2010 Vermont Relative Maturity Corn Silage Trials

Heather Darby, University of Vermont Extension
heather.darby@uvm.edu

In 2010, the University of Vermont Extension conducted an experiment to evaluate yield and quality of corn hybrids with a range of relative maturities. The goal is to document the best range of corn silage maturities to grow in this area to maximize corn yield and quality. It is important to remember that the data presented are from a single test at only one location. Hybrid-performance data from additional tests in different locations and often over several years should be compared before conclusions are drawn.

TESTING PROCEDURE

Corn varieties of differing maturities were evaluated at Borderview Research Farm in Alburgh, VT for yield and quality performance. Several seed companies submitted varieties for evaluation. Companies and contact names are listed in Table 1. Twelve corn varieties ranging in maturities from 93-110 days were grown at this site. The Relative Maturity (RM) of each variety is provided by the companies.

Table 1. Participating companies and local contact information

Dekalb/Monsanto	Mycogen	Pioneer
Scott Walker District Sales Manager Schenectady, NY 315-528-0580	Claude Fortin District Sales Manager Highgate, VT 802-363-2803	Jacob Bourdeau Bourdeau Bros. Sheldon, VT 802-933-2277
Seedway	**Wolf River Valley Seeds**	
Ed Schillawski 3442 Rt 22A Shoreham, VT 802-897-2281	Marcel Moreau District Sales Manager Swanton, VT 802-309-4674	

Table 2. Corn silage hybrids, relative maturity (RM) and traits.

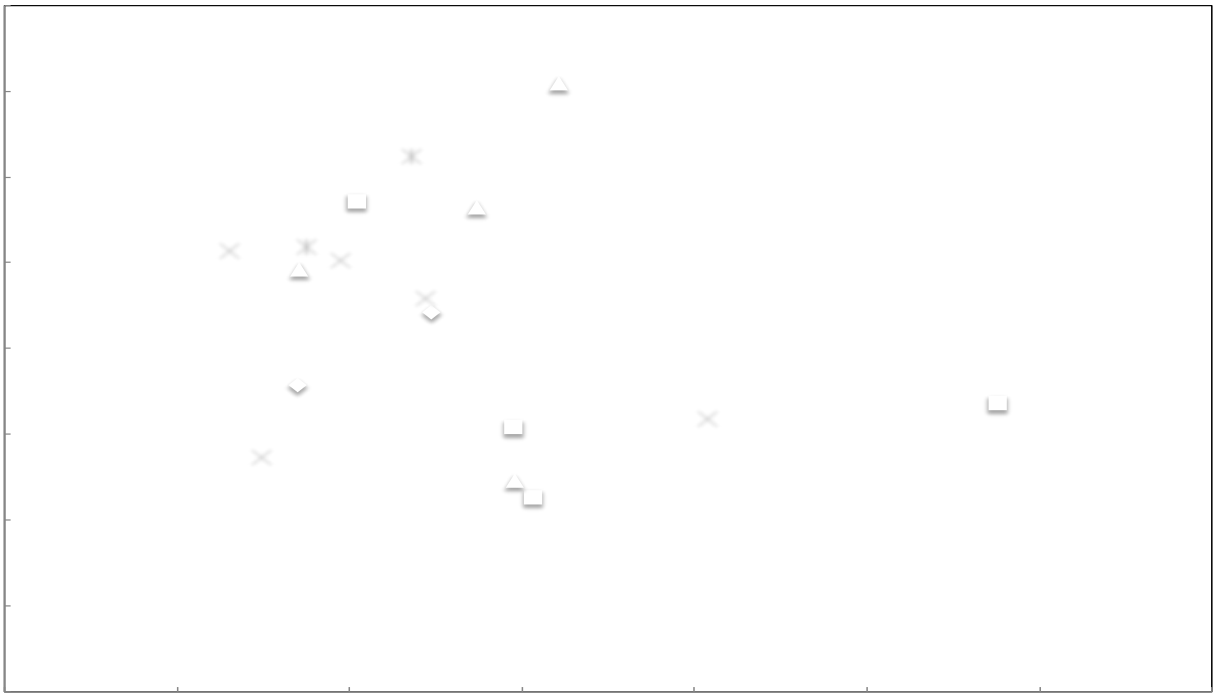
Company	Variety	RM	Description and Traits
Dekalb	DKC45-52	95	YGVT3

WEATHER DATA

nitrogen, fats and other highly digestible compounds; and the less digestible components found in the fiber fraction. The total fiber content of forage is contained in the neutral detergent fiber (NDF). Chemically, this fraction includes cellulose, hemicellulose, and lignin. Because of these chemical components and their association with the bulkiness of feeds, NDF is closely related to feed intake and rumen fill in cows. Recently, forage testing laboratories have begun to evaluate forages for NDF digestibility. Evaluation of

RESULTS

Table 5. Yield and quality of corn silage hybrids ra



RESULTS

Figure 1. Yield comparison of corn silage hybrids ranging in maturity from 93 to 110 RM. ***Hybrids with the same letter did not differ statistically in yield.***

DISCUSSION

As seen in previous years there was no relationship between corn silage yield and corn silage relative maturity. The extra GDDs accumulated this season provided enabled all varieties regardless of maturity to reach proper stage for silage harvest. Overall the shorter season hybrids reached appropriate harvest dry matters up to two weeks earlier than some of the late season hybrids. An earlier harvest without yield and quality compromise would result in an opportunity for earlier manure application, cover cropping, and fall tillage. Hybrids were drier than optimal harvest moistures due to rain delays during harvest time. Again variety selection should be based on the goals of each individual farm. Data from local trials should be evaluated to determine what will perform best in your growing climate. Hybrids should also be selected on more than maturity alone. As obvious from the report 100 RM hybrids can perform significantly different in both yield and quality. During the 2010 growing season there were many hybrids ranging from 96RM to 1110RM that performed similarly in yield and quality.

UVM Extension would like to thank Roger Rainville and staff at Borderview Farm for their help implementing the trial. We would also like to thank Scott Walker of Seedway, Claude Fortin of Mycogen, Marcel Moreau of Wolf River Valley, Ed Schillawski of Seedway, and Dave Kostyo of Pioneer for the hybrid seed donation. The information presented with the understanding that no product discrimination is intended and no endorsement of any product mentioned or criticism of unnamed products is implied.