Research Report to the North American Raspberry and Blackberry Association
2009
Title: Establishment of a raspberry research planting at Michigan State University for fungicide efficacy and disease biology research.
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Type of Research:
Production research
Objective:
To establish a raspberry research planting at Michigan State University as a long-term resource for fungicide efficacy and disease biology research.
Procedures:
Field preparation started in the fall of 2007. A well-drained site with a sandy loam soil was identified on the Plant Pathology farm at Michigan State University in East Lansing, MI. Soil samples were taken and soil amending was used to adjust the pH to 6.5-6.8. The soil was also amended to appropriate phosphorus, potassium and nitrogen levels. The area then had a succession of cover crops planted to further build the soil and reduce weed levels without the use of herbicides. Starting in fall of 2007, no herbicides were used in the planting area. The cover crops started in fall 2007 with rye which was plowed under in spring 2008 and replaced with buckwheat. In fall of 2008, the buckwheat was incorporated into the soil followed by a seeding of rye. The rye was plowed under in spring 2009. On 15 May 2009, soil and air temperatures were warm enough for planting and the plot was tilled to a mellow consistency. Subsequently, 4.5 inches of rain fell over a 2-week period. Planting was delayed until 8 June so the soil would not be too wet at planting time. Bare-rooted raspberry transplants were obtained from a reputable nursery and consisted of 750 'Prelude' and 250 'Heritage' plants. Canes were planted carefully by hand at the planting depth and spacing recommended by the nursery. The planting was supervised by an experienced technician. Moisture levels were monitored to be sure the planting was not drought stressed.
Results
We noticed upon arrival that the canes and packaging were not of the quality that we expected from this nursery, but the canes were alive so they were used. While the planting was delayed by a few weeks due to heavy rainfall, the plants were kept in a cold room at 5ºC until use. Unfortunately, the planting did not establish. Leaves never even pushed on the majority of the canes. We suspect the canes did not do well in the field because of their initial poor quality and shipping conditions. We have contacted the nursery and have been promised replacement of new, better quality canes this coming

spring. The nursery also said they would improve their packaging procedures. Our plot was seeded to rye this fall and plans are underway to replant this spring. We have already purchased the supplies we need for our double-wire trellis system and only need to replant.

Conclusions:

While the actual cause of the poor establishment of the planting is not clear, we believe that the condition of the shipped nursery material negatively affected plant viability. The plants probably deteriorated further in cold storage while awaiting planting for several weeks. We will replant the site in spring of 2010 with new planting material. We look forward to being able to use this planting for fungicide efficacy and disease biology trials within 2 years.

Matching funding: NARBA funds leveraged $6,000 in matching funds from the IR-4 project (southern region) for a fungicide efficacy trial. The trial was conducted in a grower's field in Onondaga, MI. The data are currently being analyzed.