



FIGURE 2.—Here is one of these chopped hay feeders in use on the farm of North Dakota Agricultural College. While the accompanying plan (Figure 1) is for a 12 foot feeder, this actual view (Figure 2) shows sheep feeding at a 16 foot feeder.

Approximate Bill of Materials (12' Feeder)

No. Pieces	Size	Kind	Where Used
2	4" x 6" x 12'	Fir	Skids
19	2" x 8" x 6'	Fir	Floor
2	2" x 8" x 12'	Fir	Trough sides
6	2" x 4" x 4'	Fir	Wall braces
2	2" x 4" x 12'	Fir	Plates
4	2" x 4" x 4'	Fir	Roof ties
8	2" x 4" x 3 1/2'	Fir	Rafters
8	2" x 4" x 4'	Fir	Studs
4	1" x 8" x 6'	Pine	Trough ends
2	1" x 4" x 4'	Pine	Trim
18	1" x 8" x 5'	Shiplap	End sheathing
1	1" x 6" x 12'	Pine	Ridge pole
3	4' x 8' x 1/2"	Exterior plywood	Roof sheathing
2	4' x 10' x 3/8"	Exterior plywood	Wall sheathing
1 gal.		Paint	

  

Hardware	
3 pair	6" Strap hinges
8 lbs.	16d common Nails
10 lbs.	8d box Nails

roof. The other side of the roof should be split at four foot intervals. These roof sections are held in place by strap hinges. These sections act as doors that provide the openings for filling the feeder.

A 2" x 6" plank spiked in place forms the trough side. A 1" x 8" board closes the trough end. This forms a trough of the proper height and size for the sheep to eat with ease.

## Cut Labor and Feed Loss by Building This Chopped Hay Feeder for Sheep<sup>1</sup>

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The feeding of chopped hay has been found to be a convenient method of handling hay in sheep feed lots. Sheep consume the hay readily in this form, with very little waste. For these reasons this system of feeding hay is gaining popularity with sheep feeders.

To feed hay in this form it is necessary to use a feeder that will keep the short lengths of hay from spilling out of the feeder where it will be wasted. To meet this requirement a feeder was constructed and put into operation on the North Dakota Agricultural College Farm during the winter of 1951-52. Since that time two others of the same design have been put into operation. The hay is stored in bales and is chopped into the feeders as it is needed.

A major problem in the design of chopped hay feeders is the fact that chopped hay tends to arch over in a storage box. As a result, the hay will not feed down freely into the feed troughs and it becomes necessary to force it down by hand. This feeder is designed with a slight taper from the top to the bottom. This provides a sidewall that helps to reduce the arching of the chopped hay. Less assistance is required, therefore, to keep the hay feeding down into the troughs.

Twelve foot and 16 foot feeders are in use on the college farm. The accompanying plan is for a 12 foot feeder. The feeders are built on skids for portability. Two-inch planks spiked to the skids form the floor. The studs are marked with a square as illustrated in the plans and sawed at each end. This provides the tapered wall. The studs are toe nailed to the floor and are held in position at the top by the 2" x 4" plate; 2" x 4" ties and the 2" x 4" rafters maintain the proper width at the top of the feeder.

The ends of the feeder are sheathed with shiplap. The side walls are lined on the inside with 3/8" exterior grade plywood. Sheets of plywood four feet wide by ten feet long can be cut to fit the sides most economically. Sheets three feet, two inches by four feet are needed to cover the space between one pair of studs. Three of these can be obtained from one of the 4' x 10' plywood sheets.

Eight penny box nails spaced about four inches apart should be used to nail the plywood in place. The plywood applied in this way will act as effective bracing. This will produce a feeder that is extremely rigid. This rigidity can be increased even more if water-proof glue is used in addition to the nails for applying the plywood.

Exterior grade plywood sheets four feet wide by eight feet long and one-half inch thick should be nailed securely to one side of the

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