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Leafy Silage - The New Kid on the Block

By Frank Flanagan, CCA

Until recently, the main criteria for selecting a corn silage hybrid was grain yield. Conventional wisdom told us that the best corn for grain production is also the best silage hybrid. Yes, grain is important to cattle, however, because the ruminant can digest forages it is good management to look at whole plant digestibility. Unfortunately, the other criteria for selecting a silage hybrid was “give me something that is cheap.” Today’s competitive market with narrowing margins for everybody simply will not allow the industry to select silage hybrids based on the previous criteria.

Leafy corn hybrids are usually quite tall, and as the name implies have many more leaves above the ear than a conventional hybrid. Corn leaves are much more digestible than the stalk portion of the plant, thus the additional leaves increase the total digestible nutrients of the plant. The extra leaf area placed above the ear stays green and leads to a longer filling period for the kernels of the large ears of leafy hybrids. Grain hybrids have been selected for fast maturity and rapid drying. The leafy hybrids were selected for digestibility and slower drying to give the silage grower a longer period in which to harvest within the moisture range for good silage fermentation.

Leafy corn hybrids give you considerably more tonnage

A common misconception is that they are lacking in grain which is inaccurate at best. Leafies tend to have a larger than average, well-developed ear. To compliment this, the soft kernel texture that was selected for and incorporated into leafy hybrids is more digestible leading to less

kernel passage compared to grain or dual-purpose varieties.

Leafy hybrids have a smaller rind (or outer portion of the stalk) than do conventional silage hybrids. The rind is a major component of a hybrid’s standability and is very indigestible. The inner portion, or pith, is made up mostly of fibre and contains digestible nutrients. Because of the smaller rind, standability could be an issue if the crop is left standing well into the fall but leafy hybrids will stand as well as any other within a normal silage harvest time frame. The softer stalk and increased size of the plant may increase the incidence of corn borer induced stalk breakage with leafy corn (as was evident in 2003). Again, because silage harvest occurs relatively early, harvest losses are generally minimal. There are currently a limited number of “Bt” leafy corns on the market however there will likely be more available as time progresses. One thing to note is that this combination of thinner rind and softer kernels mean that leafies are not conducive to combining, so it is a good idea to grow a few less acres of leafy corn than your expected requirements for ensilage.

Recently, kernel processors have been promoted to increase digestibility of the grain portion of corn silage. In a perfect world, if we could harvest corn silage at the perfect stage, kernel processors would not be necessary. The slower maturity of leafies widens the optimal harvest window and the softer kernels reduce the likelihood that a kernel processor would be beneficial.

On the technical side it has been said that conventional silage corn varieties will give you higher energy. However, extensive studies have shown there is

virtually no difference in net energy and a slight advantage in protein with leafy corns. Another trait that is required for good silage is palatability. Palatability is hard to measure, but intake is a good indicator. Leafies score well on palatability and it is not uncommon for producers to indicate that after switching to leafies there are no more pieces of cob, or “silver dollars” left in the manger and that intake has increased.

Leafy corn hybrids do not require any intensive management practices

Seed companies selling leafies recommend you plant them at lower plant populations, in the 27,000 to 29,000 plants per acre range depending on soil type. As they are bigger plants they require a bit more space to do their best and provide the best feed quality. Since a leafy hybrid will typically require 10-15% less acres to produce tonnage equivalent to a grain corn hybrid, a savings in seed cost can be realized. Not unlike conventional corn hybrids, some specific leafy hybrids have shown susceptibility to certain herbicides that are currently on the market.

In summary, leafy corn varieties may not be for everyone, but they are certainly worth a look. As livestock and milk production become increasingly competitive more and more growers are looking at leafy corn silages as a way to increase productivity. As the grain corn market continues to evolve, so will the silage corn market with traits selected for increased starch, sugar and yield of grain and forage. Increased availability of GMO traits such as BT and Roundup Ready are just around the corner as well.

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