Cribbing Corn to Meet Credit Commodity Corporation Loan Requirements

Agricultural Extension Service, South Dakota State College

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Recommended Citation
Agricultural Extension Service, South Dakota State College, "Cribbing Corn to Meet Credit Commodity Corporation Loan Requirements" (1948). SDSU Extension Circulars. 524.
http://openprairie.sdstate.edu/extension_circ/524
CRIBBING CORN

To Meet Credit Commodity Corporation Loan Requirements

How Good a Crib Is Needed To Get a Corn Loan?
Corn stored in any crib which meets the requirements of floors, roofs and width for the county in which it is stored, will be approved for commodity credit loan at 90% of parity or approximately $1.34 to $1.40 a bushel. (see map on page 1.)

However, no matter how good the crib is, if the corn at the time it is delivered to the Commodity Credit Corporation, does not grade Number 3 or better, it will be the farmer's loss.

The same is true of purchase agreements. When delivery time comes, you will be required to deliver Number 3 corn or better or pay the difference.

It, therefore, is to your interest to build a crib which will keep corn in good condition.

What Kind of Roofs, Floors and Widths Are Required?
A roof is required only in Eastern South Dakota Counties. (See map on page 1.) The roof must be watertight. A tarpaulin will be approved but ventilation between the corn and roof is highly desirable. Corn or cane bundles, hay or straw piled on the corn will not qualify.

Cribs having a width wider than those shown in the map on page 1 will not be considered safe for corn under loan unless the moisture content is less than shown in the table below by at least one per cent for each foot or fraction thereof in excess of the recommended width.

<table>
<thead>
<tr>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ear corn offered for loan December 1, 1948 to March 31, 1949</td>
</tr>
<tr>
<td>Ear corn offered for loan April 1, 1949 to April 30, 1949</td>
</tr>
<tr>
<td>Ear corn offered for loan May 1, 1949 to June 30, 1949</td>
</tr>
<tr>
<td>Shelled corn offered for loan Dec. 1, 1948 to June 30, 1949</td>
</tr>
</tbody>
</table>

The Roof, Widths and Ventilators
Corn in a crib with a good floor and roof will be approved for loan, if the width of the crib is not greater than 9, 8 or 7 feet, located in counties according to the map shown above. (Wider widths will be approved if the moisture is lower, according to table on page one.)

Round cribs may be of greater width if center ventilator is used. With a center ventilator a 14 ft. round crib will be acceptable for loan in the 7-ft. area; a 16 ft. round in the 8-ft. area; and an 18-ft. round crib with a center ventilator will be acceptable in the 9-ft. area.

A roof is not required for the loan to be approved in the unshaded portions of this map. A roof is required in all of the 7-foot wide area and the shaded portions of the 8-foot wide area.

Agricultural Extension Service
South Dakota State College, Production and Marketing Administration, United States Department of Agriculture, Cooperating
Putting a Roof on a Round Crib

Much of the corn in counties of South Dakota which require roofs will be stored in round cribs. Putting a roof on a round crib is such a difficult job that often it is left without a roof. The pictures on this page show an easy method of putting a roof on a round crib using asphalt roll roofing; and using corrugated galvanized iron.

Usually corn in round cribs is piled cone-shaped. This is very difficult to roof. If the corn is piled into a ridge shape as shown in the picture, the job is easier. It is necessary to extend the walls upward in a gable effect at each end.

To make these gable ends wire mesh is preferable. If roll roofing (45 lb. or heavier preferred) is the only material available to extend the walls, cut two 8½ ft. lengths diagonally as shown in the picture.

When the crib is filled until the outer edge of the pile is about 4 inches from the top of the upper ring, insert two 4-ft. lengths of 2x4's at opposite sides of the crib between the crib wall and corn.

Also insert 5 lengths of 1x4's to support each diagonal strip which is nailed to these 1x4's.

At the ends of the 4 diagonal strips, nail pieces of lath to reinforce the strip where it is wired to the crib wall and nailed (or wired) to the 2x4's.

Note that these pieces of lath are covered on both sides by the strip of roll roofing which is folded over the lath before nailing. This reinforces the material against tearing at the points where it is nailed to the laths. The bottom edge of each diagonal strip should extend 4 inches below and inside the upper edge of the top ring of the crib wall.

The piled corn is shoveled against the diagonal strips to form a ridge. Before the ridged corn is covered "rafters" of 1x4 boards will be needed where the edges of the roofing are lapped and nailed. These rafters can be cut to proper length after they are placed on the corn but it will be easier to do this cutting before they are installed.

Note that the rafters are held together at the ridge by pieces of tin or other flexible material which gives a smooth bearing surface for the roll roofing. Roofing cement should be applied where the roofing sheets overlap. And the outer edges should be reinforced against wind by pieces of lath as shown in the picture.

A 1-foot length on the top of the edge between the rafters nailed to a 3-foot length of lath under the roof sheet is satisfactory. For the end sheets of roofing, two 2-foot lengths of lath above and below the outer edge of the sheet are nailed together as shown.

**Corrugated Iron Roof**

A corrugated iron roof may be placed on a round crib in much the same way as using roofing paper.

Two 13½ ft. lengths of 1x4's should be placed on the ridged corn to give uniform support under the upper edge of the sheets.

The diagonal strips at the ends may be made from snow fencing. When this or any other material such as wire cribbing that is 4 ft. wide is used, filling the crib should stop when the outer edge of the pile is about 6 inches from the top of the upper ring.

Two pairs of 1x4's, 5 ft. long should be inserted about one foot apart between the crib wall and the corn at opposite sides of crib.

The diagonal wall strips should then be fastened to the crib wall and inside the 1x4's so that the bottom edges extend 6 inches below and inside the upper edge of the top ring of the crib wall.

A ridge roll will make the roof stronger and tighter. The ridge roll is held down by two wires extending the full length on each side and fastened to weights or pressure stakes at each end.

The roof may be held on with pressure stakes. Wires from the pressure stakes may pass through nail holes in the roof sheets and then be twisted over wood blocks as shown in the picture.
Pressure Stakes To Hold the Roof On

After the roofing has been fastened to the rafters, preferably by using pieces of lath as shown, baling wires attached to weights or "pressure stakes" are used to hold the roof against the corn as it settles. How to build and use these pressure stakes are shown in the pictures above.
Bills of Materials for Ridge End Walls

Roll Roofing (shown on page 2)
2—8½ ft. lengths of roll roofing (45 lb. or heavier)
2—4 ft. lengths of 2x4's
2—3½ ft. lengths of 1x4's
4—3 ft. lengths of 1x4's
4—2½ ft. lengths of 1x4's
4—1½ ft. lengths of 1x4's
4—lath for reinforcing ends of ridge wall strips
⅛ lb. 4d nails for fastening ridge wall strips to 2x4's
40 2d nails for fastening ridge wall strips to 1x4's

Snow Fence (shown on page 2)
2—8½ ft. lengths of snow fence
4—5 ft. lengths of 1x4's
2 ft. No. 12 wire for joining ends of ridge wall strips

Ridge Roofs

Roll Roofing
2½ rolls of 45 lb. or heavier roll roofing
2—8 ft. lengths of 1x4's for rafters
4—7 ft. lengths of 1x4's for rafters
4—6 ft. lengths of 1x4's for rafters

Corrugated Metal Sheets (shown on page 2)
12 sheets, 8 ft. long
4 sheets, 6 ft. long
18 ft. ridge roll
2—16 ft. lengths of 1x4's
3—2 ft. lengths of metal strips 3 inches wide
4—2½ ft. lengths of 2x4's fastened to wires holding ridge roll
32 ft. No. 12 wire (or heavier) to hold ridge roll
¼ lb. 6d nails
18 baling wires with pressure-stakes or concrete block weights
14 6-inch lengths of 1x2's for wire ties at outer edge of roof sheets

Crib Walls 3-Rings High

Snow Fence
3—50 ft. lengths
10 ft. No. 12 wire for joining ends

Welded Wire Fabric
3—50 ft. lengths of 2x4 inch mesh wire, 14 gauge or heavier
20 ft. No. 12 wire for joining ends

Blue Prints of Other Corn Crib

Corn cribs for which plans are illustrated in this circular, may be built from the drawings shown. The South Dakota State College agricultural engineering department has blue print plans for many types of farm buildings, including houses. These blue prints are sold at the cost of producing the print. They may be examined in all county Extension Offices.

The following are blue prints of permanent type corn cribs:

1011—A Single Shed Roof Corn Crib... 1 sheet 10c
Capacity 1,000 bu. of ear corn. Frame building 8' x 36' with 9' posts at back and sheet metal shed roof. Corner braces and long-pier foundation of concrete. Materials on blue print.

5535—A Double Granary and Corn Crib... 1 sheet 15c
Capacity 2,000 bushels of grain and 1,000 bushels of ear corn. Driveway through center with grain bins on one side and corn crib on the other. Frame building 27' x 32' with 10' posts and with low gable roof covered with sheet metal. Materials listed on blue print.

5534—Stationary Elevator Type for Grain and Corn... 2 sheets 30c
Capacity 2,000 bushels of grain and 3,200 bushels of ear corn. Suitable for hoist dump and shallow pit. Corn on both sides of driveway and grain bins overhead. A low type building 27' x 32' with 15' posts. Frame with sheet metal roof. Cupola centered. Materials list on blue print.

5026—Double Corn Crib. 12' drive. 28' x 32'... 1 sheet 15c
With ventilation for soft corn. Bill of materials.

5533—Single Shed Roof Corn Crib... 1 sheet 15c
Capacity 700 bushels. High and narrow. Concrete foundation. Metal Roof. If another similar unit is built later, the two may face each other across a driveway, converting them to a double crib. The driveway may be roofed.
Three Inexpensive Types of Ventilators

Air movement through corn cribs may be increased by the use of ventilators. Three inexpensive types are shown on this page. Welded wire mesh ventilators usually come in 10-inch diameters and four-foot sections, each section selling for about $2.50—$3.50 per section. Two types of metal ventilators are shown below. Boards, poles, wire mesh, woven wire or other material which is available can be used to make a center ventilator. The ventilator should be made to hold an open space, 10 or 12 inches in diameter, up in the center of the crib. Shown below is a horizontal ventilator which splits the crib.

Corn cribs should be located where they are not sheltered by trees or buildings which break the wind.

Bill of Materials for Ventilator in 3-ring high crib

6—16 ft. lengths 2x4's
4—16 ft. lengths 1x4's
6—16 ft. lengths snow fence
BILL OF MATERIALS

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAVEL FILL</td>
<td>4 1/4 YARDS</td>
</tr>
<tr>
<td>CONCRETE BLOCKS</td>
<td>234 FULL BLOCKS 28 HALF 4 QUARTER</td>
</tr>
<tr>
<td>POLES</td>
<td>8 - 14' LONG 10 - 14&quot;</td>
</tr>
<tr>
<td>ROOFING</td>
<td>15 PIECES OF GALVANIZED CORRUGATED 16&quot; WIDE &amp; 10' LONG</td>
</tr>
<tr>
<td>SLAT CRIBBING</td>
<td>3 - 50 ROLLS</td>
</tr>
<tr>
<td>HEAVY GAUGE WIRE</td>
<td>600'</td>
</tr>
<tr>
<td>LUMBER</td>
<td>4 - 6' x 10'</td>
</tr>
<tr>
<td>PERSPECTIVE</td>
<td>SCALE: 3/8&quot; = 1'</td>
</tr>
</tbody>
</table>

SEMIPERMANENT CORN CRIB
CAPACITY - 900 BUSHELS
EXTENSION SERVICE

SOUTH DAKOTA STATE COLLEGE
U.S. DEPARTMENT OF AGRICULTURE
CO-OPERATING

DATE: SEPT. 31, 1948
DESIGNED BY: NO.
DRAWN BY: SCALE: AS SHOWN
APPROVED BY: NO.
DIRECTOR OF EXTENSION