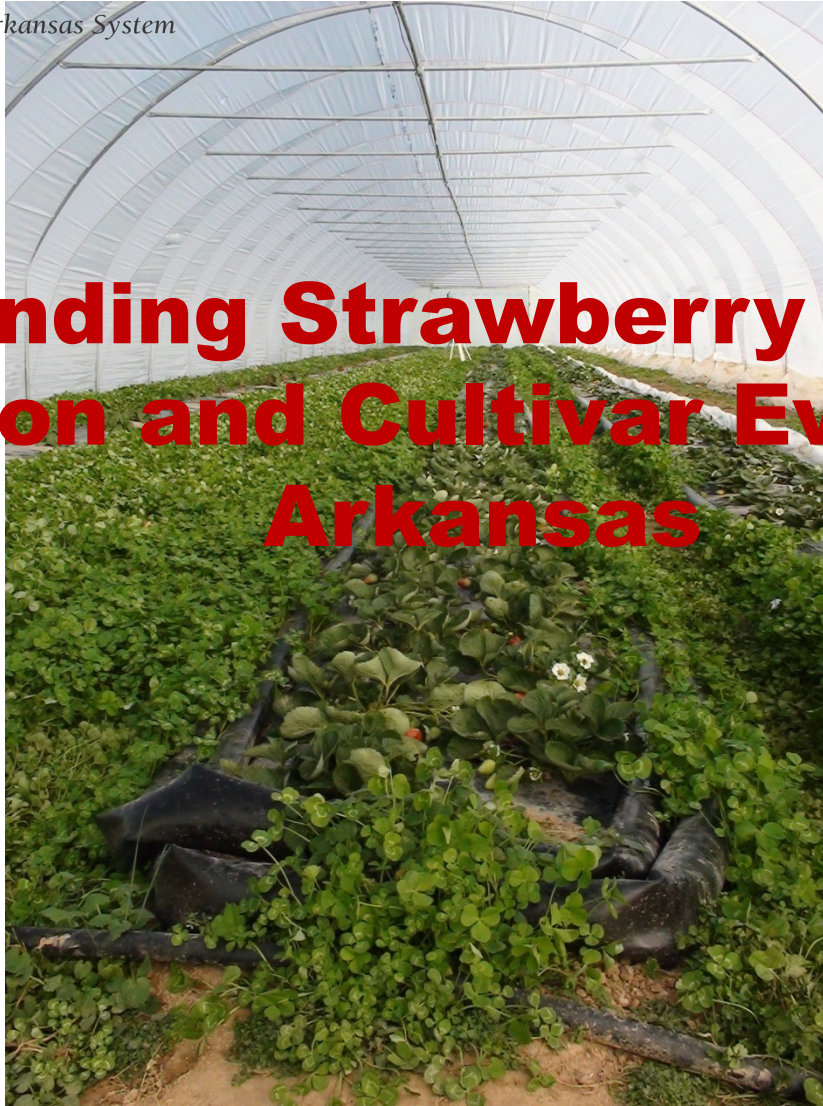


Expanding Strawberry Season Production and Cultivar Evaluation in Arkansas



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Strawberry production in AR

- Currently in Arkansas the fresh strawberry market extends from April to May
- There is market potential for fresh, locally grown strawberries throughout the year.
- Off-season production would be a unique and specialized item for holiday consumption, and could bring high returns to the grower^z.

Objective

- To determine feasibility for off-season strawberry production under a high tunnel plasticulture system in Arkansas.
- To determine cultivars (Alvion and Festival) best suited to the local environment in a high tunnel plasticulture system in November through December.

Off- Season Strawberry Production

- Location: Fayetteville, AR
- Planting dates:
 - Sept 15, 2010 and Oct 1
- Cultivars: 'Festival' and 'Albion'
- Plants were sent by Dr. Poling (North Carolina)
- Beds are approximately 28" wide.
- 'Albion' plugs were considered to be only in "fair" condition.

- Split plot design



- **October 15, 2010-** First bloom noticed on September planted 'Festival'.
- **November 1, 2010-** Noticed first bloom on October planted treatment.

Pollination

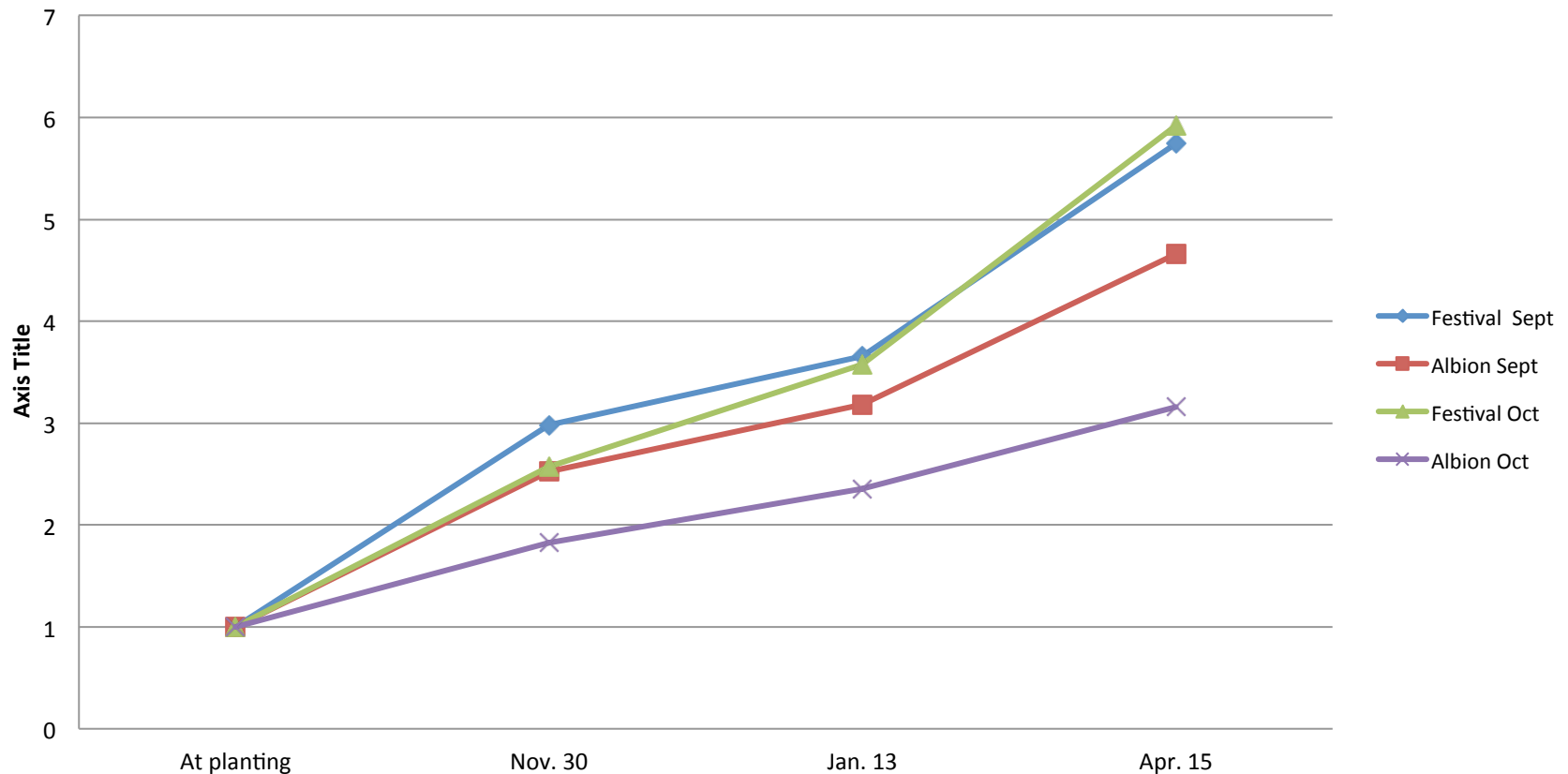
- **Mid--November** - A hive of bumble bees was placed in the high tunnel for pollination purposes.
- BBs lasted approximately six weeks.
- BB activity seemed negligible when tunnel temps were below 70 degrees F.
- A hive of honey bees was brought in high tunnel but hive began to deteriorate possibly due to disorientation under the tunnel.

Harvest

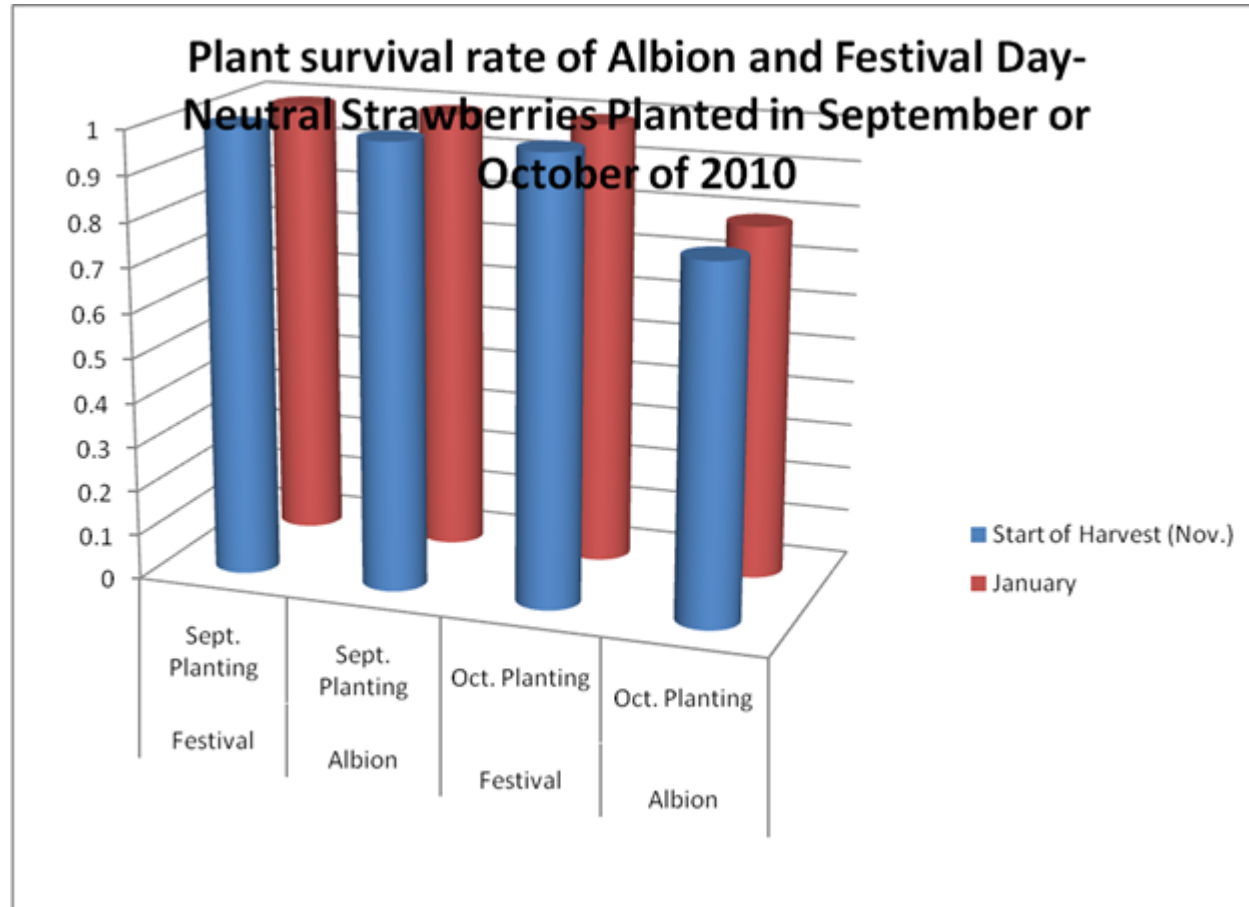
- November 30 - Harvested first berries
- January 11, 2011-
 - Harvest all fruit
 - Double row covers left off plants to incrementally prepare plants for quiescent period.
- On 10 February 2011, the minimum temperature reached in:
 - Fayetteville = -20.2°F and remained below -10°F from 3am to 10am
- Feb 21- Reopened tunnels

Results: Number of crowns

Crowns per plant over the season

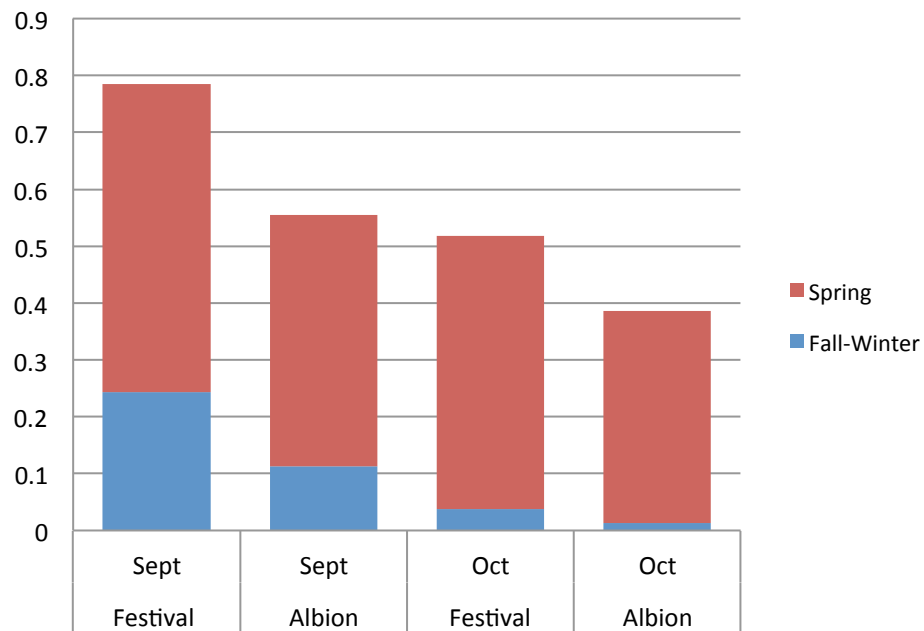


Results: Plant survival

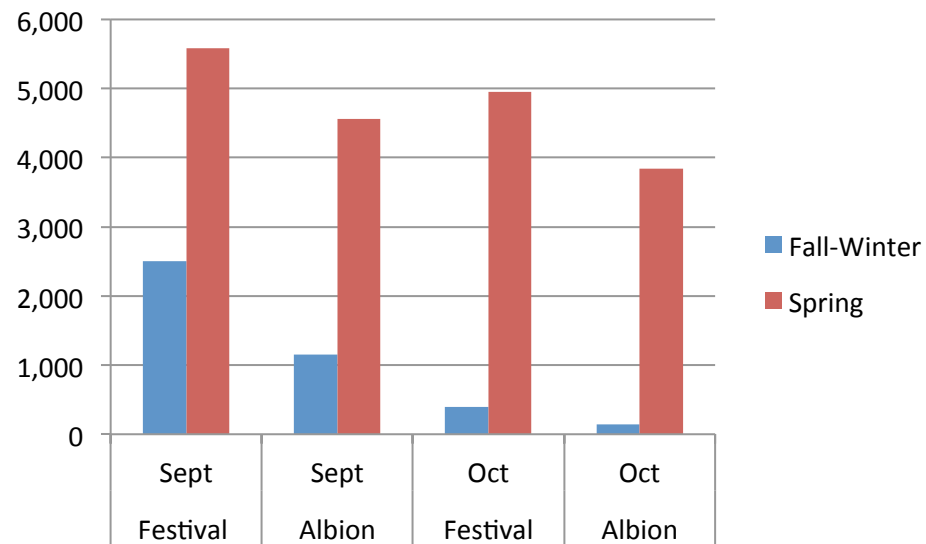


Results: # Berries

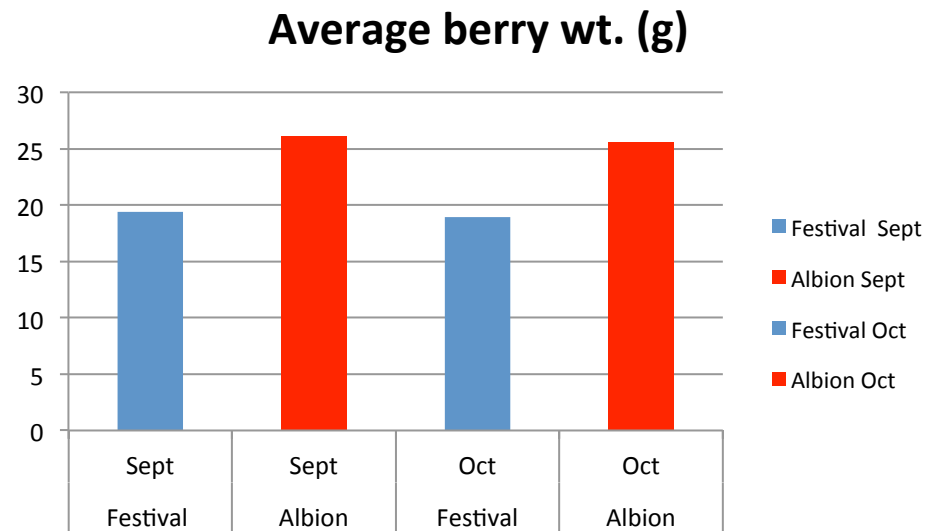
Total yield (lb/plant) in fall, winter, and spring harvested day neutral strawberries



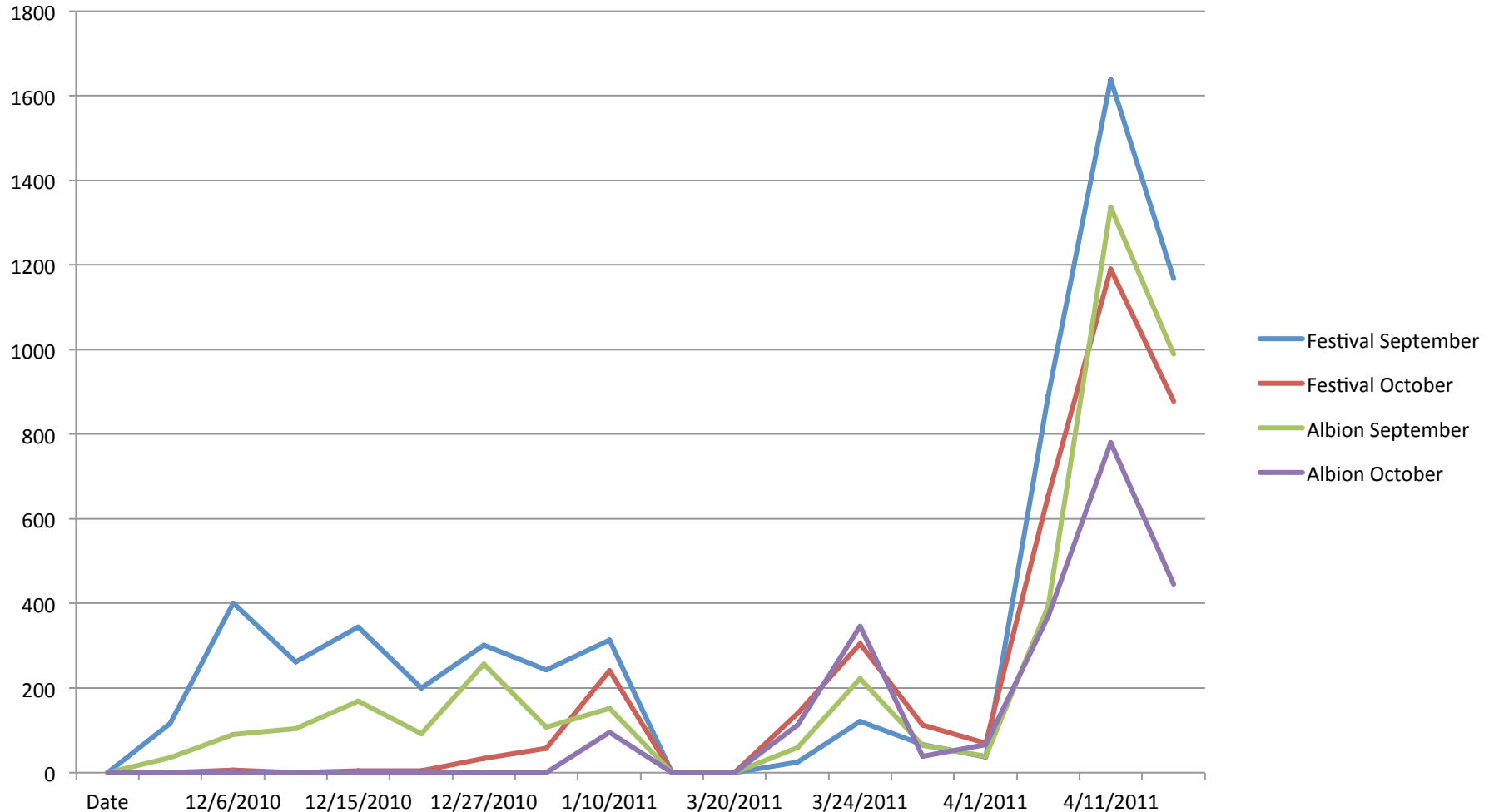
Results: Yield per acre



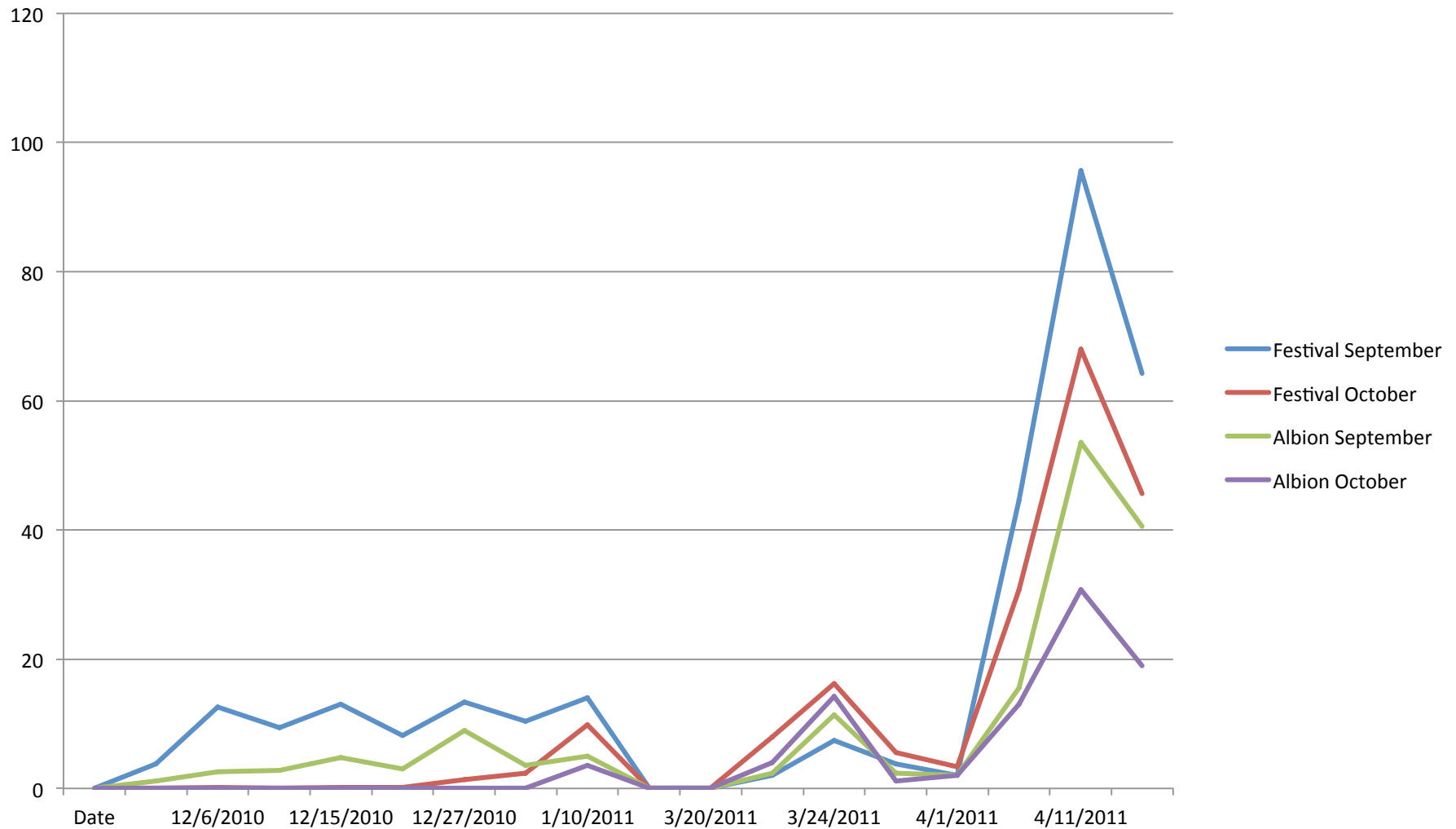
Preliminary Results: Berry Weight



Preliminary Results: Yield over Season (lbs/acre)



Preliminary Results: # berries/harvest





Problems

- Deer
- Powdery mildew
- Aphids
- Crickets
- Mice
- Humidity
- Prolonged berry harvest
- Nutrition management