Consider Options On Corn Handling

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NEWARK, Del. — You have a stand of corn still in the field, left in a sorry-looking state by this summer's drought. What is your best or most economical course for this crop?

Green chopping is one option, but the possibility of nitrate levels above safe limits caused by the corn's stunted growth is an important consideration. Laboratory testing of drought-damaged corn before feeding as green chop is an absolute must. While cattle and sheep can digest low levels of nitrates without harm, higher levels will induce illness.

When laboratory tests show nitrates up to 1,000 parts per million (ppm) (or 0.1 percent on a dry basis), usually no ill effects result. At nitrate levels between 1,000 and 5,000 ppm, it's safer to give this feed to non-pregnant animals only. When feeding pregnant animals, dilute the feed with safe forage at half and half.

Above 5,000 ppm (or 0.5 percent) in dry matter, nitrates will produce rapid, heavy breathing, frothing of the mouth, diarrhea, frequent urination, staggering, convulsions and death. Sometimes, acute cases have been saved by quick intravenous injection of 4 percent methylene blue solution at 100 milliliters per 1,000 pounds bodyweight. Additional treatment with vitamin A injections at 60 to 100,000 units per cow per day has also been helpful.

Ensiling is another option for drought-damaged corn; if nitrates are present, ensiling can reduce the amount by half. But watch for brown nitrous oxide gas flowing out of vertical silos — it's deadly to breathe. When you suspect the presence of nitrous oxide gas, don't take chances. Test the silage before endangering animals and people.

Perhaps you are short on forage this year and you plan to buy corn silage or green chop from your neighbor. What's a reasonable price? Feeding value of corn silage depends on kernel content, and market price determines the silage price.

Table 1 shows the potential price range under present conditions from about $15/ton for poor silage to $29/ton for good corn silage. The table prices are at the farm silo.

Table 2. Fertilizer Value of Drought Corn

How bad?	Estimated yield of silage (35% dry matter) would be in tons/acre	which contain this fertilizer value in average lb per acre: Nitrogen	Phosphate	Potash	which translates to these $ values per/acre
Terrible and no grain	4	57	12	60	25.05
Very bad--about 25 bushel kernel yield	7	82	18	90	36.70
Bad--about 50 bushel corn	11	117	35	100	51.00
Stressed some --75 bushel corn	14	132	52	120	61.60

Table 1. Value ($) of Drought Corn Silage (35% dry matter/ton)

if kernel yield might be in bushel/acre:	then probable feeding value in %TDN will be:	and if corn kernels are priced per bushel: $2.00	$2.50	$3.00	$3.50
		then corn silage price should be in $/ton			
10	60	16.29	19.07	21.86	24.64
40	63	17.10	20.03	22.95	25.88
80	66	17.91	20.98	24.04	27.11
120 and more (=normal)	70	19.00	22.25	25.50	28.75

If the corn is still in the field, deduct the chopping, hauling and silo-filling costs from the table price at about $5 per ton, assuming long-distance hauling is not involved. Corn silage prices refer to a 35 percent dry matter content. If this differs, adjust prices accordingly.

How much silage potential is there in a particular field? You can expect 1 ton of drought-damaged corn silage for each 5 bushels of estimated corn grain yield per acre. Another way to look at it is — for every poor stand, expect 1 ton of silage for each 1 foot of corn height without the tassel.

When should you plow the corn under? Three instances in which you might consider this option are if you can't sell your bad corn, if you don't need to make silage yourself or if the crop is loaded with nitrates. But not all is lost. Corn contains nutrients that can save you money on fertilizer next year.

Table 2 shows some useful data. If a farmer cannot use or sell the bad corn at between $25 to $60 per acre, depending on severity of drought damages, then it's more profitable for them to plow it under. Assumed fertilizer values are 2 cents per pound for nitrogen or phosphate and 13 cents per pound for potash.

Thus even under the worst drought circumstances, some corn production costs can be recovered. Just sit down and make some alternative calculations.