



Saskatchewan
Agriculture
and Food

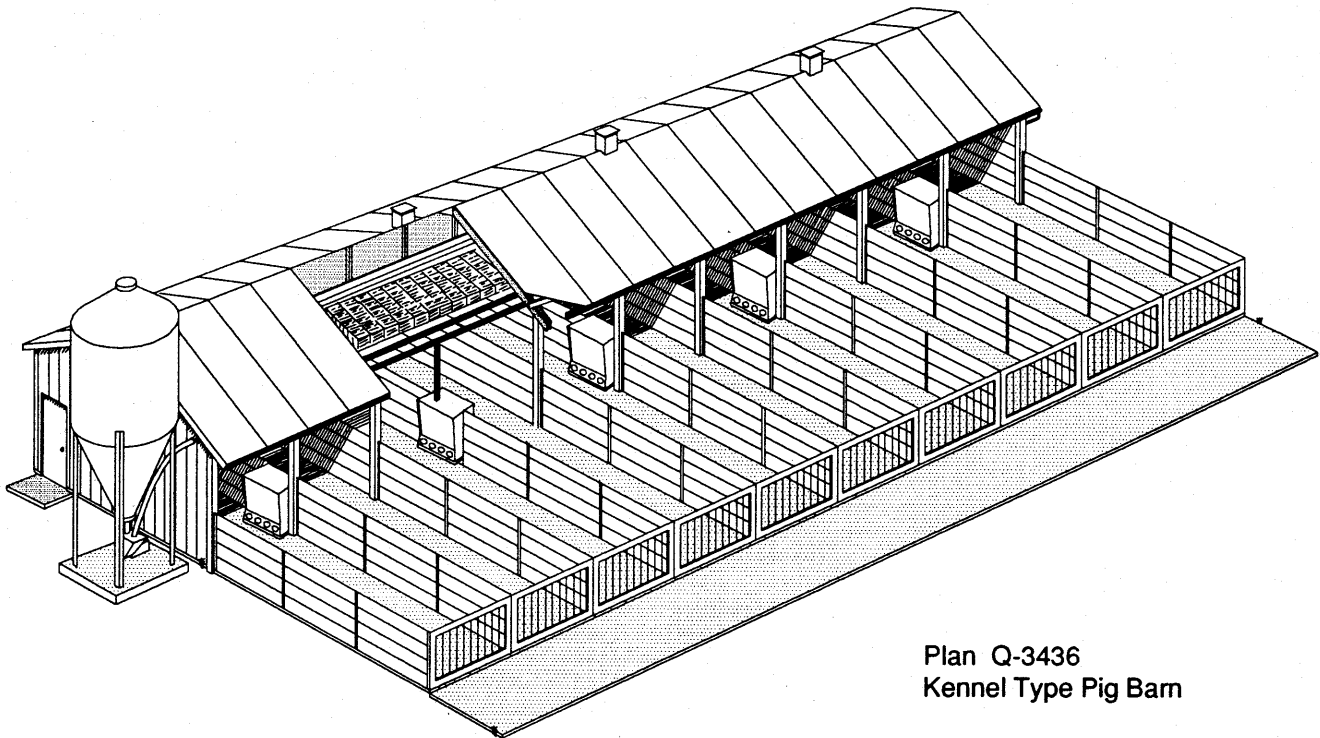
Environment and
Engineering
Branch

Extension
Service

Plan S-304

Low Cost Feeder Pig Housing

COMPLETE INSTRUCTIONS



Plan Q-3436
Kennel Type Pig Barn

High capital cost (\$200-\$250 per pig place) associated with modern confined feeder pig housing has generated a renewed interest in low cost feeder pig housing. This housing can be in unused buildings such as open front cattle sheds or in low cost commercially available structures. With low cost housing, labour is often substituted for capital investment. These low cost housing alternatives may result in less comfortable working conditions for the operator. Sanitation practises may be more difficult and not as effective. There can be a potential for higher death losses. Extra feed will be required in cold weather to maintain the pig's thermal comfort and growth rate. Prospective owners of low cost facilities will have to balance the low capital cost against the disadvantages in making their decision to proceed or not.

Low cost housing alternatives can be used to reduce stocking density in conventional housing during hot summer months when pigs require more pen space.

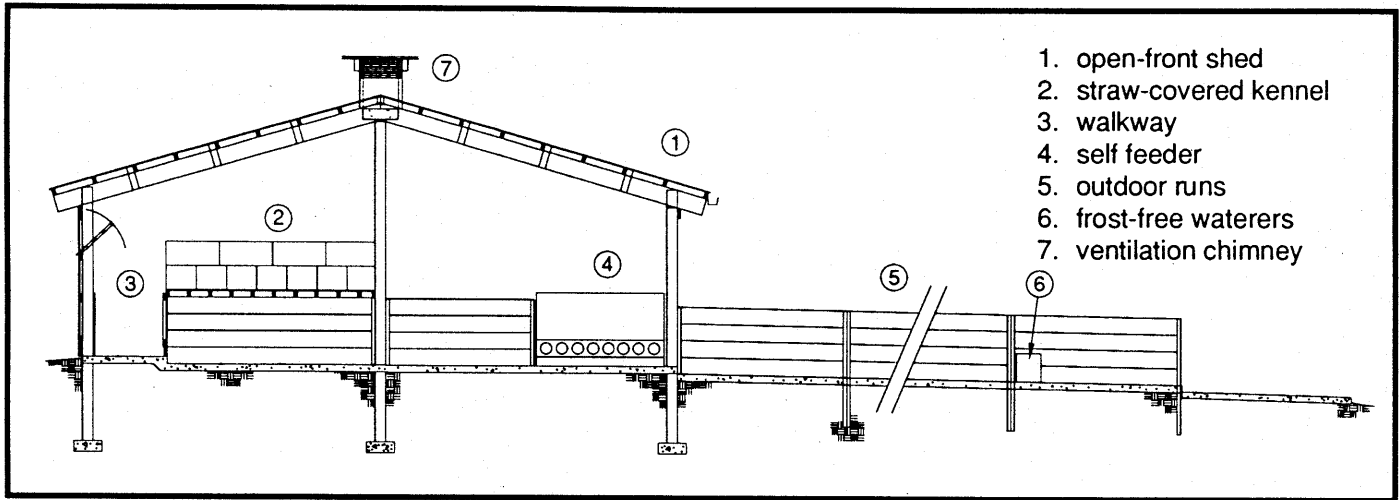
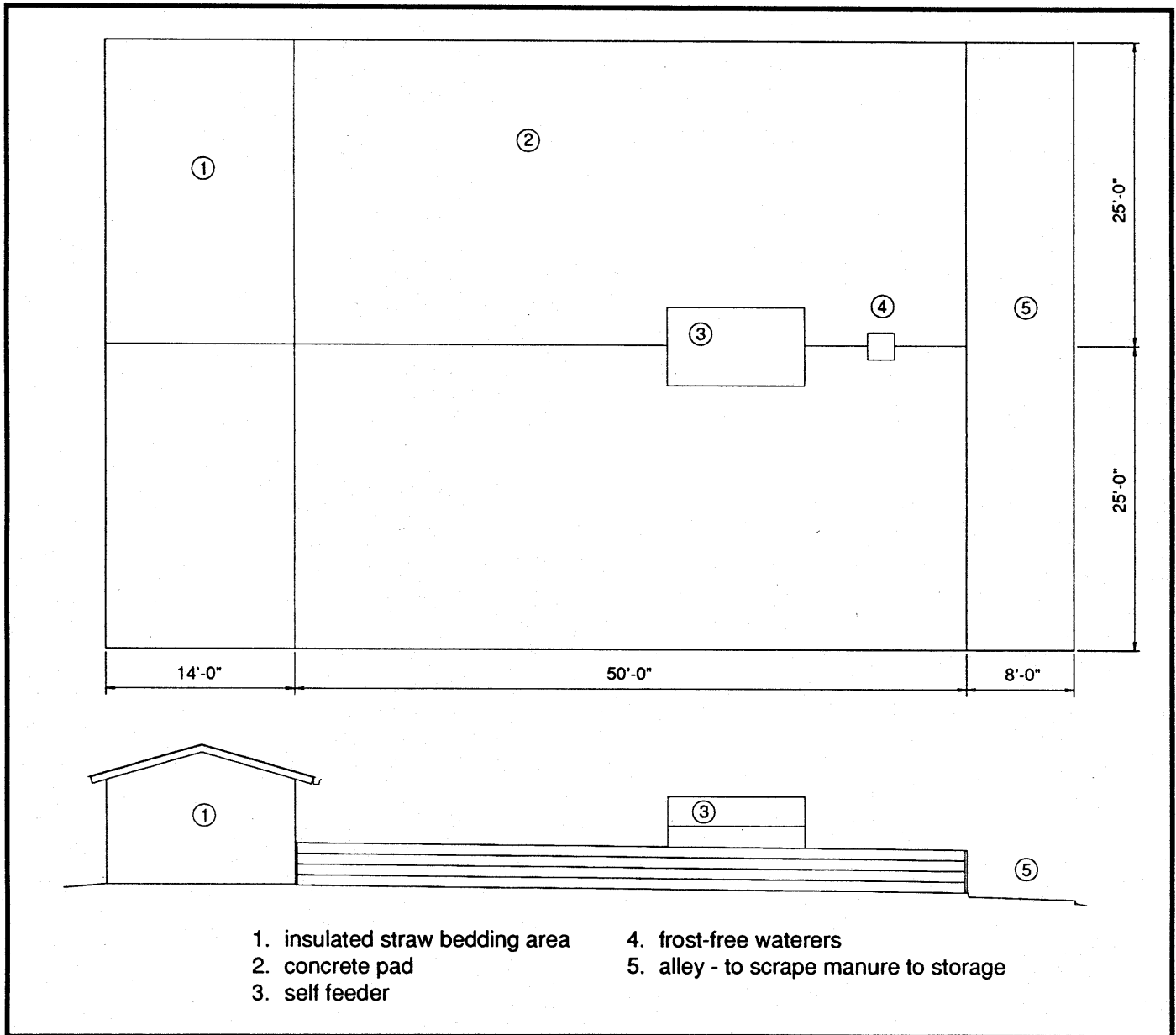


Figure 1. Kennel housing



- 1. insulated straw bedding area
- 2. concrete pad
- 3. self feeder
- 4. frost-free waterers
- 5. alley - to scrape manure to storage

Figure 2. Outdoor feeder facility

Shelters

Shelters are required to protect animals from sun in summer and cold in winter.

Kennel Housing - uses an uninsulated shed with a covered (kennel) straw bedded sleeping area (Figure 1). Generally, sleeping and feeding areas are in the uninsulated shed. The building is a pole shed with an open front. The roof can be either a single-slope shed roof or a double-slope truss rafter roof. An unused cattle shed provides an excellent facility for accommodating this type of housing. The kennel is located at the rear of the pen. It is generally 4 feet high. The kennel front may be left open or be partially or fully closed. The top is covered with straw bales. These straw bales serve two purposes; to provide insulation and to serve as a bedding supply. Several layers of bales are often piled on top of the kennel at the start of winter to provide greater insulation and to serve as a reserve for bedding purposes. The kennel cover can be removed during hotter summer weather. It is recommended that a concrete pad be used both in the uninsulated building and the pen. A concrete pad prevents pigs from rooting and makes cleaning out the facility easier. Allow 5.5 square feet in the sleeping area and 18 square feet of outside pen area per pig. Ensure pigs are crowded in the sleeping area to prevent them from dunging in the kennel. Cost of a kennel type facility is \$70 - \$100 per pig place. A Saskatchewan farmer has constructed an uninsulated wooden archrib building with concrete floor and employed the kennel principle inside the structure. The balance of the building provides a sheltered run for the pigs with self feeders and heated waterers.

Outdoor Feeder Barns - consist of an insulated, straw-bedded sleeping area and outdoor pen (Figure 2). The insulated building, used for a sleeping area, has a manually controlled natural ventilation system. Doors and vents provide the required ventilation. Pig access to the sleeping area is via pig sized openings which may have a cover for increased protection in winter. As with kennel type housing, a concrete pad is recommended for the building and outdoor pen. Use space allowances as outlined for kennel housing.

The Biotech Shelter - This commercially available arch type structure has been used for feeder pig rearing. Each arch consists of 4 lengths of 14 gauge, 2 ³/₈ inch galvanized steel tubes set on posts. Depending on snow load, arches are placed 6 feet on centre or less. Purlins run lengthwise between the arches to stabilize the structure. The arches are covered with a polyethylene tarp. These shelters are available in 24 and 30 foot widths. The desired interior height can be obtained by increasing the pressure treated post height on which the arch sits. The posts also support the 2 inch planking for the interior walls. A length of 72 feet is recommended for livestock use. End tarps are provided for ventilation purposes and for adding of feed and straw.

Sand is the preferred base for the straw bedded system used in these structures. The shelter is usually operated as one large pen allowing approximately 14 square feet per pig. Operating as one large pen allows the all-in, all-out concept to be incorporated in the management practise. A concrete pad at one end of the shelter provides a solid surface for feeders and waterers. This structure has a cost of approximately \$60-\$65 per pig place. Figure 3 shows this concept.

Other Types of Shelters - There are other options to use as shelters. Big round bales can be positioned to provide shelter for hogs. Protection must be provided for the walls of the structure to keep pigs from disturbing the bales. *Regardless of the shelter type used, the secret is to keep pigs crowded in the shelter so that they use the shelter for sleeping only.*

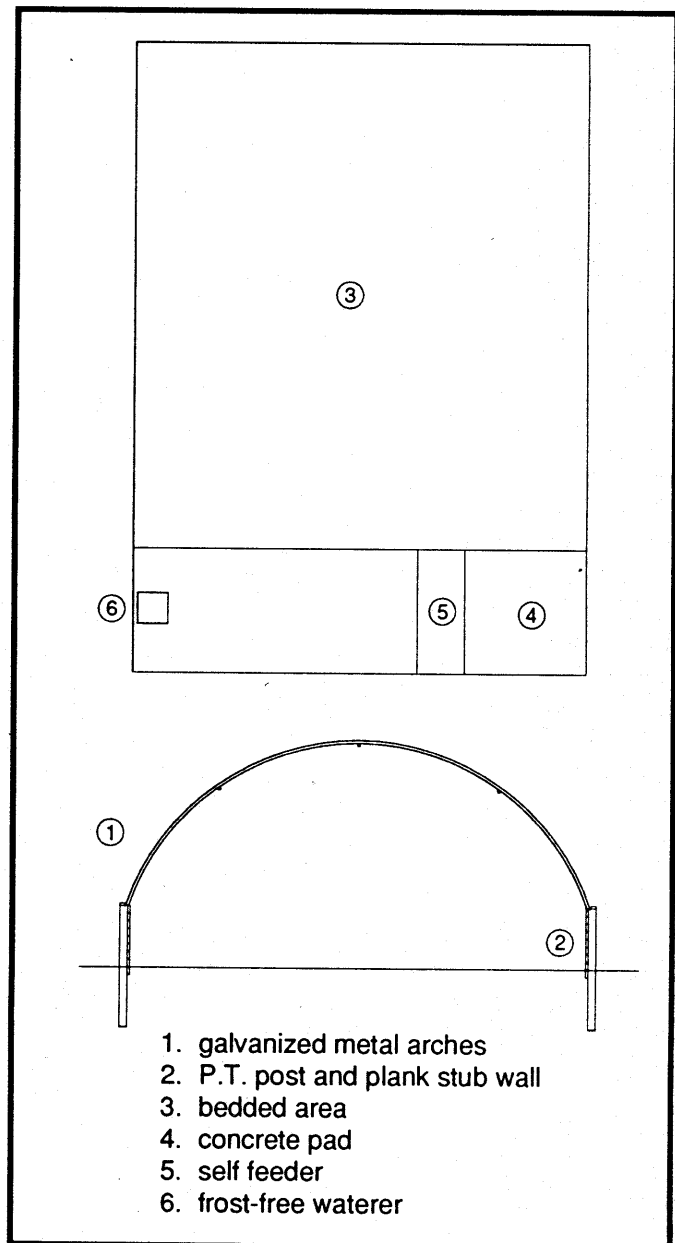


Figure 3. Biotech shelter

Group Sizes

With low cost facilities, part of the saving is in running larger groups of pigs per pen. This reduces costs for penning and feeders. The larger group size aids in keeping the structures warmer during winter. With larger group sizes, management skills become critical and careful daily observation of the pigs is essential. Larger group sizes provide some economies in transportation of pigs to market also.

Feeders and Feeding

Self feeders are generally used for feeder pigs. Self feeders exposed to weather should have covers to protect feed in the hopper and be designed to protect feed in the troughs. Large commercial feeders designed for outdoor use are available. Self feeders located between two pens of pigs reduce investment cost. Self feeders with large capacity hoppers allow for less frequent filling and provide incentive to mechanize the filling. Allow a self feeder trough space of 3 inches per pig.

Location

Locate the feeder pig facility close to the weaner barn if you are supplying your own pigs. Locate the facility to take advantage of existing windbreaks. If windbreaks are not available it may be beneficial to construct windbreak fences to control snow and wind in and around the facility. Plan S-104 Porous Windbreak Fencing gives construction details and shows the wind velocity reduction for fences of different porosity. It also shows snow drifting near porous and solid fencing. Remember to provide space for snow collection downwind from a porosity fence.

Facilities must conform to The Pollution (By Livestock) Control Act, 1984. Runoff from the facility must not enter watercourses or pollute groundwater supplies. Contact your Extension agricultural engineer regarding site requirements and selection. Before construction starts, obtain any required municipal building permits.

Handling

Handling facilities are an essential component of any pig facility. They should be located close to the feeder pig facility. The operator should be able to unload, load, sort and process pigs with minimal stress on himself and the pigs. Alleyways should be provided to move pigs from their pens to the handling facilities. A narrow alley (2 feet wide) makes it difficult for market pigs to turn around. Plan M-3002 Site and Building Planning for Swine Production contains more information on pig handling.

Fencing and Penning

Penning and fencing have to be rugged and durable to withstand the pig pressure. Plan S-301 Outdoor Sow Housing provides ideas for fencing. A single electric wire 6-8 inches above the ground used in conjunction with conventional fencing discourages pigs from rooting near the fence and provides protection for the conventional fence.

Watering Facilities

A feeder pig will drink from 0.7 -1.6 gallons of water per day. This water must be available at all times. Unless the facility is going to be maintained at a temperature above freezing, heated frost free watering bowls will be required. A concrete pad around watering bowls is essential.

Manure Handling

Locate gates for easy access with a loader to remove manure. Remove manure and bedding from the sleeping area between batches of feeder pigs. Estimates of the amount of bedding required vary but one large round bale per week per 100 pigs should be adequate for planning purposes.

Other plans mentioned in this plan are available from your Rural Service Centre,