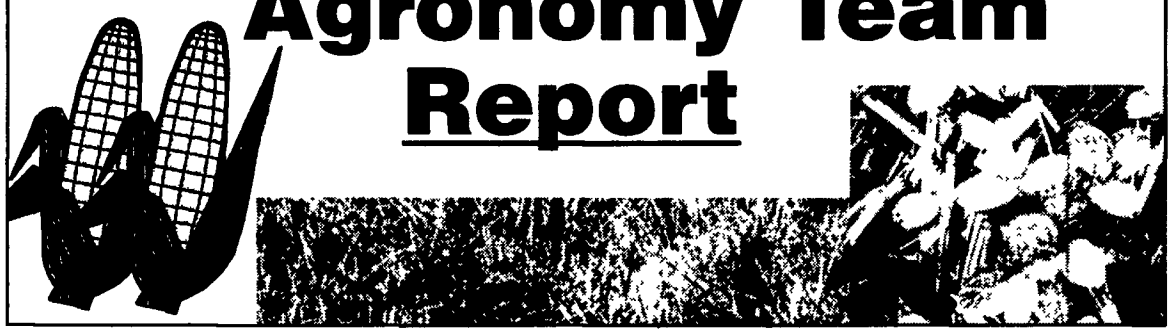
Capitol Region Agronomy Team Report



CORN SILAGE HYBRID SELECTION

Paul Craig
Capital Region Extension Agronomy Team
Dauphin County Cooperative Extension

Selecting which corn hybrids to plant for corn silage production is one of the most important management decisions affecting the economics of corn silage production. Although many silage producers simply plant many high grain yielding corn hybrids and then select fields to meet their silage needs at harvest time, more dairy producers and their nutritionists are basing silage variety selection on the nutritional needs of their herds.

Corn hybrids are typically referred to as grain type, silage type, or dual purpose. Silage types are generally selected for high forage yields, high digestibility, low fiber levels, and high stover digestibility. The best silage types have high grain yields with a grain starch content that is also highly digestible. When making silage hybrid selection, start by grouping hybrids that are adapted to your area in terms of maturity, disease and insect resistance, drought tolerance, and other agronomic characteristics. Next, discuss with your nutritionist what your forage needs are. Then ask your seed dealers to explain to you which of their hybrids should be selected for your silage production.

Dr. Michael Allen, Michigan State University, has been investigating corn hybrids for silage production for many years. He believes that although many producers use grain yield as the basis for selecting a corn silage variety, this is not a good selection criteria. Grain yield, Allen has found, is not related to forage quality and is not highly related to forage yield either. Allen has found that although many excellent "dual purpose" corn hybrids exist, certain characteristics that make an excellent grain hybrid such as fast kernel drying and hard kernel texture are undesirable for silage production because they reduce the digestibility of starch in the grain. Hard dry kernels resist digestion and reduce the energy content of the silage crop. Therefore serious consideration should be made to select hybrids for grain and silage separately.

Forage quality is a complex term. If two corn silages are compared on the same farm, they might differ in moisture content, fermentation, stability, particle size, fiber content, grain hardiness, fiber digestibility, and protein content. Many of these factors are dependent on management or environmental conditions and not related to genetics of the hybrid. Moisture content at harvest affects fermentation, which affects digestibility and feed value. Particle size also affects fermentation quality and feeding quality.

The preferred way to determine the value of a forage crop is to value the nutritional components in the forage based on the market prices of other feeds. Specifically, corn silage can be based on the price of corn, soybean meal, and legume hay. Differences in forage value calculated in this way reflect additional amounts of grain and digestibility required to equate quality differences of the forages. Your nutritionist should be able to help you value your corn silage.

In many ways, the tradeoff of tonnage for higher quality may be acceptable if the quality factors affect animal performance. Animals fed high forage diets should benefit most from hybrids with low NDF and high NDF digestibility. High-producing animals consuming higher amounts of grain, such as lactating dairy cows, should benefit most from hybrids with higher NDF digestibility. All hybrids for silage should have high starch digestibility. Until better lab analysis is available for more valid comparison, select corn hybrids for silage production with soft texture and slow kernel drying relative to stover dry down.

As the 2000 planting season approaches, only eight weeks from now, silage growers should reflect on management decisions for optimum silage production. Genetics is only one piece of the production process. Other management practices such as date of planting, populations, fertility, and pest control will also affect yield and quality factors.

Feeding quality silage in November begins with planning in February. Review with your agronomy service provider or county agent or refer to the 2000 Penn State Agronomy Guide for the latest recommendations for corn silage production.

Don't allow your potential for high quality feed this fall to begin the growing season with less than optimum production potential.

CORN BITS

Committee Appointed For NCGA CEO Search

The NCGA Corn Board has appointed a search committee to find a candidate to replace Chris Wehrman as executive vice president and CEO after her departure from NCGA.

On Feb. 4, Wehrman announced her planned departure before Sept. 30. Committee members are Lynn Jensen (chair), Lake Preston, S.D. NCGA president; Lee Klein, Battle Creek, Neb, NCGA president-elect; Roger Pine, Lawrence, Kan., chairman of the board; Bill Northey, Spirit Lake, Iowa, past president; Leon Corzine, Assumption, Ill, Illinois Corn Growers Association president; Waren Formo, Granite Falls, Minn., Minnesota Corn Growers Association treasurer; Brent Porteus, Coshocton, Ohio, Ohio Corn Marketing Program treasurer; Craig Floss (ex-officio/non-voting member), Des Moines, Iowa, Iowa Corn Growers Association/Iowa Corn Promotion Board CEO; and Neil Strong (ex-officio/non-voting member), Downers Grove, Ill., Novartis Crop Protection, Inc. director, agricultural relations.

Upon Wehrman's announcement, Jensen said the Corn Board appreciates the ample notice Wehrman gave of her future intentions. He noted that Wehrman will remain in the position with full authority and accountability for the staff management of the organization until her departure.

Jensen said that since joining NCGA in October 1994, Wehrman's leadership has broadened the scope and breadth of NCGA accomplishments on issues and programs addressed on behalf of member states and corn growers. In this period, through corn grower initiatives and her staff leadership, NCGA has reorganized the association structure and integrated NCGA presence throughout the corn and agricultural industries.

"Chris has contributed immensely to the livelihood and future of corn growers and agricultural interests, and we thank her for her dedicated service," Jensen said.