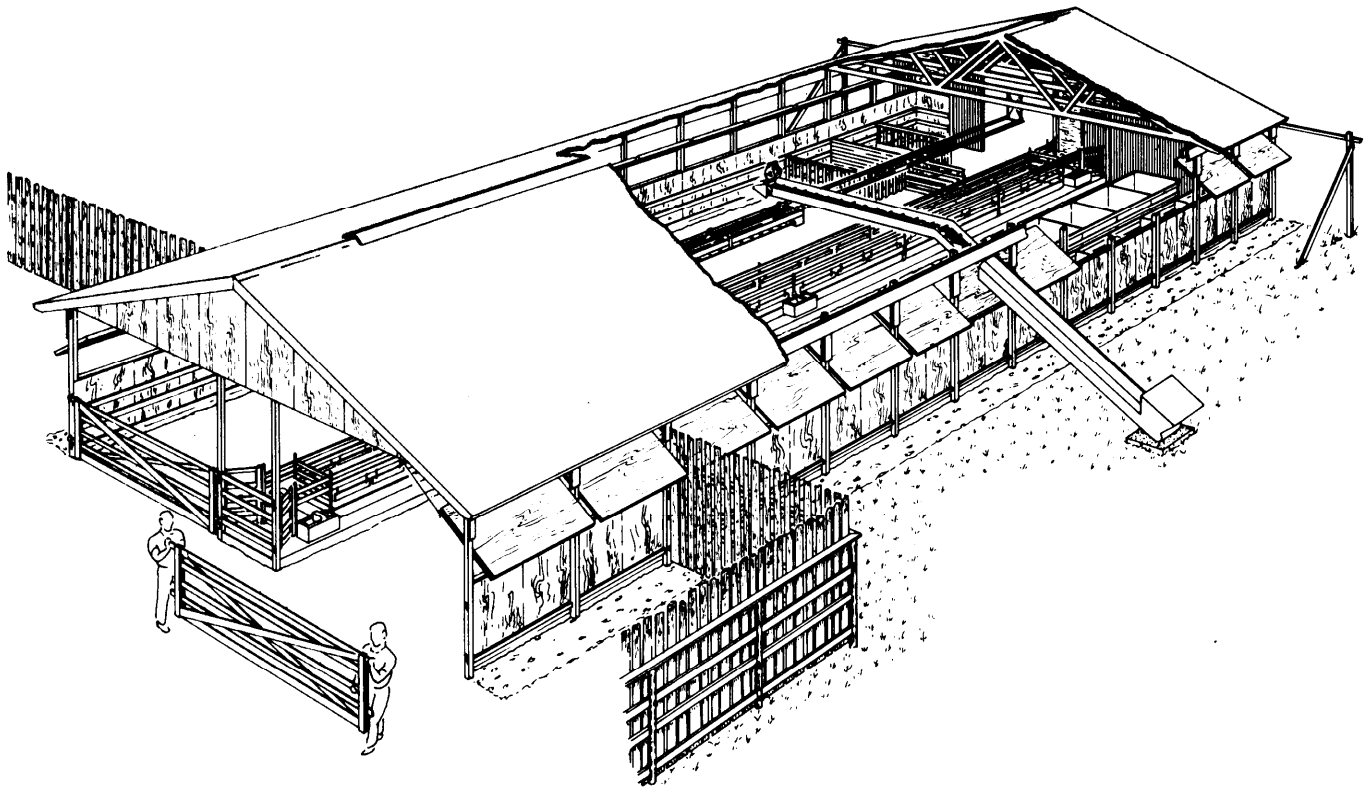
PLAN
4152

OPEN-END POLE SHEEP BARN, MECHANICAL FEEDING



CANADA
PLAN SERVICE

The Canada Plan Service prepare: detailed plan: showing how to construct modern farm buildings, livestock housing systems, storages and equipment for Canadian Agriculture.

This leaflet give: management information and describes one of these detailed plan:. To obtain a copy of the Canada Plan Service detailed plan, contact your local provincial agricultural engineer or extension advisor.

OPEN-END POLE SHEEP BARN, MECHANICAL FEEDING

PLAN 4152 NEW 06:05

This plan gives details for an Eastern Canadian sheep barn for total confinement of 170 ewes and their lambs. The barn is 34 x 120 ft, and the length can be changed in units of 8 ft if necessary.

Flock Management

The 120-ft length easily accommodates 170 ewes at 20 sq ft of pen space each. This is generous, but the idea is to provide space for complete multipurpose housing; at lambing time, part of the pen space is divided into a lambing area, claiming pens, hardening pen and nursing pen. Portable gates are used to fence each area, and the ewes and lambs are moved around to the designated sections required by the different stages of the lambing cycle. Adjust the size of these special pens to suit the numbers of ewes and lambs at each stage.

For lambing in cold weather, protection from drafts and supplementary heating is required in the 4 x 4-ft claiming pens. In 'cold' housing like this, it is more practical to close three sides of the claiming pens with plywood panels and to heat this confined space rather than to insulate and heat the whole barn. Use 250-watt heat lamps safely suspended by chains from eyebolts overhead. Install duplex, U-ground, electrical outlets between the trusses overhead and use CSA-approved heat lamp receptacles.

After lambing, sanitize and weather the pens outside in the sun for a few weeks, then fold and store them until the next lambing season.

Feeding

A feed manger 32 in. wide at the center of the building span provides feeding space for 170 ewes at one time (about 16 in. per ewe). For operators who use a lot of bedding and clean out manure only once or twice a year, the feed bunk can be adjusted to suit the depth of the manure pack. Some sheepmen may prefer to omit this adjustable feature. Use a wheeled feed cart running on the sides of the bunk (a scaled-down version of Plan 2661, for example) or install one of several types of mechanical feed conveyors developed for feeding silage, chopped hay and grain mixtures. The overhead conveyor types are quite suitable, provided a drop spout can be fitted to keep feed from sprinkling outside the bunk.

For feeding baled hay, self-feeders such as Plans 4427 or 4611 can be installed in each pen.

For mechanical feeding directly from a self-unloading truck, wagon or trailer, a wider building with a center driveway is required; see Plan 4151.

Construction

This barn is framed with pressure-treated poles spaced at 8-ft centers along the walls and clear-span roof trusses spaced at 4-ft centers. Start construction by digging or augering postholes to below frost level, then place a concrete footing in the bottom of each hole. Tamp the concrete footing to a level line exactly 4 ft below floor datum so that the poles can be cut and notched at the top for plates and trusses before being erected. This speeds construction and keeps the building level.

For easier manure clean out, spike pressure-treated, 2 x 6 in. tongue and groove splash planking to the inside of :he poles. To make the structure wind-safe, bolt trusses securely to the top of the wall poles. Install cross-bracing between end trusses and nail on the roof purlins immediately in case a wind comes up during construction.

Ventilation

The barn is designed primarily for the mild, wet winters of Eastern Canada, where heavy rain and snow can create management and pollution problems in outdoor feedlots. It is open at one end, not at the side; this helps to divert rain and snow away from the open barn and the feedlot. Because of their wool, sheep in confinement generate a lot of moisture but little heat. Do not close the barn too tightly. Plywood roof sheathing or some insulation such as fiberboard is recommended under the roofing for control of ceiling condensation.

The barn is intended to operate cold in winter. The south end is fully open for sunshine and fresh air. Slot openings at the eaves and ridge move air through to control humidity. These slots are designed to minimize snow infiltration; do not make changes without obtaining expert advice.

In milder weather, rotating flaps at the top of the side walls can be regulated easily with a winch-and-cable system to increase natural ventilation. To let the breeze blow through in hot summer weather, open the side wall flaps fully and open the sliding doors at the north end as well.

Protection from Predators

One important advantage of total or part-time confinement is protection from dogs and other predators. If this is a problem, add wire gates and fencing on all wall openings not protected by doors. Use page-wire fencing or galvanized chicken wire to cover all openings, including those under the summer ventilation flaps.