Renting and selling cornstalks

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Abstract
Dry weather has created a shortage of pasture and hay for many Iowa livestock producers. However, cornstalks are an abundant source of winter feed for beef cows in Iowa. When cornstalks are supplemented with protein, vitamins, and minerals, they can supply the nutritional needs of cows that are in moderately good body condition during fall and early winter.

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Renting and selling cornstalks

Dry weather has created a shortage of pasture and hay for many Iowa livestock producers. However, cornstalks are an abundant source of winter feed for beef cows in Iowa. When cornstalks are supplemented with protein, vitamins, and minerals, they can supply the nutritional needs of cows that are in moderately good body condition during fall and early winter.

The main advantages of using cornstalks as roughage for beef cows are their availability and low cost. Stalks can be used for livestock bedding as well. In some areas, a small but important market for cornstalks, both as a harvested feed and for grazing, has developed. As with any market product, though, a price must be determined.

Price for baled cornstalks

Cornstalks often are sold after they have been baled. The procedure below provides a method for estimating the price of baled cornstalks, based on their feed value.

Price per ton -- Cornstalks normally have about 80 to 90 percent of the energy of mixed grass and legume hay per pound of dry matter, but only 20 to 30 percent as much protein. A mixture of about 90 percent cornstalks and 10 percent soybean meal by weight can substitute for hay. Thus, cornstalks can be valued at 85 percent of the price of hay, minus the cost of 200 pounds (0.1 tons) of soybean meal per ton of stalks.

Example 1: assume the price of hay is $70 per ton and the price of soybean meal is $280 per ton:

\[
\begin{align*}
70 \text{ hay price} \times 85 \% &= 59.50 \\
280 \text{ meal price} \times 0.1 \text{ tons} &= 28.00 \\
59.50 - 28.00 &= 31.50 \text{ price per ton of stalks}
\end{align*}
\]

Price per bale -- It is not always convenient to weigh large round bales, so cornstalks are often priced by the bale instead of the ton. If a typical large round bale of cornstalks weighs 1,200 pounds (0.6 tons), multiply the value per ton by 0.6 to arrive at a price per bale.

Example 2: assume the price of cornstalks is $31.50 per ton:

\[
31.50 \times 0.6 \text{ tons per bale} = 18.90 \text{ per bale of cornstalks}
\]

The weight of a bale will vary considerably, depending on the type of baler used and the dryness of the stalks. Large round hay bales have a density of 10 to 12 pounds per cubic
foot, but cornstalk bales contain only about 7 to 8 pounds per cubic foot. Using this factor, the weight of a large round bale of stalks can be estimated by multiplying the diameter of the bale (in inches) by itself. Then, multiply this number by the length of the bale (in inches) and .0035.

Example 3: assume a bale measures 78 inches across and 64 inches long, and the price of cornstalks is $31.50 per ton:

$$78 \times 78 \times 64 \times .0035 = 1,363 \text{ lbs per bale}$$

$$\frac{31.50 \text{ per ton} \times 1,363 \text{ pounds per bale}}{2,000 \text{ pounds per ton}} = 21.47 \text{ per bale}$$

Price for cornstalks not baled

Some corn producers have stalks to sell but do not have a baler. These producers may prefer to sell the stalks as a standing crop and let the buyer do the harvesting. In that case, the price should be reduced by the cost of harvesting.

Estimate the cost of chopping, raking, and baling stalks and subtract this total from the price per bale, for the baled stalks computed above. Custom rates for chopping, raking, and baling cornstalks are reported in publication FM-1698, Iowa Farm Custom Rate Survey [1] (free).

Example 4: assume the following charges:

custom chopping = $ 6.50 per acre  
custom raking = $ 3.80 per acre  
custom baling = $ 8.25 per bale, three bales per acre  
baled cornstalk price = $21.47 per bale  
$6.50 for chopping + $3.80 for raking = $10.30 per acre  
$10.30 per acre ÷ 3 bales per acre = $ 3.43 per bale  
$3.43 + $8.25 for baling = $11.68 per bale  
$21.47 - $11.68 = $ 9.79 per bale

Establishing a price based on the number of bales harvested is probably more accurate than establishing a price by the acre because it reflects the actual feed value.

**Price for grazing cornstalks**

In some situations, it may be easier to bring the cows to the stalks than the stalks to the cows. If fences and water are adequate, stalk fields can simply be rented for grazing. Cows can typically graze for about 60 days at a rate of 3 to 5 acres per cow, although rates vary widely. Some phosphorus and potassium are removed when stalks are grazed but part of it is returned in the form of animal waste.

Cash rental rates for grazing cornstalks are reported in publication FM-1851, Cash Rental Rates for Iowa ($0.75 plus shipping). Although typical rental rates are $4.00 to $7.00 per acre, some regions in northern Iowa did not have enough responses to report a rate for cornstalks.

Crop share leases generally allow the tenant to graze or harvest stalks. Based on survey results, 44 percent of crop share tenants were allowed to harvest all the corn residue and 31 percent were allowed to harvest half of it. In return, tenants should take responsibility for maintaining fences and the water supply for grazing.