Early Sweet Corn Production

James Barnhill (Utah – Professional Development / IPM State Grant)

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Title: Early Sweet Corn Production

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Two-week old corn in the cold frame will be ready for transplanting in a week.

Utah State Professional Development Grant: $2,000

This shows the transplanting method.

Situation:

Sweet corn that matures before the general corn crop typically sells for 50 cents to $1 more per dozen at farmers markets and on-farm and roadside stands. An advantage for early sweet corn is that there is less market competition, making it easier to entice new buyers to purchase the product and possibly become long-term customers.

Early sweet corn trials were conducted on a farm in Roy, Utah, that is owned by Mildred Miya and operated by Enrique Santos. 'Bodacious,' a 75-day sweet corn, was used in the trials in 2005, and 'Sugar Buns,' a 72-day sweet corn, was used in 2006.

Transplants, shown here with plastic cover, suffered more from cold and drought than did seeded corn.

Objectives:

1. Determine maturity and harvest dates for two different corn varieties based on planting date, growing environment and planting method
2. Assess the economics of the various planting and growing options
3. Disseminate the information to producers and ag educators

Actions:

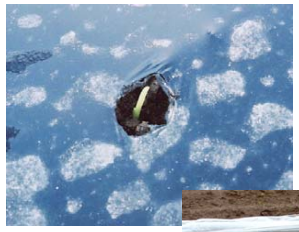
Several treatments were planted in various combinations:

Planting Date
- Early planted (middle of April)
- Conventional planting (end of April)

Growing Environment
- Plastic mulch (black)
- Row cover (floating)
- Open (no protection)

Planting method
- Transplanted (3 weeks old)
- Seeded

Farm Manager Enrique Santos displays early corn.



A seedling emerges through the plastic.

Spring snow covers the floating row covers.

Sweet corn thrives under the floating row cover.

Results:

Planting Date

Corn planted 14 days early matured only 3-5 days earlier than the conventionally planted corn. This suggests that sweet corn planted in mid April needs to be planted 2-3 days earlier to achieve a harvest 1 day earlier.

Growing Environment

Corn planted through black plastic mulch matures 5 days earlier than the corn grown in bare soil. However, it was *very difficult to remove the plastic after harvest*.

Corn covered with 0.5-ounce floating row cover matured 5 days earlier than uncovered corn. The row cover was on from planting through the middle of May. *If care is taken when removing the fabric it can be re-used the second year*.

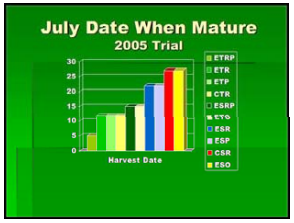
Planting Method

Three-week-old sweet corn transplants matured 12 days earlier than seeded corn. Results showed no advantage in planting out transplants early. *Transplanted corn is consistently shorter than seeded corn, although the ear size doesn't seem to be affected. Transplants do suffer more from cold weather and drought stress than seeded plants.*

Cost of Treatments

- Plastic mulch = $250 per acre
- Floating row cover = $588 per acre used for one year; $294 used for two years
- Transplanting corn = $3,000 per acre

Key for Table: E, early planted; C, conventional planted; T, transplanted; S, seeded; R, row cover; P, plastic mulch; O, open, no protection



Potential Benefits:

The earliness achieved from the treatments was cumulative. For example, 5 days could be gained from using a plastic mulch, another 5 days from using a floating row cover and an additional 12 days from using transplants.

Using all three together resulted in sweet corn that matured 22 days earlier than corn seeded in bare soil.

A yield of 1,100 dozen marketable ears per acre, sold at $3 per dozen, provides a gross return of $3,300 per acre. An extra 50 cents per dozen for early sweet corn would provide an additional income of $550 per acre.