Corn Hybrid Grain End-Use Ratings

Syngenta is committed to sharing agronomic knowledge with our customers to help them grow more corn. The Corn Hybrid Grain End-Use Ratings provide information that can help our customers produce corn for livestock, the ethanol industry or other grain end uses where grain quality is just as important as yield. These Corn Hybrid Grain End-Use Ratings are generated by collecting grain samples from internal company trials which are sent to an independent laboratory for protein, oil and starch analysis. The data from these analyses are then categorized for the end-use based on the level of each characteristic with four ratings: **Best** (highest level); **Good** (above-average level); **Fair** (average to below-average level); **Poor** (low level).

Oil and Starch: Both traits are an indication of the ability of a feed to meet the animal’s energy, fat deposition and heat production needs. Starch is the largest single component in corn grain and the primary source of most of the energy in corn. Oil is more energy dense than starch, thus a unit change in oil content affects the energy supplied by the feed more than a similar unit change in starch.

Ethanol

- Specific hybrids can yield 2-5% more ethanol than bulk commodity corn.\(^1\)
- Ideal hybrids for dry-grind ethanol production have a larger portion of high total fermentables (HTF), which is starch plus small amounts of free glucose, fructose, maltose and sucrose within kernels.
- Grain starch content alone is not a good indicator of ethanol yield.

Factors Influencing Grain End-use Characteristic Content

- Environment – Corn grown in the northern U.S. tends to be higher in protein and corn grown in the central and southern U.S. tends to be higher in starch.
- Genetics – Some hybrids will consistently produce higher levels of specific grain end-use characteristics, regardless of growing conditions and crop management.
- Soils – High fertility soils tend to produce higher levels of protein.
- Management – Proper nitrogen fertility correlates to increased protein levels.

Uses for High Quality Corn Grain

- Greater feed value per unit of grain
- Can improve feed efficiency, reducing cost per pound of gain
- Reduces the need for feed supplements, and the storage and handling costs associated with those supplements
- Potential for premium on grain

Understanding Grain Quality Traits

**Protein**: Represents the ability of a feed to supply the animal with amino acids and nitrogen, the basic building blocks needed for growth and maintenance of the body.

References:


Note: Always select hybrids first based on local adaptability and then consider grain end-use characteristics.
Using this chart:

**Protein** – A source of nitrogen and amino acids needed for animal growth

**Oil** – A secondary source of energy in corn grain and more energy dense than starch

**Starch** – The largest single component in corn grain and the primary source of energy

For more information about NK Corn hybrids, contact your retailer or visit [www.nkseeds.com](http://www.nkseeds.com)