Providing plant products to the consumer with residual fertilizer using controlled release fertilizer (CRF) adds value and differentiates product quality compared with water-soluble fertilizer (WSF) alone. Using CRF can increase post-production performance because plants are often not fertilized after sale.

**Objective:**
- Compare fertilizer strategies that provide nutrition in both the production and landscape/customer phases.

**Our approach:**
- A range of WSF and CRF fertilizer strategies were tested to provide nutrients during production and consumer phases. This included dual-coated technology (DCT) fertilizer (Everris Protect™) provides CRF to the consumer, but allows the grower to use WSF during the production phase without high EC problems or the labor of top-dressing. DCT has a second outer coating that delayed initial nutrient release for several weeks compared with a conventional single-coated CRF, and may be incorporated into the substrate at the beginning of the cycle.
- Vegetative petunias were grown in 1-gal containers for 6 weeks (production phase) followed by 12 weeks post-production in containers or landscape. All fertilizer strategies tested produced horticulturally-acceptable plants after 6 weeks. Plant performance was greater during the consumer phase in treatments with high rates of CRF compared with WSF only, or lower rates of CRF (Fig. 2).
- Nutrient release in a sand substrate without plants at constant 10, 21 or 32°C (50, 70, or 90°F), was delayed by several weeks using DCT compared with single-coated CRF and the delay decreased as temperature increased.
- A partial budget found the lowest cost treatment was WSF only, at $0.020/pot. At high rates, using DCT in combination with WSF ($0.085) was more expensive than incorporated Osmocote ($0.051), and had a similar cost to WSF + top-dressed Osmocote ($0.084).
- The greatly improved consumer performance for plants with residual CRF compared with WSF would provide an opportunity to add value and profitability if sales price could be increased.

2. Photograph taken at the end of the consumer phase (20 weeks after planting). Plants grown with WSF only (left), with Osmocote top-dressed at a high rate at the end of production phase (middle), or with DCT incorporated pre-plant at a high rate (right).

**Other planned research:**
- Development of apps in BackPocketGrower.org related to CRF use.

**How can you use this information:**
- We can provide nutrient release and plant performance with DCT compared with WSF or CRF. Are you relying too much on WSF alone? Consider incorporating a CRF product. Is your customer willing to pay more for a pre-fertilized product?

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