

New use for human hair

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Agricultural crop production relies on composted waste materials and byproducts, such as animal manure, municipal solid waste composts, and sewage sludge, as a necessary nutrient source. Studies have shown that human hair, a readily available waste generated from barbershops and hair salons, combined with additional compost, is an additional nutrient source for crops. Although human hair has become commercially available to crop producers in the past couple years, it has not been proven to be an exclusive source of nutrients in greenhouse container production.

Vlatcho D. Zheljazkov, Juan L. Silva, Mandar Patel, Jelena Stojanovic, Youkai. Lu, Taejo Kim, and Thomas Horgan of Mississippi State University recently published a research study in *HortTechnology* designed to determine whether commercially available noncomposted hair waste cubes would support plant growth in horticulture crops as a sole source of nutrients.

The study compared the productivity of four crops: lettuce, wormwood, yellow poppy, and feverfew, grown in commercial growth medium using untreated control, noncomposted hair cubes at differing weights, a controlled-release fertilizer and a water-soluble fertilizer. Results showed that, with the addition of hair waste cubes, yields increased relative to the untreated control but were lower than yields in the inorganic treatments, suggesting that hair waste should not be used as a single source for fast-growing plants such as lettuce.

Zheljazkov suggests that, "once the degradation and mineralization of



hair waste starts, it can provide sufficient nutrients to container-grown plants and ensure similar yields to those obtained with the commonly used fertilizers in horticulture. However, it takes time for the hair to start degrading and releasing nutrients, as is reflected in lower yields in the hair treatments relative to the inorganic fertilizers for lettuce and wormwood."

Because of possible health concerns, further research is necessary to determine whether human hair waste is a viable option as fertilizer for edible crops.

The complete study and abstract are available on the ASHS HortTechnology electronic journal web site: <u>horttech.ashspublications.org/... nt/abstract/18/4/592</u>.

Source: American Society for Horticultural Science

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