



2009-2010 Strawberry Plasticulture Cultivar Evaluation

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Plasticulture strawberry production is becoming more popular with Ohio growers. One of the main advantages of the system is a potentially earlier harvest providing a competitive edge in the marketplace relative to conventional matted row production systems. Another potential advantage is reduced environmental impact arising from a simpler pest management system. In certain settings, there is the potential for higher yields relative to traditional matted row production systems. Challenges include: higher per acre cost, acclimation of suitable varieties to Ohio, and general lack of experience with the system among producers. This trial compared seven strawberry cultivars, (Chandler, Camerosa, Camino Real, Sweet Charlie, Galleta, Festival, Albion) for the plasticulture growing system.

METHODS:

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. On September 18, 2009, strawberry plants were planted in double rows with 12 inches between rows and plants. Field preparation included application of 60 units of nitrogen, phosphorus, and potassium pre-planting, plowing and disking. 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 12th. The plant growth was monitored throughout the winter. To control disease, a standard commercial fungicide program was followed. Calcium nitrate and potassium nitrate were 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 and disease pressure was increased. Cultivars listed in Table 1 are ranked according to pounds per acre. Marketable pounds per acre ranged from 15174 lbs. (Camino Real) to 7602 lbs. (Galleta). Chandler had the most marketable fruit per acre (548571), but the berry fruit size was down with an average berry weight of .60 ounces. Galleta had the fewest number of fruit per plant (8) however it was the largest berry in the trial this year at .84 ounces.

Table 1: Results form 2010 Cultivar Evaluation.

Cultivar	Pounds per Plant	Marketable Fruit per Plant	Pounds per Acre	Marketable Fruit per Acre	Average Fruit Weight (oz.)
Camino Real	.87	21	15174	573571	.65
Festival	.76	17	13274	453214	.71
Chandler	.72	19	12641	548571	.60
Albion	.64	16	11288	448929	.64
Sweet Charlie	.62	15	10930	445714	.64
Camerosa	.44	11	7689	310714	.64
Galleta	.43	8	7602	170714	.81
LSD	.30	8	5288	266963	.16

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