Central NC Organic Sweet Corn Observational Trial, Summer 2014

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Objective

This project was initiated as a demonstration project and is the first organic sweet corn trial at North Carolina A&T University Farm. The objective was to try an assortment of organic sweet corn varieties with different traits to see what would grow well in the Piedmont of North Carolina. The demonstration was focused on using a Polyplanter to direct seed sweet corns on raised beds covered with black plastic mulch. This practice is uncommon in central North Carolina, but it has great potentials for organic sweet corn production in the plastic mulch and drip irrigation system.

Materials and Methods

Varieties and there characteristics are listed in Table 1.

Table 1. Seed varieties and seed sources.

Variety	Source	Color	Days to Maturity	Type
Bling F1	High Mowing Organic Seeds	Yellow	75-78	Se
Double Standard	Johnny's Selected Seeds	Bicolor	73	Su
Fischer's Earliest	High Mowing Organic Seeds	Yellow	70	Unavailable
Luscious	Johnny's Selected Seeds	Bicolor	75	Se+
Sugar Pearl F1	High Mowing Organic Seeds	White	73	Se+

The trial was conducted at the North Carolina A&T State University Farm (Greensboro, NC) in an organically managed field (Year 1 of the organic transition period). Fertilizer was applied pre-plant using Nature Safe pelleted fertilizers (13-0-0 and 7-12-0) and potassium sulfate (0-0-50) at 50 lbs N, 75 lbs P and 50 lbs K per acre. Plots were tilled to incorporate fertilizer and three-foot raised beds with black plastic mulch (1.25mil) and drip tape (5/8", 8 mil, 12" emitter spacing) were laid using a Rain-Flo raised bed plastic mulch layer. Four 120 ft long beds were made for each variety (20 beds total). Planting was done with a Farris Farm Polyplanter that sets two rows of seed per bed at 8 inch in-row and 18 inch between-row spacing. Plots were planted on May 14 and 15, 2014. Some hand re-seeding was done on June 5, 2014 to fill in gaps. Soil moisture was monitored and plots were irrigated as needed. Weeds were controlled by the black plastic, although some weeds that grew in planting holes were hand pulled. Corn earworms were observed, but the plots were not sprayed. There were three harvests on July 15, 25 and 30, respectively. Data were collected on number of ears per plot and total yield.

Results and Discussion

The highest yielding varieties were 'Double Standard' and 'Luscious'. 'Double Standard' had the largest ears, while 'Bling' had the smallest ears (table 2). Corn earworms were extensive throughout the plots. An informal taste test was conducted and rankings from most to least favorable taste are as follow, 'Sugar Pearl', 'Bling', 'Luscious', 'Double Standard', and 'Fisher's Earliest'.

Table 2. Sweet corn yield and number of ears.

Variety	Yield (lb) per acre	No. of ears per acre	Average Ear weight(lb)
Bling F1	3,272	3,913	1.20
Double Standard	3,946	8,740	2.21
Fisher's Earliest	4,676	5,809	1.24
Luscious	6,749	8,305	1.23
Sugar Pearl F1	6,353	7,739	1.22