

Pressured to Place that Corn Seed Order? Remember the Basics

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This time of year growers are under a lot of pressure to buy seed. Seed salesmen pursue seed commitments through volume pricing and early purchase incentives often before the current year's yield trial results are available. Growers often respond by putting a "hold" on seed orders, but not committing to specific hybrids until yield results are published. This time of year is difficult because seed salesman must balance supply with demand.



Do not be "sold" hybrids through commercial advertising (radio, TV, magazines, and newspapers), sales literature, sales pitches from seed dealers, testimonials, or simply because it is "cheap" or "new" or "transgenic" or "available" or "different." **Choose hybrids wisely by using comparative yield performance data.** Remember the basic principles of hybrid selection:

1. Use multi-location averages to compare hybrids
2. Evaluate consistency of performance
3. Buy the traits you need
4. Every hybrid must stand on it own
5. Pay attention to seed costs

Use multi-location averages to compare hybrids

Use multi-location information to evaluate grain yield, grain moisture, and standability. Today, most universities compile hybrid yield data over multiple locations. They do this by testing the same set of hybrids at numerous locations. Begin with trials that are nearest to you. Compare hybrids with similar maturities (harvest grain moisture) usually within about a 2% range in grain moisture. To ensure genetic diversity on your farm, divide the trials into two or three groups based upon grain moisture.

Consider single location results (even if the trial was conducted on your farm) with extreme caution. Use single location information (your own on-farm trial) to evaluate test weight, dry-down rate, grain quality and ease of combine-shelling or picking. The way you approach the hybrid selection decision, e.g. single-location versus multiple-locations, makes all of the difference in subsequent profitability. For more information regarding selection strategies and predicted yield increase (see <http://corn.agronomy.wisc.edu/AA/A012.aspx>). There are many possible sources of comparative yield performance data including strip-trials (seed company

and independent) and replicated-trials (F.I.R.S.T. and university). Each source of data has its own strengths and weaknesses.

What criteria should you select for?

In Wisconsin the two major uses of corn are grain and silage. There has been enough breeding progress, especially in corn silage, that the criteria for grain versus silage are different. The most important consideration regardless of use is yield. For grain, moisture at harvest can often mean the difference between profit and loss in the northern Corn Belt. For corn silage hybrids, large differences exist for quality parameters such as starch content and NDFD.

Criteria for Grain Hybrids

Grain yield

Grain moisture

Plant lodging

Insect resistance

Disease resistance

Grain quality (i.e. Test weight, kernel breakage susceptibility)

Other factors

Criteria for Silage Hybrids

Forage yield

Forage quality (i.e. Starch content, NDFD, and NDF)

Insect resistance

Disease resistance

Plant lodging

Forage moisture

Other factors

Evaluate consistency of performance

Look for hybrids that yield consistently across a diverse set of conditions. Be wary of any hybrids that finish in the bottom half of any trial. Seed companies benefit greatly from all those on-farm trials that farmers participate in (numerous weather patterns and pest situations per year). So if you concentrate on your on farm results (or the local area results), you miss out on the benefits of all the testing that goes on nationally. Corn breeders define hybrids as "stable" when they have a minimum of interaction with environments. Most hybrids are stable, but a few get reputations as "racehorse" or "workhorse" hybrids. These are difficult to characterize because it takes numerous environments to determine.

Buy the traits you need

Remember that transgenic "traits do not increase yield, they protect yield." There are pros (safety, efficacy, and insurance discounts) and cons (expense and resistance potential) to using transgenic traits. Wisconsin is fortunate in that our landscape often includes alfalfa and pasture as part of our crop rotations. We can use these crops to help control pest outbreaks and slow development of resistance to transgenic events. Unfortunately up to this time, it was often difficult to buy the specific traits that you need. However, this is changing and in the near future there will be more opportunity to purchase specific traits.

Every hybrid must stand on its own

Every hybrid must "stand on its own" for performance. You don't know what weather conditions (rainfall, temperature) will be like next year. Just because it is transgenic and you pay extra for traits does not mean it will be high performing. We see transgenic hybrids ranked at the top and bottom of a hybrid trial. Therefore, the most reliable way to predict hybrid performance next year on your farm is to consider past performance of individual hybrids over a wide range of locations and climatic conditions. We see large difference among hybrids within a family (see Table 5 of <http://corn.agronomy.wisc.edu/AA/A060.aspx>).

Pay attention to seed price

A major change in extension recommendations has occurred recently due to corn seed costs that have dramatically increased. It is not unheard of for seed of high-performing premium hybrids with transgenic traits to cost over \$250 per bag, whereas 10 years ago, premium seed would cost about \$80-\$100. It is important to compare the "difference" between any two hybrids. A price that is different by more than \$50-\$100 per bag must be carefully considered because it is difficult to make up the bag price difference with increased yield. For a further discussion of this principle, please see <http://corn.agronomy.wisc.edu/AA/pdfs/A073.pdf>. Also a seed cost calculator is available at <http://corn.agronomy.wisc.edu/Season/DSS.aspx>.

Key References

Lauer, J. 2009. [Getting a Handle on Corn Seed Costs](#). Field Crops 28.424 - 73.

Lauer, J. 2008. [Corn Hybrid Selection](#) Field Crops 28.31-60 PDF.

Lauer, J., and K. Hudelson. 1997. [The University of Wisconsin Corn Hybrid Trials -- Selecting the Top Performers](#). Field Crops 28.31-12.