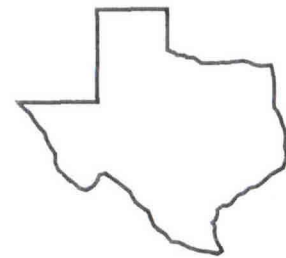
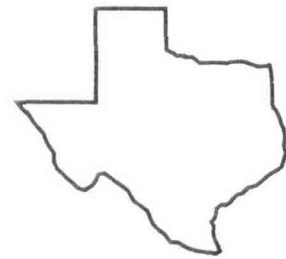
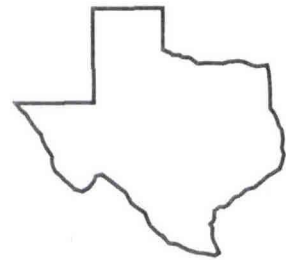
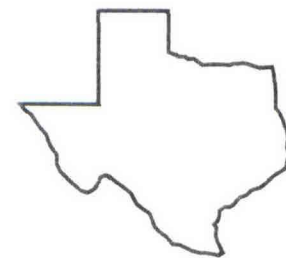




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ANNUAL STRAWBERRY PRODUCTION FOR EAST TEXAS

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Background. Strawberries were commercially grown in East Texas in the past. However, disease and labor problems killed the industry. Improved varieties and cultural practices have made strawberries a viable crop for pick-your-own operations. There are two systems for strawberry production, the annual and matted row. Use of the annual strawberry production system is ideal for East Texas. In the annual strawberry system, plants are set out in the late summer, grown through the winter, harvested in spring and then removed. By contrast, in the matted row system plants are set out in early spring, grown for one year, then harvested the second spring. The annual production system utilizes plastic mulch and has certain advantages over matted row production, in that the fruit are earlier, have a longer picking season, are easier to pick, and are more disease free.

Research Findings. The majority of annual planting systems in the south utilize 'Chandler', followed by 'Pajaro' and 'Douglas'. At Overton, highest yields were obtained with Chandler, and while Douglas produced earliest, it had lowest yield (Table 1). Pajaro produced largest fruit.

Strawberry plants are obtained in one of two ways, either dormant or fresh dug. Studies revealed that the dormant plants had a higher survival and production rate as compared to freshly dug plants, under East Texas conditions (data not shown). Dormant plants had no leaves at planting, while freshly dug plants were completely leafed out and performed poorly due to heat stress.

Use of plastic mulch is critical in the annual system. Clear plastic mulch cannot be used when the plants are set out in September because soil temperatures are too high and will damage the root system. Clear mulch may be painted white with latex paint before planting or applied after planting late in the fall. Black, white, and black on white mulches are all acceptable. Black and clear mulch encourage earlier production by warming the soil in the early spring. Use of row covers also increases early yield by providing frost protection.

Fruit yields in solarized soil were less than those in fumigated plots, but greater than nontreated controls (Table 2). Fumigation with methyl bromide increased yield in all years. Solarization is a non-chemical alternative to fumigation utilizing the sun's heat to pasteurize the soil. Clear plastic is placed over the prepared bed during the hottest part of the summer.

Application. Annual strawberry production is well suited to East Texas and can be a profitable addition to pick-your-own enterprises. The following is a time table for annual

strawberry production.

February: Order plants, plastic and irrigation supplies. Order plants early, since availability may be limited.

March: Soil test and apply lime to raise pH to 6.0.

Early July: (solarization) Till planting area and broadcast apply 400 to 600 lbs of 10-10-10 per acre. Prepare beds 30 inches wide and 12 inches tall on 4.5 to 5 foot centers. Lay drip irrigation lines on center of beds. Apply clear plastic to beds. Irrigate to maintain uniformly moist beds.

Late August: (fumigation) Prepare beds as described above. Irrigate to assure uniformly moist soil prior to fumigation. Fumigate with methyl bromide + chloropicrin and lay plastic (single step).

Early September: (solarization) Lay new opaque plastic or paint clear plastic to stop solarization. (fumigation) Slit holes in plastic for plants. Allow 10 to 14 days for soil to clear of fumigant.

Mid September: Plant strawberry plants.

December: Apply row covers (optional).

Early March: Remove row covers for pollination. Replace as needed for frost protection.

April-May: Harvest fruit.

Table 1. Strawberry cultivar performance at Overton.

Cultivar	Total yield (lbs/acre)	Fruit size (g/fruit)	% Fruit harvest by May 6
Chandler	8960	12.5	49
Pajaro	4390	14.4	51
Douglas	4010	15.1	54

Table 2. Effect of soil treatment on yield of 'Chandler' strawberries.

Soil treatment	Yield (lbs per plant)		
	1988	1989	1990
Fumigation	.87	1.10	1.39
Solarization	.78	1.03	1.31
Control	.57	.92	1.29