Using High Tunnels to Produce Blackberries Organically in West Virginia
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William H. Jett
Rt. 2 Box 182
Lost Creek, WV 26385
Lewis.Jett@mail.wvu.edu

The overall goal of this project is to evaluate several varieties of thorny and thornless blackberries for organic production with and without a high tunnel in West Virginia. In April, 2008, twelve plants of twelve varieties (144 plants total) of blackberries were purchased as virus-indexed planting stock from several nurseries. Two western trailing type blackberries were also included. Rather than plant the blackberries permanently within a high tunnel in Year 1, we wanted to determine if the plants could be established in organic media within movable containers which could be moved in and out of a high tunnel as needed for early or late fruit production starting in Year 2.

The plants were established in 3-gallon nursery containers in which a 50:50 peat-compost mix was added (Figure 1). Water was routinely drip irrigated to the plants through early summer and supplemented with rainwater. In July, the plants produced enough cane growth, so they were moved to 7-gallon nursery containers containing a 60:40 compost/peat mixture. Based on a tissue nutrient test, two applications of a fish emulsion fertilizer were applied. No insect or disease pests were observed on the blackberries in Year 1.

Figure 1. Blackberry plants were established in containers filled with a compost/peat mixture.

The first year of this project was devoted to producing cane growth on the blackberry plants. After frost in October, the plants were covered with a 1.25 oz row-cover for the winter.

A similar planting of blackberry varieties were established at the WVU Plant Science Organic Farm in May 2008. Compost was banded on each row prior to planting. Deer pressure at this site resulted in some damage to certain thornless varieties. The project was disussed as part of the WVU Organic Farm Field Day in July, 2008.

Cane growth on the field-planted varieties was superior to container-grown plants in Year 1. Irrigation of container-grown plants was scheduled using a tensiometer, but, root-zone temperatures may have been excessive since the black containers absorbed heat. In Year 2, the containerized plants will be placed in the soil in order to moderate soil temperatures. Temperature probes will be placed in unburied containers to compare

temperature differences. Yield data will be collected in 2009. A vigor assessment of each variety will also be taken. Pest monitoring will be conducted. Digital images will be taken throughout to document growth and yield of each variety and management system.