

What is the Value of a Standing Corn Crop for Silage?

Revised by **Andy Swenson** • Farm and Family Resource Management Specialist, NDSU Extension Service

Corn for silage sometimes is sold standing in the field, and farmers frequently ask how to determine a fair price for the standing crop. The following provides some guidelines for estimating the value of a standing corn crop.

Mature Corn – 50% Grain DM Content	Example 1	Example 2	Example 3	Example 4	Your Figure
1. Estimate of yield per acre in tons ¹	4	8	12	16	_____
2. Percent dry matter	30	30	30	30	_____
3. Value of silage per acre at \$34.86 per ton ² (calculations shown on Page 2)	\$ 138.44	\$ 278.88	\$ 418.32	\$ 557.76	_____
4. Less custom cost of chopping and hauling per acre ³	\$ -60.00	\$ -80.00	\$-100.00	\$-110.00	_____
5. Value per acre of standing corn for silage	\$ 79.44	\$ 198.88	\$ 318.32	\$ 447.76	<input type="text"/>
Immature Corn – 25% Grain DM Content	Example 1	Example 2	Example 3	Example 4	Your Figure
1. Estimate of yield per acre in tons ¹	4	8	12	16	_____
2. Percent dry matter	30	30	30	30	_____
3. Value of silage per acre at \$30.75 per ton ² (calculations shown on Page 2)	\$ 123.00	\$246.00	\$ 369.00	\$ 492.00	_____
4. Less custom cost of chopping and hauling per acre ³	\$ -60.00	\$-80.00	\$-100.00	\$ 110.00	_____
5. Value per acre of standing corn for silage	\$ 63.00	\$ 166.00	\$ 269.00	\$ 382.00	<input type="text"/>
Immature Corn – 0 % Grain DM Content	Example 1	Example 2	Example 3	Example 4	Your Figure
1. Estimate of yield per acre in tons ¹	4	8	12	16	_____
2. Percent dry matter	30	30	30	30	_____
3. Value of silage per acre at \$26.64 per ton ² (calculations shown on Page 2)	\$ 106.56	\$ 213.12	\$ 319.68	\$ 426.24	_____
4. Less custom cost of chopping and hauling per acre ³	\$ -60.00	\$ -80.00	\$-100.00	\$-110.00	_____
5. Value per acre of standing corn for silage	\$ 46.56	\$ 133.12	\$ 219.68	\$ 316.24	<input type="text"/>

¹ The following formula may be used to estimate the wet yield of a standing corn crop with 30-inch rows:

- a. Select a representative row and measure 17.4 feet. (For 36-inch rows, use 14.5 feet of row. For 22-inch rows, use 23.8 feet.)
- b. Cut at normal chopping height and weigh, then multiply by 1,000 to estimate total weight per acre.
- c. Divide answer obtained in “b” above by 2,000 to convert to tons per acre.

² Corn silage is primarily an energy feed. The dry-matter value of silage can be compared with the local value of shelled corn and grass hay. Good-quality corn silage typically will average 50 percent corn grain by dry-matter weight.

³ The most frequent custom rate charged for field chopping and hauling was \$100 per acre. We assume the rate would vary somewhat at different yields.

The value of the standing corn crop depends upon several variables, including yield, price of substitute feed crops, and harvesting and hauling costs. The figure on line 5 in the above examples indicates the maximum amount the buyer could afford to pay. The buyer should discount the computed price by the estimated spoilage. With this information, the parties would negotiate the price.

If you have all-risk crop insurance on your corn crop, you should check with your insurance agent before beginning chopping to determine how selling the standing corn crop will affect yield history and insurance payments if the situation warrants.

Failure to notify your insurance agent may result in forfeiture of any potential indemnity payment. If you have a potential insurance claim, your insurance company likely will require you to leave a number of rows unharvested at specified intervals across the field to be used for final appraisal. Also, selling unharvested corn results in a loss of beneficial interest prior to harvest. This means you will not be eligible for any potential loan deficiency payment.

Calculating the Value Per Ton of Corn Silage

If shelled corn containing 13 percent moisture is priced locally at \$3.50 per bushel and grass hay containing 10 percent moisture is priced at \$80 per ton, their value per pound of dry matter is computed as follows:

Corn 56 lbs. x 0.87 = 48.72 lbs. dry matter

$$\frac{\$3.50}{48.72} = 0.0718 \text{ or } 7.18 \text{ cents per pound of dry matter}$$

Hay 2,000 lbs. x 0.90 = 1,800 lbs. dry matter

$$\frac{\$80}{1800} = 0.0444 \text{ or } 4.44 \text{ cents per pound of dry matter}$$

If silage contains 30 percent dry matter, there are 600 pounds of dry matter per ton, or the equivalent of 300 pounds of shelled corn and 300 pounds of grass hay. Mature, high-yielding grain corn should contain 50 percent grain by dry-matter weight.

300 lbs. corn equivalent	x	.0718	=	21.54	
300 lbs. hay equivalent	x	.0444	=	13.32	
1,400 lbs. water	x	.0000	=	0.00	
2,000 lbs.					\$34.86 per ton of silage containing 30 percent dry matter

The above example is typical of good-quality mature corn made into silage. However, immature (early frost) or drought-impacted corn salvaged for silage contains much less grain relative to stalk and leaf material. Corn in the hard dough stage may be only 25 percent grain by dry-matter weight. In that case, the value would be computed as follows:

150 lbs. corn equivalent	x	.0718	=	10.77	
450 lbs. hay equivalent	x	.0444	=	19.98	
1,400 lbs. water	x	.0000	=	0.00	
2,000 lbs.					\$30.75 per ton of immature, drought-stressed corn silage containing 30 percent dry matter

Very immature corn with no grain content would be valued based on hay equivalent value only.

0 lbs. corn equivalent	x	.0718	=	0.00	
600 lbs. hay equivalent	x	.0444	=	26.64	
1,400 lbs. water	x	.0000	=	0.00	
2,000 lbs.					\$26.64 per ton of corn silage with 0 percent grain content containing 30 percent dry matter.

This publication was authored by Dwight Aakre, retired Farm Management Specialist, NDSU Extension Service

For more information on this and other topics, see www.ag.ndsu.edu

NDSU encourages you to use and share this content, but please do so under the conditions of our Creative Commons license. You may copy, distribute, transmit and adapt this work as long as you give full attribution, don't use the work for commercial purposes and share your resulting work similarly. For more information, visit www.ag.ndsu.edu/agcomm/creative-commons.

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa.ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.