

BANKING ON NEW BASKETS

Are your customers a little tired of standard hanging basket crops?

Here's how to grow nine interesting alternatives.

by Terri Woods Starman and James E. Faust, University of Tennessee

Recently, many new vegetatively propagated species of plants have been introduced in our industry, several of which are suitable for hanging baskets. But there is very little cultural information about these plants available to growers. So, last spring at the University of Tennessee we developed production schedules for nine species in 10-inch hanging baskets. The plants used were bacopa, bidens, brachycome, helichrysum, lysimachia, pentas, scaevola, streptocarpella, and streptosolen.

Rarely will one production schedule meet the needs of all growers. So, we chose to look at the main two variables in hanging basket production: the number of plants per pot and the number of pinches per basket. We wanted to provide options that allow flexibility for individual production schedules.

For each species, we planted one to four plugs per basket and made zero to two pinches per basket. Finally, we evaluated the heat tolerance of the plants in baskets through the summer.

A note: Several of the species in this study did not flower during the summer months. The success of nonheat-tolerant plants depends on the consumer. A gardener may be upset by a basket which stopped flowering in early summer. However, many Mother's Day sales are gifts. A gift such as a fuschia basket must look stunning for the holiday, but long-term performance is not always needed. If you grow nonheat-tolerant plants, perhaps target them for the holiday market, not the gardening market.

The Basics

Bacopa. *Bacopa speciosa* "Snowflake" has hundreds of small white flowers covering trailing foliage. Three plugs transplanted in a 10-inch basket will finish in 5 weeks (see Table 1), while 4 more weeks were necessary for one plug per pot. We provided one pinch one week after transplant.

Pinching resulted in the crop being in the greenhouse for one extra week. Pinching is desirable for a higher quality plant when only one plug is used. However, when using more than one plug, pinching is not necessary. Bacopa was not heat tolerant and ceased flowering in June. Foliage remained green through the summer, and plants bloomed again in the cool fall.

Brachycome. Swan River Daisy (*Brachycome multifida*) "Crystal Falls" has numerous blue daisy-type flowers and fin tentured foliage. Pinching was not required to produce a beautiful basket.



Cauliflower basket planted by Paul Thomas

Four plants per 10-inch basket finished in six weeks, while three plugs per basket finished in seven weeks. Two plugs per 10-inch basket produced a lopsided, lower quality product, but these baskets would likely be acceptable to mass merchandisers.

Flowers were not heat tolerant, but these plants will be great for impulse purchases during the spring.

Helichrysum. *Helichrysum bracteatum* "Golden Beauty" is a strawflower that produces many long-

lasting, golden-yellow flowers, but unlike other strawflowers, it has a low-growing, spreading habit. We suggest using two or three plugs per 10-inch basket to finish in 7 or 8 weeks. No pinching is required.

We do not recommend using one plant per pot because of the increased potential to overwater. Helichrysum appears to be relatively heat and drought tolerant, but the plants need to be cut back and deadheaded regularly to look neat through the summer.

Lysimachia. *Lysimachia procumbens* "Golden Globes" has clusters of bright golden flowers set against dark green foliage. The plugs were pinched by the supplier. A second pinch delayed flowering by 1-2 weeks, but did slightly improve plant quality.

More than two pinches are not necessary. Two, three, or four plugs per 10-inch basket pinched only once (by the supplier) finished in 10, 9, or 8 weeks, respectively. One plant per pot takes a long time to make a full basket.

Lysimachia is a quantitative long day plant (i.e. time to flower decreases as the day length increases). This species did not bloom during the summer heat, but rebloomed in the fall.

Pentas. The Egyptian Star Flower (*Pentas lanceolata*) "Starburst" thrives in heat and drought, blooming all summer. It's a newer cultivar that's more compact and ideal for hanging baskets.

Pinching delayed flowering but increased vegetation growth and thus numbers of flowers. Pinch off any existing flower buds at time of potting and use one to four plugs per 10-inch basket. If one or two plugs are used per basket, a second pinch made five weeks after potting will produce a quality product. With three or four plugs, a second pinch is not necessary, and production time is reduced by 3-4 weeks.

Lighting with incandescent lamps to extend the length accelerated flowering by one week.

ALTERNATIVE HANGING BASKETS

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PLANT NAME	Number of		Weeks to Finish													Flowering			
	Plants	Pinch	0	1	2	3	4	5	6	7	8	9	10	11	12	13	Spring	Summer	Fall
Bacopa 'Snowflake'	(1,2,3)	(0,1,2 ^{**})																	
	3	0	○					✿									✿		
	3	1	○	✂					✿								✿		
	2	0	○															✿	
	2	1	○	✂														✿	
	1	0	○																✿
1	1	○	✂															✿	
Brachycome iberidifolia	(2,3,4)	(0)																	
	4	0	○															✿	
	3	0	○															✿	
2	0	○																✿	
Helichrysum 'Golden Beauty'	(1 ^{**} ,2,3)	(0)																	
	3	0	○															✿	
	2	0	○															✿	
Lysimachia procumbens	(1 ^{**} ,2,3,4)	(1,2,3 ^{**})																	
	4	1 [*]	○															✿	
	4	2 [*]	○	✂														✿	
	3	1 [*]	○															✿	
	3	2 [*]	○	✂														✿	
	2	1 [*]	○															✿	
2	2 [*]	○	✂														✿		
Pentas 'Starburst'	(1,2,3,4)	(1,2,3 ^{**})																	
	4	1	○	✂														✿	
	3	1	○	✂														✿	
	3	2	○	✂	✂													✿	
	2	1	○	✂														✿	
	2	2	○	✂	✂													✿	
1	2	○	✂	✂													✿		
Scaevola 'New Blue Wonder'	(1 ^{**} , 2,3)	(1,2,3 ^{**})																	
	3	1 [*]	○															✿	
	3	2 [*]	○	✂														✿	
	2	1 [*]	○															✿	
2	2 [*]	○	✂														✿		
Streptocarpella 'Blue Concord'	(1 ^{**} , 2,3,4)	(0,1 ^{**})																	
	4	0	○															✿	
	3	0	○															✿	
2	0	○															✿		

- ✿ Ready for Market
- ✂ Week pinched
- * Pinched by supplier prior to arrival
- ** Not recommended

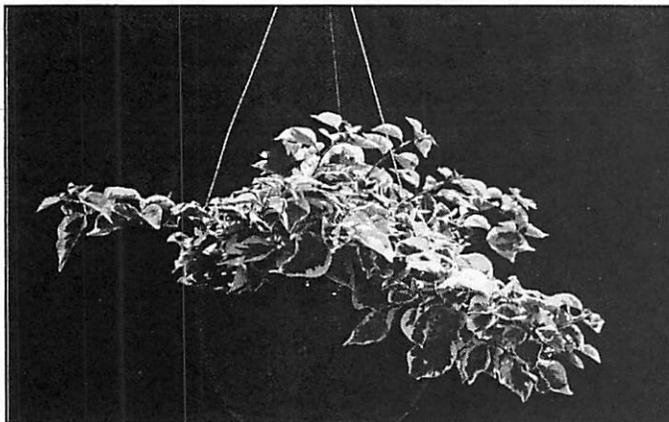
Scaevola. Fairy Fanflower (*Scaevola aemula*) "New Blue Wonder" was introduced in 1990. Scaevola flowered all summer in Tennessee, but it was not very drought tolerant.

Our plugs were pinched by the supplier prior to shipping. We provided a second pinch to some of the crops four weeks after planting. This pinch promoted fullness in the center of the pot but delayed flowering by two weeks. Two or three liners per 10-inch basket without an additional pinch finished in 6-7 weeks. One plug per basket never fully covered the top of the media in the pot regardless of the number of pinches applied.

Streptocarpella. Streptocarpella hybrid "Concord Blue" is an excellent plant for hanging baskets. The plants produced abundant streptocarpus-like flowers through the summer. Three or four plugs in a 10-inch basket produced a marketable plant in 7 or 8 weeks. Two plugs per basket required 10 weeks, but the plants looked lopsided. (Pinching did not improve branching.) An added bonus: These flowers attracted hummingbirds.

Bidens and Orange browallia. Two other species in our trials were *Bidens ferulifolium* and *Streptosolen jamesonii* (Orange browallia). Bidens is a vigorous trailing vine with fine textured foliage and golden yellow coreopsis-like flowers. We couldn't produce a compact plant, due to its sprawling growth habit; therefore, bidens is likely best used in a large basket where other plants can be added to provide more substance.

Orange browallia has attractive tubular yellow-orange flowers; however, it is an obligate short-day plant. Therefore, flowering for spring/summer sales requires black clothing to shorten the natural daylight. Orange browallia requires a day length of 10 hours or less for flowering.



Choosing The Right Approach

Obviously, the more plugs in a pot, the less production time required to finish the crop. Also, pinching requires more time on the bench and increases labor costs. So what is the best method to grow these species?

Some growers prefer to use more plugs per pot in order to have a shorter production schedule - so that greenhouses don't need heat in January and February. Other growers prefer to save money on plant material and perhaps spread out the transplanting labor by getting the baskets started before the peak of bedding plant trans-

planting. Many growers don't have the labor needed to manually pinch hanging baskets, while other prefer to produce the higher quality basket that pinching often provides.

The bottom line is profitability. Do some cost accounting to determine which approach is best for you.

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THE EXPERIMENT:

All crops were started from #2 plugs per tray transplanted into 10-inch hanging baskets, between Feb. 22 and March 7, 1995. A constant liquid fertilization program was used in which 20-10-20 was alternated with 15-0-15. 100 ppm N was used during the first 3 weeks, then 200 ppm N was used for the remainder of the experiment. Plants were grown in 70F/65F (venting/night temperature set points) glasshouse.

Baskets were grown on benches and spaced as needed beginning March 30. Plants were held throughout the summer in a simulated patio environment to test heat tolerance. Your crop time may differ from our's due to different greenhouse temperatures.

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