

## **Salvia Grows Well in Cranberry Pomace Mixes**

*Douglas Cox, Plant, Soil, and Insect Sciences*

*University of Massachusetts - Amherst*

Successful commercial trials with cranberry pomace as a growth medium amendment have been conducted in Massachusetts for several years. Growers have produced crops such as hardy mums, poinsettias, flowering hanging baskets and mix containers of flowering annuals. These trials have shown the promise of using cranberry pomace as a component in growing media and have familiarized growers with its use. Projects at UMass studying plant growth response to pomace mixes under controlled conditions have also shown positive results (Cox and Lopes, 2007). This is a brief report of work looking at the response of salvia to cranberry pomace growing media. It's part of a larger project supported by a grant from The New England Greenhouse Conference.

### **How the plants were grown**

Two types of cranberry pomace were tested. One type consisted of pomace composted for about 3 years ("old") resulting in an appearance and consistency something like coffee grounds. The initial pH and EC of this material was 5.5 and 0.57 mmho/cm, respectively. The second type of pomace was about 6 months old ("new") and was not completely composted as seeds and fruit skins could be seen. The initial pH and EC of this was 5.8 and 0.88 mmho/cm, respectively. Plugs of 'Empire II Mix' salvia were obtained from a commercial propagator and transplanted to 4-inch pots of Fafard 3B (control) and pomace growth media on 2 October 2007. Plants were fertilized at every watering with 180 ppm N from Technigro 17-5-24 alternating with 15-0-15.

Pomace growth media were formulated with "old" and "new" pomace at 25, 50, 75, and 100% were mixed with sphagnum peat moss on a volume basis. Dolomitic limestone at 5 lb./yd<sup>3</sup> was added to the pomace media. There were 8 single-plant replicates per treatment and the control. On 22 December, foliar height (height measured to the top of the foliage) and total plant height (measured to the top of the flower stalk) were measured and the tops were harvested for dry weight determination.

### **Results**

Data analysis revealed no significant differences in foliar height, total height or dry weight between treatments (Table 1). Growing salvia in old or new cranberry pomace resulted in plants no different from the Fafard 3B control regardless of pomace level. There were no differences in appearance between pomace treatments and the control plants. Looking at the data, it might seem that there were some differences between treatments (e.g., height of 25% old pomace vs. control), but

**Table 1. Growth of salvia in cranberry pomace-amended media.**

Growth medium	Foliar height (cm)	Flower height (cm)	Dry weight (gm)	Foliar height (cm)	Flower height (cm)	Dry weight (gm)
Fafard Mix 3B (no pomace)	17.1	25.0	6.7			
	<b>Old pomace</b>			<b>New pomace</b>		
100% pomace	15.3	20.9	6.7	16.3	23.4	6.8
75%	16.2	22.8	6.2	14.7	23.0	6.4
50%	16.6	23.2	6.2	17.5	24.5	7.8
25%	14.9	21.1	6.5	17.9	23.5	6.5

these differences were due to variability between plants in the treatments. The existence of this variability might have been due to the fact that the plants were from a seed mix.

Results of this study with salvia were very similar to earlier experiments with *calibrachoa* and geranium (Cox and Lopes, 2007) and grower trials with other crops across Massachusetts. In general, cranberry pomace is an acceptable amendment for greenhouse growing media.

**Reference**

Cox, D. A. and P. Lopes. 2007. Cranberry pomace as a growth medium for greenhouse crops. *Floral Notes*. 19(6):6-9.