

IDENTIFYING BROCCOLI CULTIVARS BETTER ADAPTED TO NY THROUGH REGIONAL TRIALS

Phillip D. Griffiths
Associate Professor
Dept of Horticultural Sciences
Cornell University NYSAES
Geneva NY 14456

The East Coast Broccoli Initiative includes the establishment of regional testing sites to identify the most promising current and future hybrid cultivars for east coast growers. Regional testing activities were established at five sites representative of eastern climatic conditions in 2011: Phillip Griffiths (Cornell University NYSAES) in Geneva, NY; Mark Farnham (USDA-ARS) in Charleston, South Carolina; Mark Hutton (University of Maine) in Monmouth, Maine; Jeanine Davis (North Carolina State University) in Fletcher, North Carolina and Wythe Morris (Virginia Tech) on grower sites in Virginia. The regional testing in 2011 represented Phase I trials focused on initial evaluation of cultivars/genotypes for specific adaptation to East Coast growing regions and broad adaptation to all growing regions. Results from these trials are being used to select entries for Phase II trials, which will encompass a more comprehensive evaluation of cultivars and experimental hybrids, and the most promising materials for production will then be advanced to Phase III testing which will feature advanced trialing of the most promising materials. The intent of the regional testing is to identify current and future cultivars best suited to eastern production regions, which will yield higher quality crowns and expand local harvest windows.

In 2011 a total of 32 entries were evaluated at the five regional testing sites. These entries were coded, randomized and replicated into three plots at each of the sites. Two plantings were made at each site, a planting to represent more optimal conditions for each location, and a planting to represent more marginal conditions. The plots were evaluated using a common rating scale evaluating multiple plant traits including: bead size/uniformity, crown color/uniformity, head extension and overall plot uniformity and quality. The data from the 30 plots (5 sites, 2 plantings, 3 replications) were compiled and evaluated to determine the most promising overall cultivars/genotypes from the 32 entries for advancement to Phase II trials in 2012. Results of the regional trials will be presented focusing on the NY testing site, relative to the performance of 2011 entries at other East Coast regional trial sites.