

# Drought-Stricken Corn Silage Feeding Needs Supplementation

BY  
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 NEWARK, Del. — As if we didn't have enough problems already with surplus milk, buyout farm losses and reduced milk prices, along comes a one-in-a-hundred years drought in much of this area. Some corn was already stunted and very uneven before tasseling. Because of the drought, some of us are stuck with some sorry looking corn with sorry looking ears for filling our silos.

Fortunately, cows have a wonderful buffer system in their large rumen. They can adapt and keep going for some time on borderline feeds, although they may reduce their milk output in the process. But dairy farmers who need to make money to pay their mortgages can't afford to let this happen by including too much of such feeds in their daily milking cow ration. And drought-stricken corn is a borderline feed.

For one thing, it's a low yielder in tons per acre, so you need more acres to fill your silo. Our University of Delaware dairy

strategy is to have enough silage on hand year-round for 12 months. This contrasts with other practices before my time here and certainly differs from the practices on many dairy farms in this region. So, did we plant enough acres this year to fill our silos, even under drought conditions? Or do we need to plant double-crop to extend our acreage to keep silos full—maybe with small grains plus vetch or millet and soybeans off-season for additional silage?

Because of poor ear set, drought-stricken corn is also a low yielder in terms of energy content per pound of silage eventually fed to our cows. In this sense, it compares more to sweet corn after ear harvest, which can be fed as silage but must be supplemented with more energy from concentrate supplements to keep milk production levels high.

Drought-stricken corn may be harvested too dry, which poses other problems. When this happens, it doesn't pack well, leaving trapped air to cause heating and molding instead of proper fermentation. The resulting silage may end up on your manure

spreader instead of in the feed bunk. Wasted work, wasted feed, wasted money!

In borderline cases, such silage will at least heat up with so-called secondary fermentation in the feed trough. The result—reduced palatability, less feed intake, lower digestibility and less milk output. To save this borderline feed, drought-stricken corn that's too dry can be watered down with a hose during ensiling.

The optimum moisture content of corn for silage harvest is around 65 percent. You can easily check for this by weighing a handful of chopped corn before putting it into your microwave oven or on top of your tractor exhaust pipe, and then carefully weighing it again after drying, maybe 10 minutes. The percentage difference in weights

gives you the moisture content. Supplementary off-season silages from small grains need to be wilted down to the 50 percent to 60 percent moisture range for optimum fermentation. Corn that's harvested too early can also be too wet, in which case it will make inferior silage, producing very undesirable foul smelling seepage and nutrient losses.

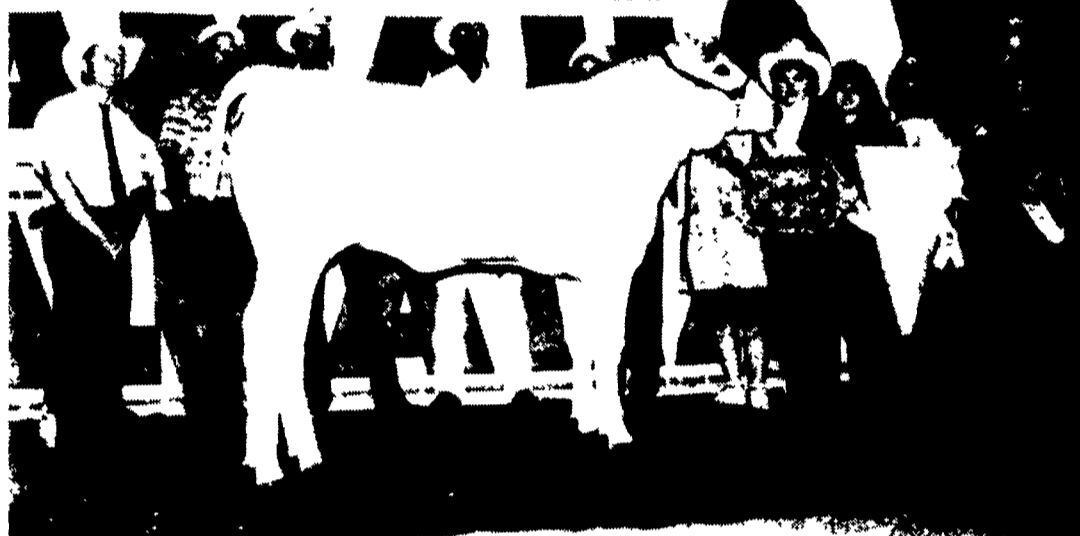
One final thing to beware of in drought-stricken corn. It may be high in nitrates because of inhibited plant growth and inhibited utilization of nitrogen fertilizers.

Nitrates, if not in high levels, can be utilized by cows for protein synthesis by rumen microorganisms but drought stricken corn may have levels that

are too high and toxic. Silage fermentation will reduce nitrate contents because of the generation of nitrous oxide gases that dissipate from tower silos; however, much less from horizontal silos. A silage analysis for nitrate contents after silo opening of drought stricken corn is a must so as to know how much of that borderline feed can be safely fed, probably only after diluting it with other feeds, hays, haylage, green chop and concentrates to reduce daily nitrate intake per cow down to safe levels.

Thus, after evaluating the conditions of drought stricken corn and considering that it is only a more or less borderline feed, it can be fed to dairy cows to get through these hard times.

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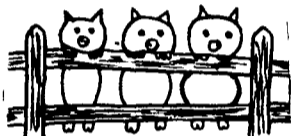
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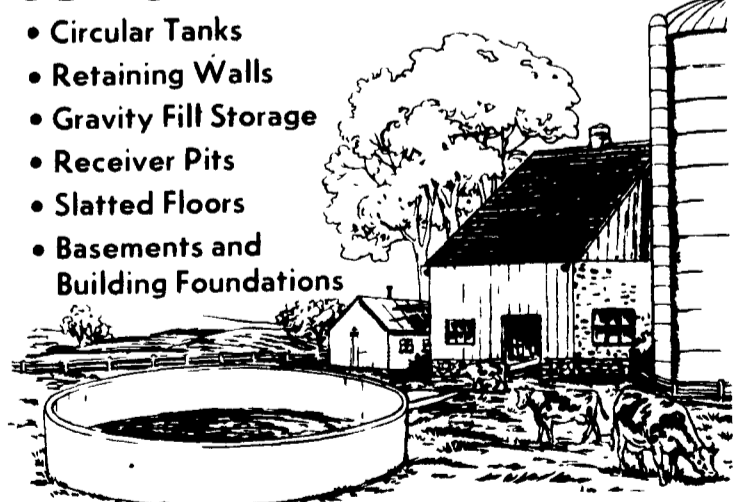
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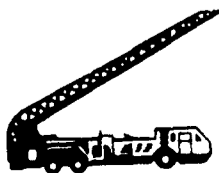
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