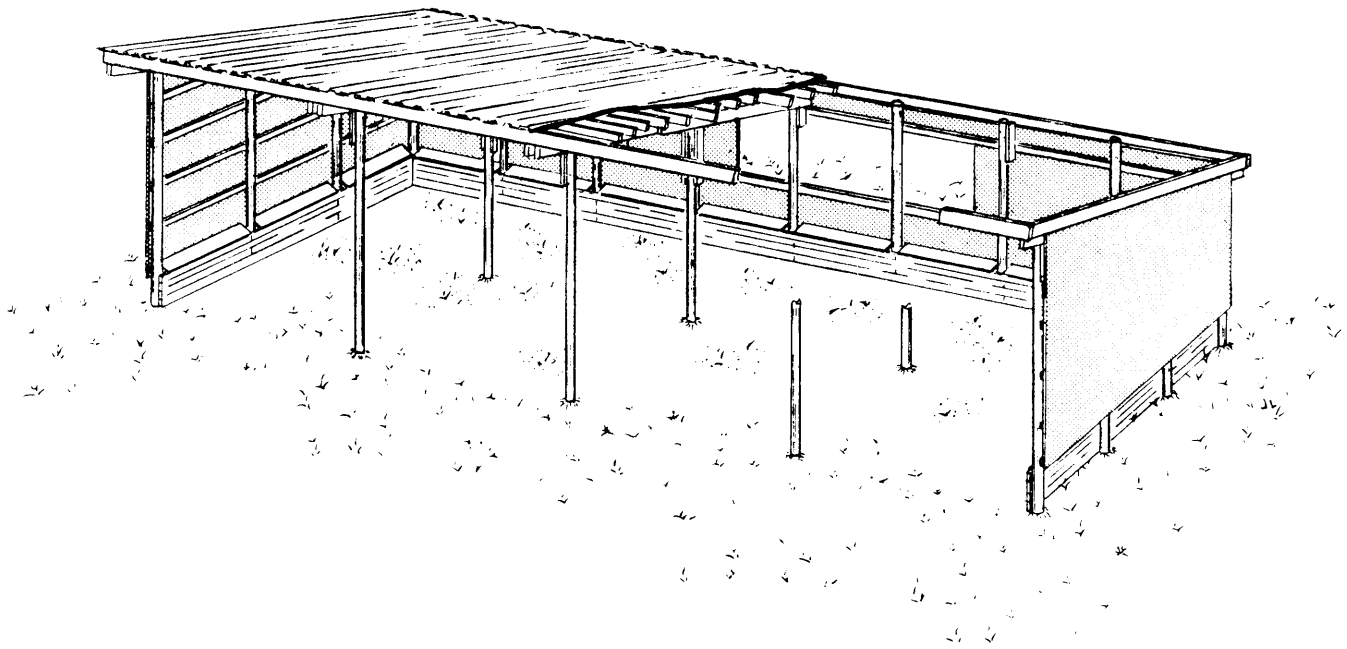
PLAN
M-8162

OPEN FRONT SHED



CANADA
PLAN SERVICE

The Canada Plan Service prepares detailed plans showing how to construct modern farm buildings, livestock housing systems, storages and equipment for Canadian Agriculture.
This leaflet gives management information and describes one of these detailed plans. To obtain a copy of the Canada Plan Service detailed plan, contact your local provincial agricultural engineer or extension advisor.

OPEN FRONT SHED

PLAN M-8162 NEW 79:2

Plan M-8162 gives details for a general-purpose open front pole shed. With a single-sloped shed roof draining to the rear this building is particularly suitable for a feedlot shelter where it is very important to minimize wet conditions in the feedlot area.

POLES

The shed is framed with round pressure-treated wood poles set on concrete footings deep in the ground to resist wind and frost. The poles are spaced 3.6 m on center back-to-front. With 600 mm roof overhang at the open front, this makes 7.8 m of depth. Pole spacing is 4.2 m along the length so the shed can be built in length multiples of 4.2 m. Each 4.2 m bent provides a sheltered bedded area for about 20 yearling feeder cattle or 12 beef cows. It is suggested that post-holes be dug for the poles so that concrete footings can be poured to exactly 1.2 m below a ground datum line.

WALLS

The three walls are ruggedly planked at the bottom with pressure-treated tongue-and-groove lumber. These planks are spiked to the inside face of the wall poles, for easier cleaning of the manure pack with a tractor and manure loader. Planking should be arranged with the end joints staggered at alternating poles, for improved wall straightness and rigidity.

The rear wall has a continuous row of drop panels 1.2 m high. These panels may be opened for maximum summer ventilation, but closed for winter protection. With this feature the shed can function as a summer sunshade or winter weather shelter.

A small additional fixed opening at the top of the rear wall is designed for limited winter ventilation. In areas subject to drifting snow this slot may have to be restricted, but it should never be completely closed.

ROOF CONSTRUCTION

An improved arrangement of roof purlins eliminates the complicated knee bracing used in most other sheds of this type. Rafters are doubled and lap-jointed at each line of poles, at 4.2 m centers. Purlins 4.8 m long are blocked on edge over the built-up rafters so that the purlins are also lap-jointed and doubled at the points of maximum bending stress. This system gives a stiffer roof with less material.

Another advantage for lapped joints is that the roof members need no cutting on site. It is most important to follow nailing instructions carefully so the doubled rafters and purlins can be fully effective.

This plan is best adapted to low-slope metal roofing. In a dry cold climate a single-skin roof or exterior grade plywood is reasonably satisfactory provided the joints are suitably lapped and caulked before nailing down. To allow for horizontal lap joints at the end of each course of plywood roofing, re-space the roof purlins slightly so that each course covers 2 325 mm instead of 2 400 mm.