Important: Warranty Disclaimer for Plans

For the convenience of our clientele, this website makes available conceptual plans that can be helpful in planning buildings, facilities, or other structures. They were developed over many years by engineers at Land Grant universities through the former USDA Cooperative Farm Buildings Plan Exchange. Regardless of the original intent, these are older plans that provide conceptual information only, and are not to be considered or used as construction plans.

These plans do not claim to represent the most current technology or the most recent construction techniques, standards, or codes. For example, over the years there have been changes in the National Design Specifications for Wood Construction, changes in the strengths and types of building materials, and changes in fasteners, among other things. Those changes, along with variations in climate, building codes, and other factors, make it imperative that professional services be utilized for your specific project. Suggested services include, but are not limited to, structural design, assurance of compliance with codes and regulations, site selection, construction supervision, and provision for utilities, waste management, and access. These plans do not replace the need for competent design assistance in developing safe, legal, and well-functioning agricultural buildings and systems.

Neither the University of Kentucky, the Midwest Plan Service, the United States Department of Agriculture, nor any of the cooperating Land Grant universities, warrant these plans. They are for conceptual use only and are not for use as construction plans.
Two rafter-units are required for each 14'-0" of length. Two units on each pair of inside poles and one unit on the inside face of the end poles.

**Rafter-Unit Assembly Diagram**

Scale: 1/16" = 1'-0"

Metal Ridge Roll

2" x 6" x 14'-0" Purlins

2 1/2" Corrugated Metal Roofing, 6'-0" Sheets

6'-0" Sheets

1 1/2" x 6'-0" Diagonal Brace nailed to the lower edge of purlins in end bays

5" Top Diameter Pressure-Treated Poles 22'-0" long, set in pairs; 14'-0" O.C. for inside poles and 14'-0" to the outside of end poles. Tops of poles to be flattened to a net thickness of 4".

Manger sides are 2" x 8" x 14'-0". The bottom is 14" stock, 2" 6" x 14'-0". All end joints are at poles.

Manger is supported at poles and midway between poles 2" x 6" at midpoint and 2" x 8" at poles.

Two 2" x 6"

5" Concrete Platform with Brushed Finish

Slope 3° in 12'-0"

Both footing and backfill are of compacted crushed stone

Typical Cross Section

Scale: 1/16" = 1'-0"

5" Concrete Platform with Brushed Finish

Slope 3° in 12'-0"

3" x 12" Sheet Metal Ties with Three Roofing Nails to Each Purlin. Use Two Ties, 4'-8" O.C. in each bay.

Ridge Purlin Ties

Fasten each end of purlins with one 16d toenail to rafter and two 12d nails to purlin anchor or blocking (this nailing not shown).

Nail each rafter and collar to purlin anchors with two 16d nails.

Fifteen 6d nails to collar.

Use Hot-Dip Galvanized Common Nails.

Nailing Details

Scale: 3/8" = 1'-0"

Three 3/4" Lag Screws each 2" x 12"

Two 3/4" Lag Screws each 2" x 12"

Three 3/4" Lag Screws each 2" x 12"

Three 3/4" Lag Screws each 2" x 12"

Three 3/4" Lag Screws each 2" x 12"