

The Ohio State University

South Centers

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2001-2002 Strawberry Plasticulture Date of Planting Study

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Introduction

This Strawberry Plasticulture trial compared four planting dates using 4 replicates of each. Objectives were to rate and observe date of plantings for Plasticulture Strawberries production in Ohio and how date of planting may effect production characteristics.

Methods

Planting: The first planting was placed in the greenhouse on August 6th. Planting two was placed the greenhouse on August 17th. Planting three was placed in the greenhouse on August 22nd. Planting four was placed in the greenhouse on August 29th. All tips were planted into 50 cell trays filled with metro mix.

Tips were grown for four weeks and planted to the field at that time. Planting one was planted on September 10, 2001. Planting two was planted on September 17, 2001. Planting three was planted on September 24, 2001. Planting four was planted on October 1, 2001. Tips were planted to the field using a three-point hitch water wheel planter.

Spacing: Plug plants were planted on top of 10 inch high beds into black plastic mulch. Plants were double row planted with 12 inches between plants in row and 12 inches between staggered double rows.

Soil Type: Haubstadt Silt loam

Fertilizer: Applied 100 units of N, P and K preplant before plastic was put down. Calcium Nitrate was injected through the trickle tape in the spring and continued through harvest depending upon weekly plant and petiole nitrate analysis results.

Weed Control: Annual rye grass was seeded between the beds of plastic prior to planting berries to the field. The rye grass was then killed off in the spring with an application of Poast herbicide.

Pest Management: Captan + sticker 4/26/02, Captan + Quadris + sticker 5/10/02, Captan

5/19/02, Switch + Quadris tank mixed with Thiodan 5/31/02

Harvest: 5/15/02, 5/20/02, 5/24/02, 5/27/02, 5/29/02, 5/31/02, 6/7/02, 6/10/02

Results

Selecting the appropriate planting date for the strawberry plasticulture production system is one of the most important decisions a grower can make to be successful. Planting too early will result in the strawberry plant remaining in a vegetative state of growth resulting in excess runner formation and development. When this vegetative growth occurs little of the plants energy goes into formation of flower buds or reproductive growth. Planting too late can result in insufficient plant growth in the fall and winter resulting in reduced plant production the following spring.

Results indicate there were no significant differences between planting dates in terms of marketable pounds of fruit per plant nor marketable pounds of fruit per acre. The number of marketable fruit per acre was significantly different between treatments, with the 9/10 treatment having the highest marketable fruit per acre. The 9/24 planting date had the largest average fruit size at .82 oz. From our visual observations there was increased plant runner formation in the 9/10 planting date treatment.

The fall of 2001 was one of the warmest in terms of highest average temperatures. The winter of 2001-2002 was also one of the most mildest winters in terms of average temperatures on record. These fall and winter weather conditions were very non- typical southern Ohio winter growing conditions. This study will be repeated again in 2002 and 2003.

Table 1. Yields from the replicated Strawberry Plasticulture Date of Planting Trial, Ohio State University South Centers, Hillsboro

<u>Planting date</u>	<u>Average Fruit Size (oz)</u>	<u>Marketable lbs per plant</u>	<u>Marketable Fruit per Acre</u>	<u>Marketable lbs per Acre</u>
9/10/2001	0.61	0.49	342157	8556
9/24/2001	0.82	0.46	245098	8093
9/17/2001	0.59	0.39	268627	6842
10/1/2001	0.69	0.33	204412	5918
LSD	0.22	NS	134911	NS

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