times \frac{7 \text{ wks in pens}}{52 \text{ wks/yr}}$$

$$= 12.4 \text{ pens (provide 14 pens)}$$

VENTILATION SYSTEM

Ventilation is controlled by thermostats at the center passage and a series of exhaust fans in one wall. An adjustable ceiling center inlet receives fresh air from an insulated duct built into the attic, using the roof trusses for framework.

The adjustable inlet consists of two 8-in. wide slabs of polystyrene, butted together to form a 16-in. wide baffle suspended on wire under a continuous slot in the ceiling.

For winter ventilation, air discharges horizontally from the inlet slot between the ceiling and the polystyrene baffle. The area of this opening is easily adjusted by a control rope and boat winch which moves the baffle endwise to swing up or down as required. The size of this inlet opening is important for maintaining a high inlet air speed, preventing cold drafts at the floor.

For summer ventilation, the baffle can be lowered to increase the air flow rate but decrease the velocity across the ceiling. The distance the air stream travels along the ceiling can be altered by changing the slot width. For extremely hot weather, the two polystyrene slabs can be separated so that a slot discharges air straight down toward the center passage.

HEATING SYSTEM

Weanling pigs just out of the farrowing creeps require good temperature control (70^{o}F minimum) as well as warm floors. Floors in the sleeping area should be insulated. In winter, supplemental heat is required to maintain temperature. This heat may be provided by electric resistance cable or hot water piping in the floor, or by fan forced unit heaters or radiant heaters suspended from the ceiling. Another possibility (not shown in this plan) is to preheat the fresh winter air to about 60^{o}F in an adjacent room, then duct this air into the insulated attic duct. Add extra insulation around this duct if you plan to use preheated air.

MANURE SYSTEMS

This plan gives details for three liquid manure handling systems, including (1) deep narrow gutter, (2) slotted floor with deep trench and draw-off system, and (3) slotted floor with shallow flushing trench. In (3), the trench flushes through pail valves into a 12-in. collector pipe which drains into a sump. A pipe elbow entering the sump acts as a trap to prevent gases from the storage from being drawn back into the barn. Liquid manure then drains through a 16-in. main sewer to long-term storage. Alternatively, a pump can be used to transfer manure if the main storage is above the sump. System (1) can be constructed in the same manner. To prevent freezing of the sump and the 16-in. main sewer to storage, the continuous-running step 1 exhaust fan can be ducted into the top of the sump. This ensures a flow of warm air through the main sewer. This duct should be removed in hot weather to avoid drying out manure in the drain line or sump. If more than one building is serviced by the same collector pipe, check elevations of floors and gutters to ensure that a blockage in the pipe would not cause manure flushed from one building to back up in another.

To control water pollution, the swine production unit must include a manure-tight storage with sufficient capacity to eliminate spreading on snow, frozen ground or sensitive crops. For most farm situations, spring and fall applications are best, requiring up to 6 months storage. Obtain approval for your plans from proper local authorities before you start construction.