



2009-2010 Strawberry Plasticulture Date of Planting Study

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Plasticulture strawberry production is becoming more popular for Ohio growers. One of the main advantages of the system is a potential earlier harvest providing a competitive edge in the marketplace relative to conventional matted row production systems. Other potential advantages include higher yield and reduced environmental impact from a simpler pest management system. Challenges include: lack of experience with the system among growers, Extension personnel and researchers; cost, and adaptability of suitable varieties to the climate. This trial compared four different dates of planting.

METHODS:

Chandler strawberry tips were planted in 50-cell trays containing Metro Mix 360 soilless media and placed on weed mat under mini wobblers during the month of August. Tips were grown outside for four weeks under ambient conditions. Planting media was kept continually moist with a mist system to promote root development. The resulting plugs were transplanted to the field using a three-point hitch water wheel planter and watered in with Peters 20-20-20 starter fertilizer. Strawberry plants were planted in double rows with 12 inches between rows and plants on September 3rd, 8th, 14th and 23rd. Field preparation included application of 60 units of nitrogen, phosphorus, and potassium pre-planting. A raised planting bed was formed with a Redick Fumigation bed shaper. Chateau was applied and then covered with black plastic, and trickle irrigation was placed under the mulch. The floating row cover was put in place on October 13th. The plant growth was monitored throughout the winter. To control weed growth, annual rye grass was seeded between the rows of plastic prior to planting of berries to the field. The rye grass was then killed off in the spring with an application of Poast EC at 2.5 pints/ac plus 2 pints of a crop oil concentrate. To control disease, a standard commercial fungicide program was followed. Calcium nitrate was then injected through the trickle tape in the spring as necessary and continued through harvest in an attempt to maintain optimum plant growth and berry production.

RESULTS:

With the wetter spring, fungicide applications were very important this year. In this year's date of planting study, the marketable pounds per acre ranged from 22,978 (9/3/2009) to 16,800 (9/14/2009). Pounds per plant ranged from a low of .96 lb. (9/14/2009) to a high of 1.31 lbs. (9/3/2009). Overall, there was not any significant difference among the four planting dates.

Table 1: Results from 2009-2010 Date of Planting Study.

Planting Date	Pounds per Plant	Marketable Fruit per Plant	Pounds per Acre	Marketable Fruit per Acre	Average Fruit Weight (oz.)
September 3	1.31	35.27	22978	970000	.59
September 8	1.04	29.63	18166	803929	.56
September 14	.96	25.62	16800	709643	.59
September 23	1.14	30.70	20015	842857	.60
LSD	NONE	9.03	None	242419	None

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