



Selecting a Corn Hybrid

The Perfect Hybrid

There is no perfect hybrid that fits every situation or need. Therefore, when selecting those hybrids for your farming operation, you're the one that must assess your farming operations strengths and weaknesses in order for you to properly evaluate the hybrids that have the qualities needed to compliment your fields and farming practices.

What Are Some Corn Hybrid Selection Factors to Consider?

1. Genetic Diversity

Don't put all of your eggs in one basket and plant one variety. No two years are the same and planting a portfolio of genetic backgrounds will give you diversity to help give you yield consistency from one year to the next.

2. Seedling Vigor

Because you most likely can't plant your entire crop in one day and in one field, chances are you will be planting in different weather conditions, soil types, soil temperatures, and overall environments. Plant the hybrids at the times and in the areas they can best handle.

3. Desired Population

Each hybrid has its most advantageous population at which it expresses its uppermost yield potential. Consider ear type and its interaction with the corn production system you use in your farming operation.

4. Ear Type

Ear types are either fixed or flex. With-in reason, fixed ear types make the same size ear regardless of population while flex ears can make either longer or girthier ears if competition is decreased by reducing population.

5. Tillage Practices

The less that you till the fields, the greater are the chances you will encounter cooler soil temperatures, wetter soils, and more residues which may well mean increased insect pressures at or after seed germination.

6. Continuous Corn or Rotation With Another Crop

Crop rotation tends to break insect and weed cycles. It could also help in reducing some of the residue buildup that possibly will be the host for insect and disease survival. Poorer stalk quality might also be a problem in many continuous corn on corn fields.

7. Dryland, Irrigated or Drought Tolerance



Hybrids that can flex in ear length or girth fit dryland or drought conditions better. Irrigated or adequate moisture situations are more manageable, so hybrids that can handle high populations, have high yield potential, or produce determinate ears are good choices.

8. Soil Fertility, Soil Type and Topography

Lower fertility soils get the best yield potential from flex ear type hybrids and varieties that do not need higher populations to produce yields. Another advantage of flex ear hybrids in lower fertility soils is at lower populations less vegetative matter is produced. Lower plant population means a smaller amount of vegetative matter is produced so fewer plants means less demand for moisture and nutrients needed from the soil. Topography, what's the lay of the land? Canopy cover is advantageous to help conserve moisture and shadow out weeds. Consider the hybrids height when planting in hills or on poorer soil types.

9. Plant Growth Type (early or late flower for hybrid maturity)

Flowering or pollination in relation to length of grain fill is a yield consideration. Later flowering hybrids many times produces a larger stature hybrid, the grain fill period for yield potential is shorter, and yield may be hurt if a prolonged period of heat coincides with the shorter grain fill period. Shorter grain fill periods sometimes make softer kernels and lower test weights. Early flowering hybrids use longer grain fill periods to generate yields but plant stature may be smaller. Areas where heat could be a problem during grain fill choose to use early flowering type hybrids.

10. Stalk Quality and Root Lodging Resistance

Stalk quality is the ability of the plant to stand and stay intact through harvest. The two main sources of stalk quality are rind thickness and staygreen. It is not necessarily the diameter of the stalk, but the thickness of the rind that provides resistance to lodging. The rind is made of lignin and lignin provides the rigidity that keeps the plant upright into the harvest season.

11. Drydown and Grain Test Weight

Drydown, or the rate at which moisture leaves the kernel, is influenced by husk looseness, plant staygreen and test weight. Test weight is influenced by how staygreen a hybrid is. Hybrids that are fast-die and fast-dry are more apt to have lower test weights

12. Corn Borer and Insect Tolerance

Hybrids differ in tolerance to corn borer. Hybrids that are planted early or grow fast early are more attractive to first brood corn borer. Later planted or immature corn is more attractive to second brood corn borer. If other insects are a concern, consider genetically altered varieties or ordering specific seed treatments for the varieties you choose.

14. Herbicide Tolerance

Herbicide tolerant hybrids are becoming more popular and work well when properly applied and utilized. However, we also need to be good stewards of herbicide use and understand that we still need to rotate herbicides. Good stewardship will help delay weed resistance to a herbicide and prolong its overall effectiveness. According to the chemical company's



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representatives, no new herbicides are on the horizon. If we abuse the herbicides we are using today, and resistance becomes a problem, there is not a new lifesaving herbicide waiting to replace it!

CREDITS: Agronomy Services