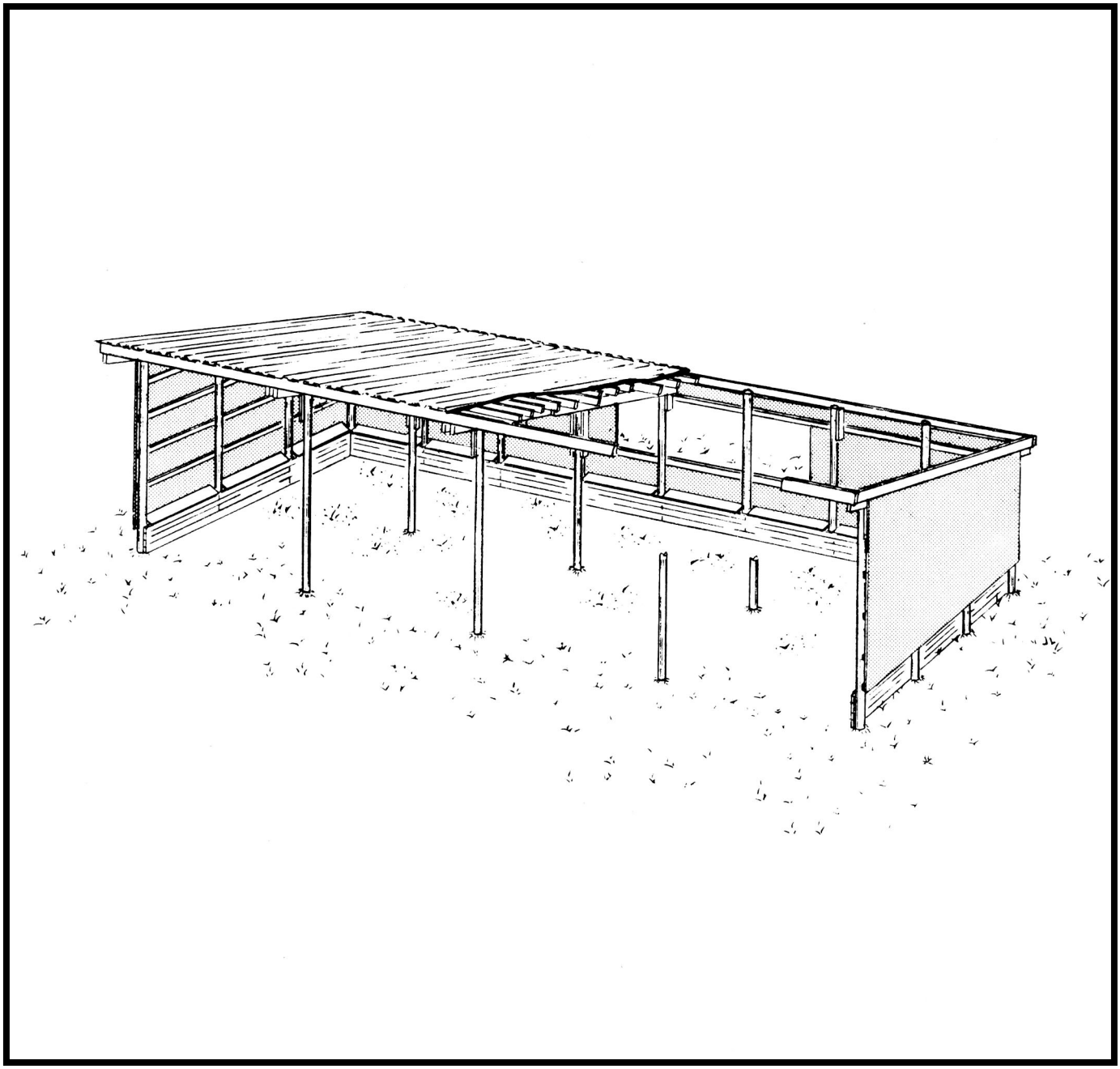
SHED ROOF POLE BARN - OPEN FRONT



DEVELOPED BY CANADA PLAN SERVICE

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OPEN FRONT SHED

CPS
PLAN 8162 NEW REVISED 11:75

Plan 8162 gives details for a general-purpose open front pole shed. With a single-slope 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 12 feet on center back-to-front. With 2 feet roof overhang at the open front, this makes 26 feet of depth. Pole spacing is 14 feet along the length so the shed can be built in length multiples of 14 feet. Each 14-ft. bent provides a sheltered bedded area for about 20 yearling feeder cattle or 12 beef cows. It is suggested that concrete for the pole footings be poured exactly level in pole holes at 4 feet below a ground datum line. This way the poles can be measured exactly and pre-notched to receive the rafters, before erecting.

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 4 feet 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 unusual arrangement of roof rafters and purling 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 14-ft. centers. Purlins 16 ft. 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 nail 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 of 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 7 ft. 9 in. instead of 8 ft.