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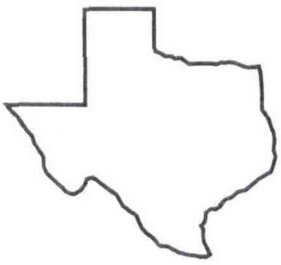

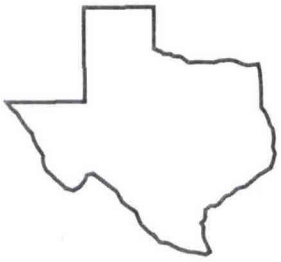

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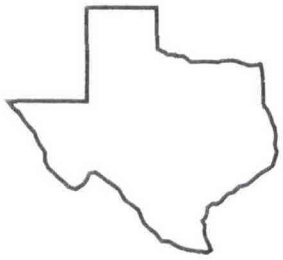

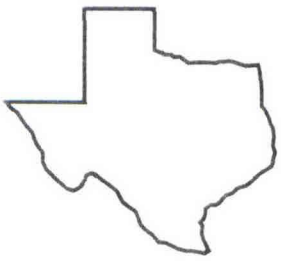

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PETUNIA AND VINCA PACK AND GARDEN TRIALS FOR EAST TEXAS: SPRING 1993

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Background. The $50 million Texas bedding plant industry is centered in East Texas with a large part of the production being marketed in the major metropolitan areas in the eastern half of the state. The number of varieties that exist for greenhouse bedding plant production and sales can be bewildering to producer and consumer alike. Regional performance trials are important for providing the information needed for both groups to make informed decisions about production and consumer use. Garden performance data are limited for Texas and the south-central U.S. and pack trial data for assessing greenhouse production performance is virtually nonexistent. Therefore, bedding plant pack and garden performance trials were started at the Texas A&M University Agricultural Research and Extension Center at Overton to provide information to local producers on greenhouse pack performance in addition to garden performance under local conditions.

Petunia and vinca were selected for the initial pack trial. Eight seed companies entered 68 varieties of petunia and 15 varieties of vinca. Seed were sown on April 7 through April 9, 1993 with a portable vacuum seeder into "406" plug trays using Redi-Earth (Grace-Sierra) seedling-mix. Plant flats were covered with plastic wrap and placed in a glasshouse with a 78°F constant temperature until emergence, then 72°F night temperature and cool as possible (76-80°F) during the day. Seedlings received HID supplemental lighting (60 to 70 micromoles per square meter per second) from 6 p.m. to 12 midnight until transplanted then lights turned on until 8 p.m. during heavy overcast days during finishing. Plants received 50 ppm nitrogen (Peter's 20-20-20, Grace Sierra) after emergence for 10 days then 100 ppm nitrogen during the third week, and then 200 ppm constant feed until flowering with periodic leaching. All varieties had three applications made at weekly intervals of Alar® at 1500 ppm active ingredient to control height. Excessive height control was avoided so genetic variations in growth habit might be observed.

Research Findings. *Greenhouse Pack Trial Evaluations:* Many petunia varieties started blooming on day 47 after sowing with the last beginning flowering date being 63 days after sowing. Overall, flowering was uniform with the exception of the double flowering types which were delayed. Flower diameters ranged from 2 inches in some of the multiflora types such as the Merlin and Primetime series to 3.75 inches in the grandiflora types such as the Ultra, Flash, or

Polo series. Qualitative differences tended to be restricted to color preferences over plant form. Heights ranged from 3.5 inches to 6.25 inches in height at 50% of pack flowering with the grandiflora types being taller. One series of note were the Merlins which maintained their compactness throughout the greenhouse evaluation. Vinca flowering was fairly uniform with *Parasol* blooming first at day 60 after sowing and *Tropicana Rose* and *Grape Cooler* blooming last at day 64 after sowing. Flower diameters in vinca ranged from 1.25 inches for most cultivars to 2 inches in *Parasol*. Cultivar height within the pack tray was very uniform and ranged from 3.75 inches for *Orchid Cooler* to 4.75 inches for *Little Linda*.

Garden Evaluations: The garden evaluation for both petunia and vinca began on June 15, 1993 when 2 blocks of 12 plants of each variety were transplanted into a site prepared as a test garden. One block was planted by series with the other block planted by color. As a result of an unusual tropical low weather front, 10 inches of rain were received in a 24 hour period on June 20 resulting in severe flooding of the trial area. Several other significant rainfall events occurred right before and soon after the June 20 event. As a consequence, several petunia varieties perished due to waterlogging. Those petunias that survived the flooding were then subjected to 35 consecutive days about 95°F with 13 of those days being about 98°F with night temperatures above 70°F. As a result of these severe weather events, normal garden performance evaluations were compromised. Garden survival percentages of most petunias varieties were low. As with the petunia cultivars, extreme weather events affected the vinca garden evaluation portion of the trial. Survival rates among the vinca varieties were much greater than the petunia varieties with the lowest survival rate being 85% in the varieties *Rosie*, *Orchid Cooler*, *Little Bright Eye*, *Orchid Cooler*, and *Blush Cooler*. *Tropicana Blush*, *Little Blanche*, *Little Linda*, and *Parasol* had 100% live as of October 20, 1993.

Application. A 1993 Bedding Plant Pack and Garden Trials at Overton Report is available from the authors detailing varieties tested and specific variety results. Please contact one of the listed authors for further information if interested.

Acknowledgements. Participating companies in this trial included American Takii, Ball Seed, Goldsmith Seeds, Sakata Seed America, Sluis and Groot, Vaughan's Seed, and Waller Flowerseed. The support of Powell Plant Farm and Dr. Harvey Lang is appreciated.