

2008-2009 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 market place 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 five strawberry cultivars, ('Chandler', 'Camerosa', 'Jewel', 'Sweet Charlie', 'Galletta') 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 for four weeks outside 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 8, 2008. Field preparation included application of 60 units of nitrogen, phosphorus, and potassium pre-planting, plowing, disking and formation of a raised planting bed Chateau applied then covered with black plastic and trickle irrigation under the mulch that was formed with a Redick Fumigation bed shaper. The floating row cover was put in place on November 13th. The plant growth was monitored throughout the winter. To control weed growth, Spartan II grass was seeded between the rows of plastic prior to planting of berries to the field. To control disease, a standard commercial fungicide program was followed. Calcium nitrate and potassium 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:

'Chandler' was consistently the leader in terms of marketable pounds of fruit per acre and marketable pounds per plant. In terms of fruit per plant, 'Jewel' had the highest number of fruit per plant. "Galletta" had the largest average fruit size. 'Sweet Charlie' was the lowest yielding of the cultivars tested this year in our trials.

Table 1: Yields from 2008-2009 Cultivar Evaluation.

Cultivar	Marketable lbs. per acre	Marketable fruit per plant	Marketable lbs. per plant	Average fruit weight (oz.)
Chandler	17138	24.5	.98	.64
Camarosa	16813	20.3	.96	.76
Jewel	16235	28.8	.93	.52
Galletta	9865	10.3	.56	.87
Sweet Charlie	6305	12.4	.36	.46
LSD	4328	6.75	.24	.04

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