

Fertilizer used during plants' production adds value for consumers

June 27 2016

Producers of container-grown landscape plants often use fertilizers to ensure that consumers take home healthy, vigorous plants. This "residual fertilizer" adds value to plants by extending the benefits beyond the greenhouse. A new study recommends the best fertilizer strategies to give plants staying power and add value for consumers.

According to Paul R. Fisher, corresponding author of the study in *HortTechnology* (April 2016), many consumers fertilize [plants](#) in their landscapes, but plants are not always adequately fertilized after they are sold. "Without residual fertilizer, no matter how good the plant genetics or quality at point of sale, plant performance is likely to be poor for long-term and vigorous plants such as petunia in hanging baskets, patio containers, or the landscape," he explained. Fisher and his colleagues designed a study to compare strategies using water-soluble fertilizers (WSF) and controlled-release fertilizers (CRF) to provide adequate nutrition during production and consumer phases of petunia plants.

To simulate the production phases, 'Supertunia Vista Bubblegum' petunias were grown in greenhouse experiments in a peat/perlite substrate in containers for 42 days with water-soluble or controlled-release fertilizer treatments. The analyses showed that all fertilizer treatments [WSF only, a low rate of combined WSF and CRF, WSF and a second prill coating (DCT), or CRF] produced high-quality plants after 42 days of production in the simulated grower phase. "Growers therefore have multiple strategies to produce similar quality plants, and the choice comes down to factors such as cost and practicality," the authors said.

In a subsequent "consumer phase," the researchers evaluated petunia growth and nutrient level in plants that were maintained in containers or transplanted into a landscape and irrigated with clear water for 98 days. Results showed that the petunias grown with WSF only (without residual fertilizer) during the production phase were severely nutrient deficient (as measured by chlorophyll index and flower number) after 42 days in the consumer phase. The petunia plants that had been grown with controlled-release fertilizer were still growing vigorously after 42 days in the consumer phase, especially when a single-coated CRF or a second prill coating were applied at a high rate.

"The greatly improved consumer performance for plants with residual fertilizer compared with WSF provides an opportunity to add value and profitability," the authors said. "Several fertilizer strategies are available depending on material and labor cost and availability, and preferred crop management style."

More information: *HortTechnology*, [horttech.ashspublications.org/ ...nt/26/2/164.abstract](https://horttech.ashspublications.org/...nt/26/2/164.abstract)

Provided by American Society for Horticultural Science

Citation: Fertilizer used during plants' production adds value for consumers (2016, June 27)
retrieved 26 April 2024 from
<https://phys.org/news/2016-06-fertilizer-production-consumers.html>

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