



By Erik Runkle



# Strategies for Growing Mixed Containers

Choosing plants with similar vigor and nutritional requirements will minimize your potential for headaches during growing.

**P**roduction of flowering plants in large containers and hanging baskets continues to increase. Among the challenges in producing mixed containers are identifying which plants to combine and how to control plant growth of some crops, but not others. Of course, you want to combine plants that harmonize with one another by choosing complementary flower colors, varying textures, different growing habits and/or different leaf colors. Combining aesthetically pleasing plants is much more of an art than a science. However, there are also some science-based considerations when choosing which crops to grow together in the same container.

## Match Growth Characteristics

Combine plants with similar vigor. For example, avoid planting sweet potato vine with alyssum. They might look good together at transplant, but after a few weeks, the more aggressive sweet potato could drown out the alyssum. If you decide to combine vigorous plants with slower-growing varieties, then try using different sizes of plant material. For example, use small liners or plugs for the aggressive species, and larger plant material for the slower-growing varieties. This can at least give the larger, less-vigorous plants a head start.

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Apply plant growth retardants (PGRs) to the vigorous plants prior to transplanting. All growth retardants are effective as sprays, while products containing paclobutrazol (Bonzi, Paczol and Piccolo), uniconazole (Concise and Sumagic) or ancymidol (Abide and A-Rest) are useful as plug and liner drenches or dips. Sprays are useful when more of a short-term response (10 to 14 days) is desirable.

Liner dips and drenches are becoming more popular because they have a longer residual effect.

A plug or liner dip is the practice of dipping the bottom of a flat into a PGR solution, allowing the media to absorb the chemical for 10 to 15 seconds. Liner dips are appropriate for aggressive plants because the media at the bottom of the cells, where most of the roots are, absorbs the PGR. When you transplant a dipped plug or liner, you're also transplanting a small amount of PGR solution into the mixed container. The effect is that you inhibit extension growth of only the dipped plants, and not others that are in the container.

Successful plug and liner dips require using an appropriate chemical concentration (ppm). Suggested starting rates for aggressive plants (such as calibrachoa, petunia, scaevola and verbena) are 4-8 ppm for products with paclobutrazol and 1-4 ppm for products with uniconazole. Prior to the liner dip, the media should be uniformly moist but not wet. Of course, be sure to conduct your own trials on a small scale to determine appropriate rates for your situation.

## Pair by Environmental Needs

Choose plants that have similar growth responses to the environment. In other words, mix cold-tolerant plants together and cold-sensitive crops together. What will happen if you plant a cold-tolerant osteospermum with a cold-sensitive New Guinea impatiens? At cooler temperatures, the osteospermum will thrive and the impatiens will stall; at high temperatures, the opposite will occur. After transplant, grow these containers in different greenhouses so that cold-sensitive crops are grown warmer than the cold-tolerant ones.

Combine plants that have similar sun or shade requirements, as well as water, pH and fertility demands. Why grow plants with a high pH requirement (such as marigold and geranium) in the same container as plants with a low pH requirement (petunia and calibrachoa)? You're destined for challenges. There are hundreds of species at your disposal, and combining those with similar nutritional demands will minimize problems as crops finish. [GPN]

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