

Between The Rows

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they brought with them. In the middle of July, I took my vacation and left with some relatively good looking corn plots in the field. I had the expectation that all that stood between me and an excellent corn crop was a few good thunderstorms.

Unfortunately, they never came in for us. Rainfall in July totaled 1.1 inches at Rockspring and 0.8 inches in August. Not everyone experienced our July drought but most everyone got a taste of the dry weather and hot temperatures in August.

The Pennsylvania crop condition dropped from 83 percent good to excellent corn on July 30 to 40 percent good to excellent on Sept. 17. The USDA crop yield estimate for Pennsylvania dropped from 118 bushels/acre in early August to 106 bushels/acre in early September. This was the largest drop in yield during that period for any state in the country.

As there is with any bad situation, there are always some positives. This year the positives include the good corn price, the early harvest, the reduced drying costs, and the remarkable drought stress that some fields showed in the late season.

There were also areas who avoided the drought and will end up with the combination of high yields and good prices that everyone strives for.

The dry weather also provided us an opportunity to evaluate some practices, hybrids, and recommendations.

One recommendation that received a lot of attention was

the use of the milkline as a guide for harvesting silage. Normally, when corn is harvested at half milkline we estimate that the whole plant moisture will be about 65 percent, but in past years we have noticed that this varies anywhere from about 58 percent to 70 percent.

This year I harvested several experiments where the whole plant moisture was less than 60 percent at half milkline. Consequently, the milkline method is not accurate enough to be used alone. Ideally, we should monitor the milkline development and start moisture testing just after it appears on the tip side of the kernel. This is particularly true if you are working with folks who have a fairly narrow range of moisture that they want in their silage.

Another interesting aspect related to silage has been the silage quality. The textbook often tells us that the feed value of drought-stunted corn is 80-90 percent of normal. In several of the past seasons, however, drought-stunted corn has tested considerably better than this.

For example, the droughts in 1991 and 1993 occurred early in the year and the plants were stunted so the ear-to-stover ratio was similar or higher than normal corn silage. We also tended to get some rain late in both of these seasons, which allowed the stunted plants to recover a bit. Several studies showed superior digestibility of this stunted corn silage compared to normal years because of a good grain to stover ratio, lower fiber levels, and also

because of less lignification of the fiber.

In 1995, the drought came late in the season and was combined with high temperatures. Plant growth was relatively good and ear development was generally stunted somewhat. This made for a silage in some areas with less grain than normal and normal or high lignification levels. In addition, the high temperatures likely reduced the amount of sugars in the crop because of increased plant respiration. The end result has been some higher fiber, lower energy corn silage that will need more supplementation to maintain expected production levels.

One positive aspect of this year's crop is that much of it was harvested before kernels reached black layer and became too hard, so this should have a positive effect on silage quality.

Another observation from this season is how various fields withstood the dry conditions. In general, corn on the deeper soils, in crop rotations following sods or soybeans, and no-till corn appeared to tolerate the drought more than other corn. All of these observations were consistent with the textbook. One observation that was surprising was the productivity of some corn hybrids that received little summer rainfall.

Some of our plots at Rockspring this year have yielded 100 bushels/acre after exhibiting leaf rolling for at least 25 days. This is a testament to the drought tolerance of some of some of our new hybrids.

Our hybrid harvest trial data



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is not in yet but I expect there will be large differences in yield based on my observations so far. Drought tolerance is a trait we need to continue to be focused on in developing and selecting hybrids for this region.

Grain harvest has been moving well ahead of normal in many areas. The early maturity of the corn is due to the rapid accumulation of GDDs in the season and the excellent conditions for drydown. Early harvest is essential this year to hit the moisture targets for high moisture corn and to avoid the stalk lodging that may be prevalent later in the season because of increased corn borer pressure and thin stalks.

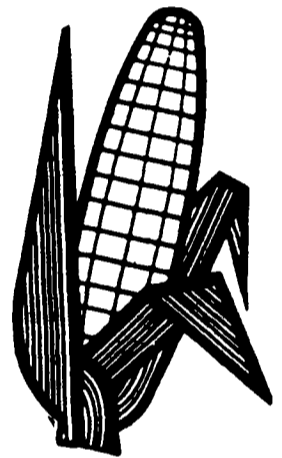
Given the kinds of weather extremes we have anymore, we may experience monsoons in November anyway.

Two issues you may want to monitor more closely this year are corn borer infestation and harvest losses. With the high temperatures that we had, we have some fields that have fairly high corn borer infestations. Corn borer infestation levels are not always apparent from the roadside or combine seat, although ear drop and broken stalks are a tip-off to the problem.

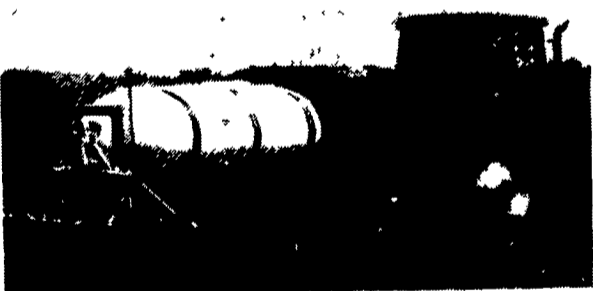
To assess the number of corn borers per plant, split the stalks and count the number of tunnels you find. Do this on 5-10 plants to get a good average for the field. Also look for corn borers in the ear and shank.

This winter, you'll hear a lot about corn borer resistant corn. This information will help you decide if a resistant hybrid has a place on your farm. Entomologists are estimating about 3-5 percent yield loss/borer/plant. Along with this, estimating yield losses, particularly with later harvested fields, would be a good idea. Count the number of kernels in a 10 square foot area. Every 20 kernels in this area represents 1 bushel/acre. If there are many ears on the ground, estimate the ear loss separately by counting the ears in 1/100th of an acre. Each 1/4 pound ear in this area or its equivalent represents one bushel per acre.

Corn borer and harvest loss information will be valuable in assessing the response to the new corn borer resistant hybrids that will be available soon.



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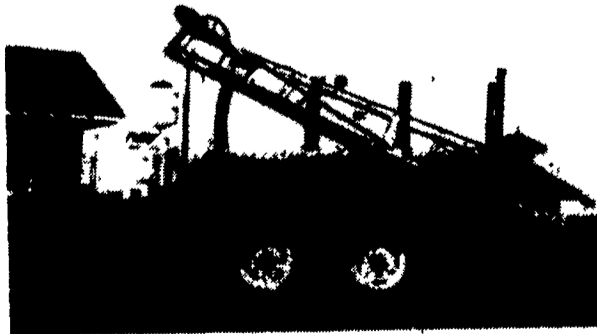


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