

Agronomy Advice

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Harvesting Non-Uniform Corn Fields

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The corn production season of 2001 has been extremely “variable.” We have had other variable years like 1993 and 1996 where planting was delayed for whole fields. This year’s variability is more within fields than between fields and the harvest season will present some special handling problems.

Tasseling or silking date is an early indicator of the evenness of development within a field. Use these dates to predict the order that fields will be harvested as well as a method to locate problem areas within a field and as a method for estimating acreage for development. Later developing plants (greater than 1 to 2 weeks) will have higher whole-plant and grain moisture.

Silage

The biggest concern for corn silage is the potential for mold development when plants are too dry. Mold increases the chance of mycotoxin development in the silage. For corn that is too wet a bunker silo might be the best storage structure to use. Immature areas within a field will be wetter than the rest of the field and might seep in the bunker, but as long as the seepage does not leave the bunker nothing is lost. For these reasons farmers may want to pick more uniform fields to ensile.

To harvest an uneven field, begin chopping the cornfield when the majority (>50%) of the plants within the field are at the correct moisture for the storage structure. If developmentally uneven plants are randomly scattered within a field there should be no fermenting problem because adequate mixture of material will occur as plants are chopped and packed into the silo.

We need to guard against forming layers in the silo that are significantly wetter or drier than the optimum moisture for the storage structure. This would typically be seen with large problem areas in a field or when switching to fields that differ significantly for moisture. Optimally set the theoretical length of cut for chopping and take special care when packing.

The best way to harvest a field with a large problem area depends upon row orientation. If an uneven area is located in a field so that each pass of the chopper moves through the area, then enough mixing will occur that fermentation will proceed in the silo without problems. However, if the area is orientated to the rows so that the chopper will not move through the area with each pass, then the area should be segregated and harvested separately.

Grain

Higher grain moisture at harvest increases kernel damage and drying costs. All corn harvested from uneven fields should be dried to a suitable moisture content for long-term storage.

Later developing plants have smaller stems, weaker stalks and fewer brace roots, so the potential for lodging is higher. Rate of kernel drydown for immature corn killed by frost is determined by hybrid.

The main difficulty of harvesting uneven corn is keeping the combine adjusted properly. We can easily lose 10 to 15 % of our grain yield when operating a poorly adjusted combine. Variable ear sizes typically encountered in uneven fields make it difficult to keep grabber rolls on the combine head properly adjusted. Uneven kernel development will mean that fan windblast must be monitored and adjusted.