



Saskatchewan
Agriculture
and Food

Agricultural
Engineering
Branch

Saskatchewan
Rural
Development

Extension
Service

Plan S-301

Outdoor Sow Housing

COMPLETE INSTRUCTIONS

Some producers prefer to house sows outside during the gestation period. Sows receive more exercise when housed outdoors. They also tend to have less foot and leg problems than sows housed on concrete. These factors can help improve reproductive performance and longevity of the sow herd.

Lower investment costs are another reason for selecting outdoor housing. Pole frame shelters, old buildings, granaries or straw bale shelters can be used for sow housing. Eliminate any sharp or protruding objects that could injure animals.

Lower capital costs are offset by increased sow energy requirements and feed consumption during cold weather. Feed rations must be balanced to maintain sows in desirable condition.

Handling feed, water, manure and sows outdoors can be a challenge during winter. Maintenance of outdoor facilities is also an important consideration.

Space Requirements

Paved drylot	25 ft ² /sow
Dirt drylot	50 to 100 ft ² /sow
Pasture	15 to 18 sows/acre
Bedded colony house area	10 ft ² /sow
Shaded area	15 to 20 ft ² /sow
Sorting alleys	24 in. wide

Management

When housing sows outside it may be difficult to get them bred on time and to keep track of breeding dates, especially in extreme weather conditions. It is critical to observe animals routinely and maintain accurate records, particularly breeding records. Some producers prefer to breed sows indoors in a more controlled situation before turning them outside.

Outside breeding requires proper thermal comfort of the boar. This may require penning the boar with the sows during cold weather so he can receive warmth from huddling in a communal house.

House and handle sows in groups according to stage of pregnancy. Reduce handling and sorting problems by housing and moving sows as a group. Size groups to move through the farrowing facility as a unit. Groups of less than 20 sows are desirable.

Each farrowing unit requires four groups of sows if six weeks are allowed between farrowings (weaning at 4 - 5 weeks and 1 - 2 weeks for clean up and restocking the farrowing room).

A small holding area is useful for routine practices such as observing and treating sick or injured animals.

Housing Design

Sows housed outdoors need protection from wind and cold temperatures in winter and from sun and high temperatures in summer.

Colony houses are not heated. Heat generated by the pigs, their ability to huddle and an ample supply of bedding provides a comfortable environment in colony houses in cold weather. Colony house sizing and adequate bedding material are critical to ensure the thermal comfort of sows.

Colony houses or buildings (Fig. 1) should be just large enough to hold all the sows in a pen. When the sows have only enough room to sleep they will tend to manure outside, keeping the colony house clean. As bedding becomes broken up, replace it with fresh straw. Clean out soiled bedding and replace with fresh bedding between groups of sows. Moveable, floorless colony houses built on skids, instead of fixed pole buildings, can help with sanitation and manure removal in the pens.

Since pigs are susceptible to sunburn, extra shade areas should be provided in the summer. Provide a wallow filled with water, or a simple spray cooling system in the pens to allow pigs to get wet and evaporate water from their skin. This will help to control heat stress and reduce loss of reproductive performance in very hot weather.

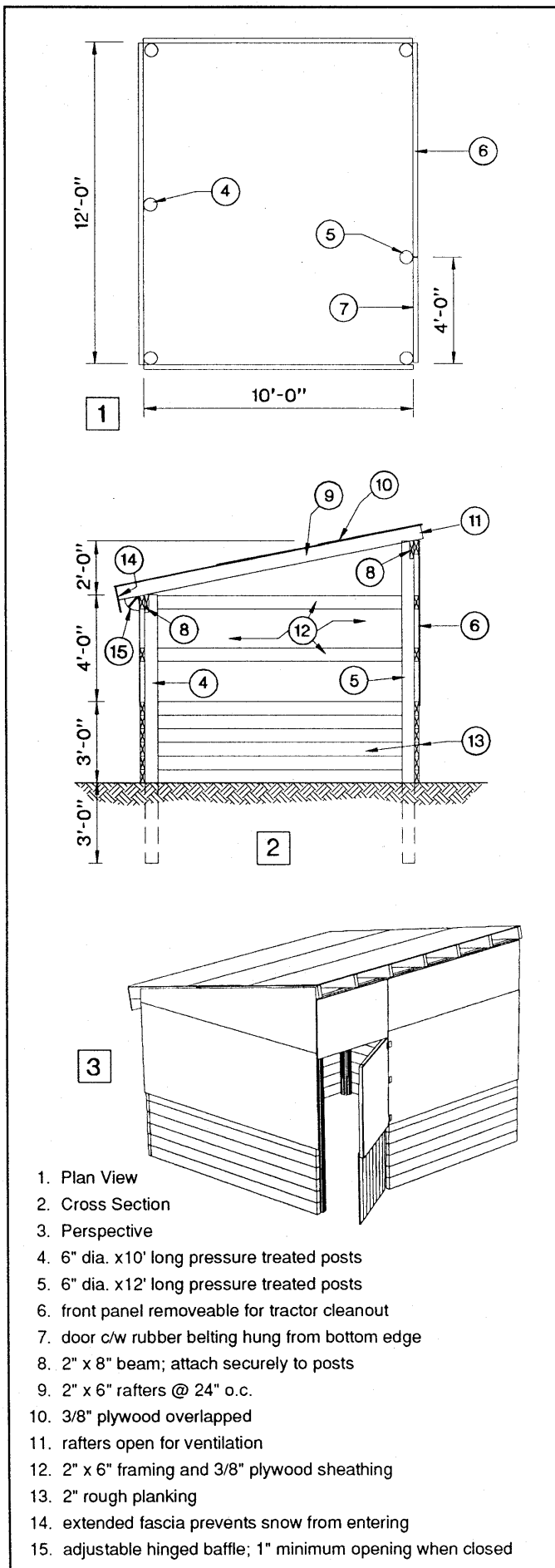


Figure 1. Bedded colony house

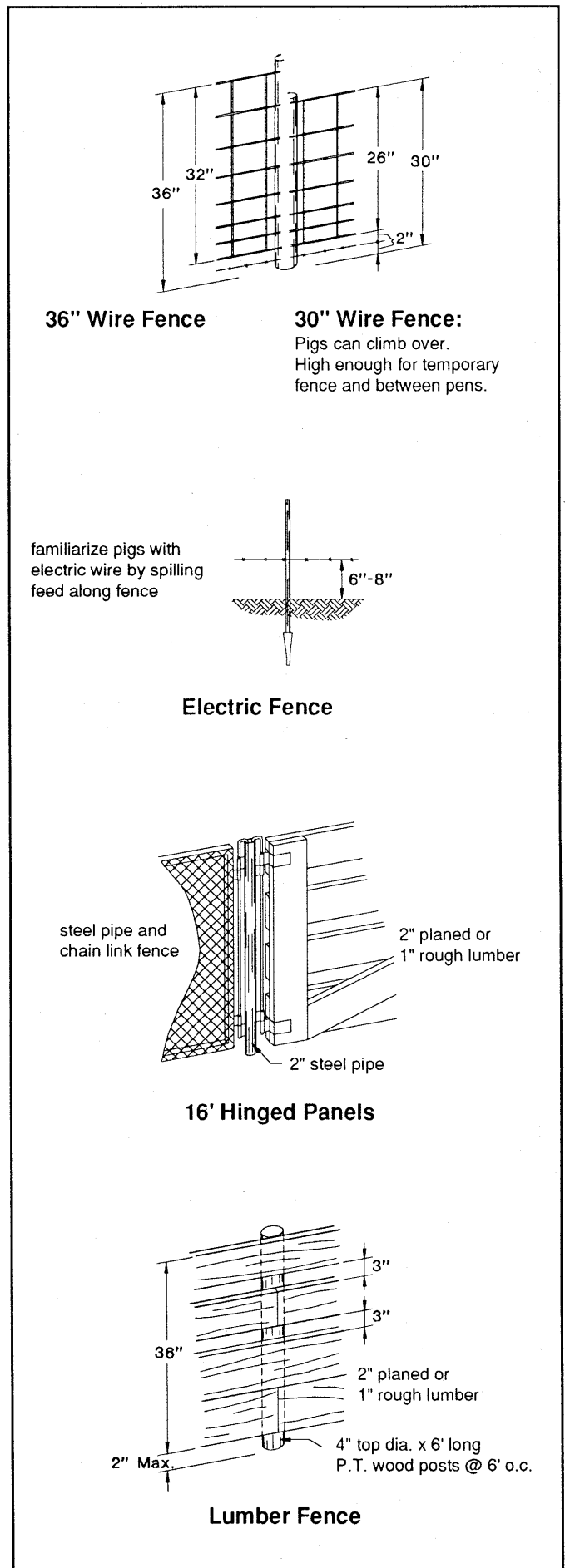


Figure 2. Typical sow fencing

Fences

Use pressure treated fence posts (4 to 5 inch top) and rails or rough planking 42 in. high in feeding and handling areas (Fig. 2). Where sows are not closely confined, wire mesh fencing can be used. Enclose boar pens with the same fencing used in the feeding area.

Electric fencing can be used to confine sows in drylot or on pasture. A single electric wire located 6 to 8 inches above the ground is adequate in low traffic areas. Electric fencing is often used with conventional fencing to reduce wear and tear on the fence by the animals.

If the site does not have adequate protection from wind, provide a porosity windbreak fence. A snowfence or shelterbelt should be located 150 ft. upwind to reduce snow accumulation.

Feeding and Watering Facilities

Good feeding and watering facilities are critical to successful outdoor sow housing. Feeding and watering sites should be well drained. Paved concrete areas should be used in these high traffic areas.

Gestating sows housed outdoors will normally eat from 5 to 8 pounds of feed per sow per day. Feed and energy requirements will be the highest during cold weather when extra feed is required to maintain body temperature and condition.

Water consumption for lactating sows is 3 to 4 gallons per sow per day. Water consumption will be highest during hot weather. Water should always be available to sows. Use heated frost free watering bowls to provide water. They can be located to serve two pens. A concrete pad around watering bowls is essential.

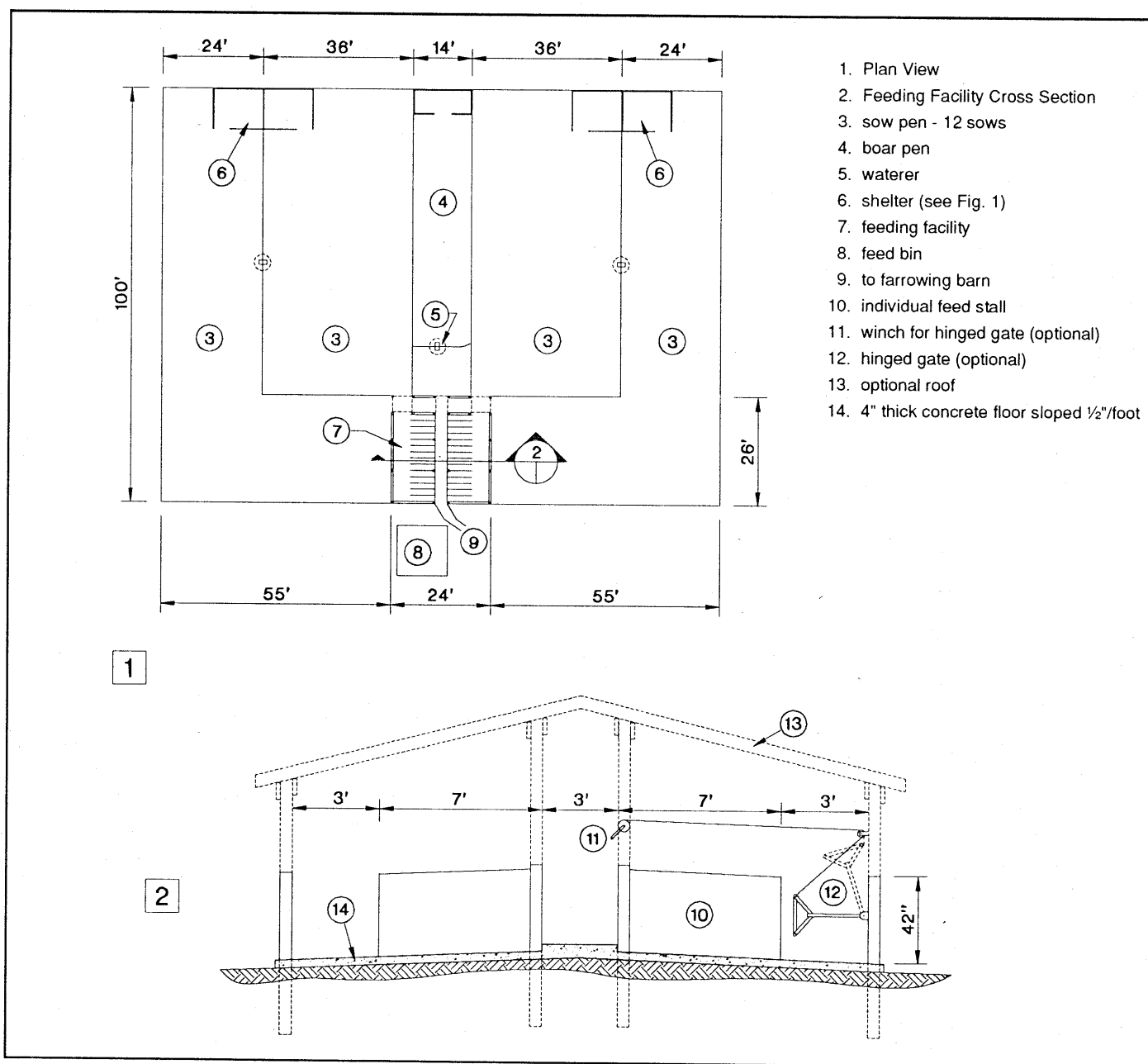


Figure 3. Typical daily feeding outdoor sow housing facility

Daily Feeding

Provide individual feeding stalls for sows fed daily to control feed intake and reduce fighting (Fig. 3). Feeding stalls should be a minimum of 18 inches wide and 7 feet long. A winch operated gate can be used to hold sows in the feeding stalls while they are eating.

Feeding facilities can be used to feed two or more groups of sows, one group in the morning and another in the afternoon. Allow sows into the feeding area only long enough to clean up their feed allotment. This practice reduces manure buildup in the feeding area.

Since sows like to drink when they are eating it is desirable to install nipple drinkers in the feeding stalls. It will not be practical to keep these nipples in operation year round due to freezing in very cold weather.

If desired, the feeding area can be covered with a roof to keep the area dry, minimize snow build up and provide shade.

Skip-a-Day Feeding

This management system provides a method of limiting total feed intake while using self feeders. One self feeder can serve four groups (Fig. 4). A feeder space should be provided for each sow in the group to ensure adequate feeder space is available. Each group has access to the self feeder for half a day every other day. Sows can eat all they want when they have access to the feeder. The long feeding period allows timid sows ample time to feed after dominant sows have eaten their fill.

Sow condition should be observed closely to ensure they are being allowed the proper amount of time at the self feeder. Skip-a-day feeding should only be used where sows have access to adequate supplies of bedding and other roughage between feeding periods. Water should always be available.

Manure Handling

Establish a dunging area in each pen by taking advantage of the sow's tendency to manure in one area. Locate pen gates for easy access with a tractor and front end loader to clean out manure. Minimize manure build up in feeding stalls by allowing sows into the feeding area only at feeding time. Remove manure and old bedding from colony houses between groups of sows.

Location

Locate outdoor housing close to the farrowing barn to simplify moving sows to and from the barn. Locate feed storage bins close to the feeding area.

The facility must conform to The Pollution (by Livestock) Control Act, 1984. Runoff from facilities must not enter watercourses or pollute ground water supplies. Contact your Extension agricultural engineer regarding site requirements and selection.

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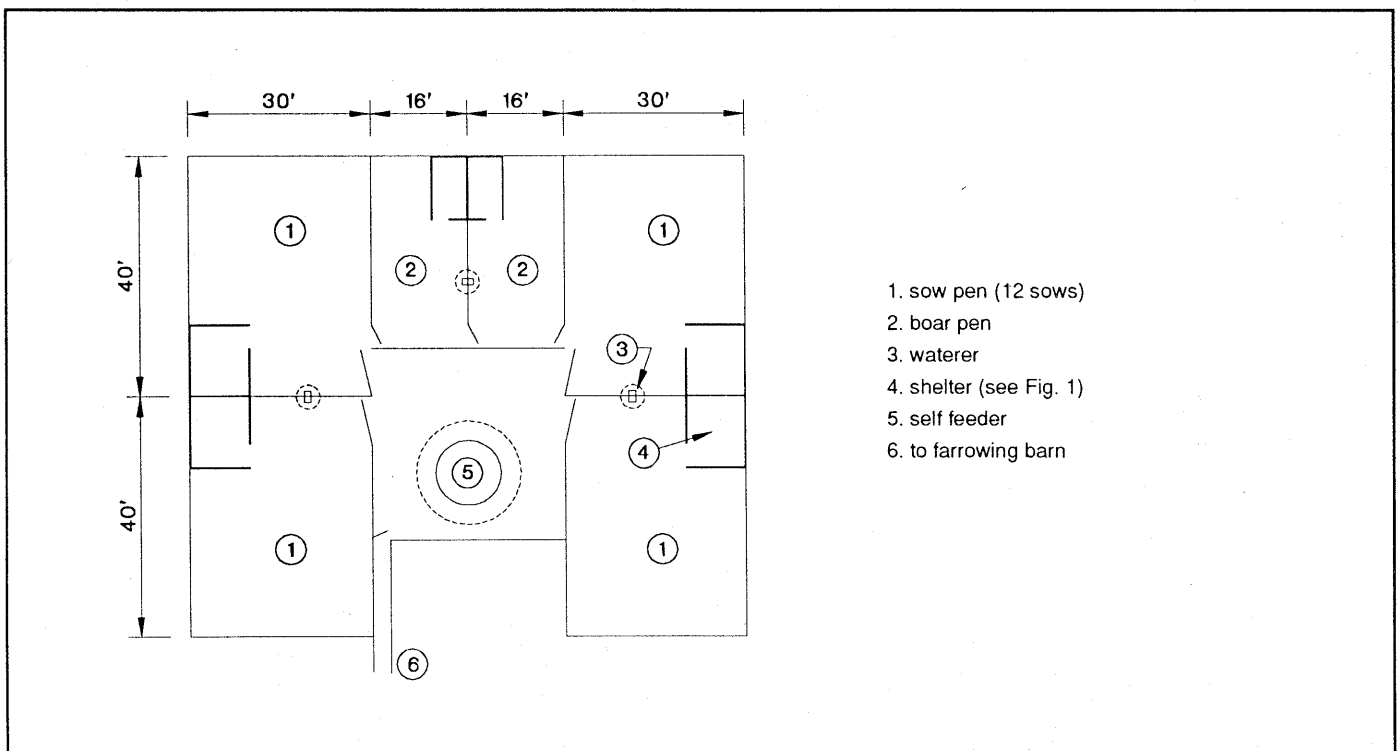


Figure 4. Typical skip-a-day feeding outdoor sow housing facility