crop culture report:

Osteospermum FlowerPower Series

Osteospermum have become a popular crop in recent years. After some initial difficulties, breeding has improved summer performance and color selection, boosting the crops' appeal to growers and consumers alike.

By Stefan Reiner

Top: *'FlowerPower Compact Yellow.'* ***Bottom:*** *'FlowerPower Purple Blue'. (Photos: Selecta First Class)*

Osteospermum are emerging as one of the most important crops cultivated for spring sales. Their daisy-like flowers and striking colors are so popular among consumers that they have the potential to catch up with vegetative propagated crops such as calibrachoa, petunia and verbena.

FlowerPower varieties are suitable for pot production in different sizes or scheduled production, and they're perfect to use in mixed containers and planters. They may be finished for early spring, peak spring, early summer and fall sales.

Variety Selection and Scheduling

Growers may choose from 21 FlowerPower varieties. The regular line, with 13 varieties, is perfect for mass production and scheduled crops. Choose the four FlowerPower Compact varieties for the South and for late crops in the North. Spice up the offering with FlowerPower Spider varieties available in four colors.

Check the recommended finishing times, and use this information to select your varieties. Schedule your crop and plant accordingly; scheduling is critical for the success of an osteospermum crop. There are two ways to go: the cold crop method for very early flowering and the traditional crop. The cold crop method starts in early fall and has a cold phase between the 1-inch stage and the finishing period (six to eight weeks with 46° F average day temperature).

Rooting

Choose a well-drained, aerated rooting media with a pH of 5.8-6.2 and an EC of 1-1.5. After their arrival, stick cuttings as soon as possible. Cuttings may be stored for one night in a cooler at 46° F. Bottom heat is highly recommended for any propagation. A media temperature of 68-70° F and air temperature of 65-74° F will ensure quick and uniform rooting. Temperatures can be lowered slightly toward the end of the propagation cycle, after cuttings are well-rooted. The use of a rooting hormone (preferably an IBA + NAA mix) will encourage rooting and improve uniformity.

Shade cuttings for the first two weeks at 1,500-2,000 foot-candles. This will reduce stress and transpiration and preclude excessive misting. Well-established cuttings can tolerate light levels of 3,500-4,500 foot-candles during the last week of the propagation cycle. Osteospermum cuttings need more frequent mist compared to most other crops, but it's important to avoid oversaturating the plug the first 10 to 14 days until initial roots have formed. Mist frequently but with a short running time (just moisten the cuttings).

Using PGRs during rooting will result in a more compact cutting. Start using fertilizers as soon as cuttings start to root at 50- to 100-ppm nitrogen, using a well-balanced fertilizer, including minor elements (especially iron). First roots should be visible after seven to 10 days. The total rooting time is about 21 to 28 days.

Finishing

Pinching your plant at the right time will make a huge difference. Don't let your liner overgrow. Keep cuttings soft and growing before you pinch, as hard cuttings won't branch as well. Apply PGRs at an early stage in propagation so the cuttings stay compact. Pinch after transplanting right after roots become visible to ensure good basal branching.

Start using fertilizers as soon as roots are visible (seven to 10 days after planting). Use 200- to 250-ppm nitrogen, using a well-balanced fertilizer, including minor elements (especially iron). Keep the pH around 6.2 and the EC level below 2.0.

Even though osteospermum can be grown quite cold, they like warm conditions during propagation and especially during the first two weeks when the media temperature should be at 70° F. Drop the temperature by a couple of degrees, use cool morning and higher light levels to tone your liners. Hardening off too harshly will delay rooting of the liner after transplanting and reduce branching. After transplanting, maintain temperatures at 61-64° F night and 68-72° F day, until plants have nicely branched and side-shoots are about an inch long. Grow on with 65-70° F day and 50-55° F night temperatures. Use the same temperature recommendation to finish the crop after the cold phase, which is used for very early flowering. From the 1-inch stage to a finished 4- to 5-inch crop, calculate seven to nine weeks.

Using the right PGR at the right moment will help avoid problems later on. Try using a spray and drench combination. Start in propagation with about two sprays, and apply the drench according to the plant format. Don't apply PGR sprays too late, as this may lead to flower damage. A late drench at half rate, however, will work.

One Step at a Time

An unwritten rule says that when growing osteospermum, you should apply one major treatment per week only. For example, don't pinch and plant or drench a PGR and cool the crop in the same week. Plant your rooted cutting, pinch the week after, apply your PGR drench the next week and cool down the following week. GPN

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