



2009-2010 Strawberry Plasticulture Space Study



Brad Bergefurd, Thom Harker, Wayne Lewis, Lynn Miller, Al Welch
OSU South Centers
1864 Shyville Road
Piketon, Ohio 45661
740-289-2071
<http://southcenters.osu.edu/hort>

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 four different in-row plant spacing treatments to evaluate what plant population may be suitable for planting in Ohio.

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. On September 14, 2009, Strawberry plants were planted in double rows with 12 inches between rows with 8 inches and 12 inches between 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 13th. The plant growth was monitored throughout the winter. 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:

In this year's spacing study we looked at two different in-row spacings: 8" and the standard 12". The results in table 1 are ranked by pounds per acre. The pounds per acre ranged from 19454 lbs. (12" spacing) to 16420 lbs. (8" spacing). The standard 12" in-row spacing produced the largest overall yields. There was no significant difference between the two treatments.

Table: 1 Yield form 2009-2010 Strawberry Spacing Study.

Spacing	lbs per plant	Marketable Fruit per Plant	lbs per Acre	Marketable Fruit per Acre	Average Fruit Weight (oz)
12"	1.11	29	19454	796071	.61
8"	.75	21	16420	594643	.56
LSD	None	None	None	None	None