

JeanPierre Prive- Presenter

Ecological Systems for Raspberry Production In New Brunswick

For raspberry lovers Jean Pierre Prive's research, testing the effectiveness of protecting raspberry canes from excessive rainfall and the waterborne diseases it may carry, promises a greater abundance of these exotic local fruit grown here in the region.

JeanPierre's presentation was targeted to the serious grower as it had a largely scientific bent, reporting on the effectiveness of trials and research he is conducting in southern New Brunswick.

The object in the research is to take a holistic approach - different trophic levels -- plant, insect, disease and reviewing all as to how they affect the ecological reality.

The Trophic Web: raspberry, pathogen, beetles

Why raspberries?

BC has 86% of the production -- majority is in lower Fraser Valley.

When comparing Bouctouche NB and Abbotsford BC --during the growing season summer temperatures are very similar; however, BC does not get hard frost as NB does in winter months. Consequently, BC canes do not suffer the winter stress of local canes. Further, BC has less rain during the picking season compared to that in NB.

So, we must extend our growing season and protect from rain. Raspberries are susceptible to disease with increased rain and moisture. Raspberries are also one of the most sensitive crops affected by wind.

Rain Shelters

Beauty of systems is you can roll it back when hot and dry.

Various difference trial models of rain shelters. He's currently, working with a cloth that is organic approved, allows light to go through. Also reflective ground covers on the ground between rows -- Extenday Reflective cloth (trade name).

1st protocol: 6 mil plastic over hoops

Protocol has been developed since including criss-crossed ropes and tarp anchors.

With the new system, it can tolerate 80-100 km winds - although he continues to remove the plastic cover during extremely high winds.

No pesticides were used on a three year trial.

Baking Soda (BiPro or Bufferright from Southeastern Farmers Coop)

Household rate: 4tsp./4.54 (1gal) of water was applied in some cases.

Basically the system is meant to protect from rain. The Rain Shelter is not a season extender. It should be noted with the rain shelter installed, you must have trickle irrigation to allow for watering.

Notes re Reflective Cloth between the rows (Extenday) – don't install too early; as it will hold the cold in the ground. Allow the ground to warm up before installation.

RESULTS

Productivity for 2008/09 was considerably higher combining Rain Shelter and Reflective Material. 2010 was a perfect, natural growing year for raspberries.

However, although our control group was as productive under shelters, there was still a beneficial effect in terms of shelf life with the combined-rain shelter and reflective material.

Therefore, any water borne disease elements are reduced significantly. Spur blight incidence also decreased significantly using the combined Rain Shelter and Extenday.

Insects

A good diversity of ground beetles (Carabidae) is an indicator of good control in an organic system. With Prive's trials, there was a higher abundance of carabids when using the combination of Extenday and Rain Shelter. Therefore Extenday and Rain Shelter together provide a potential refuge rather than a barrier for ground beetles.

Further tests were conducted comparing dry weight results of dried plant tissue, diseased plant tissue, and dried carabid beetles --- These results determined reduced disease, more biomass and fruit in the raspberries and more ground beetles when using the combination of Rain shelter and extenday.

Using high tunnels, further field trials were done for various fruit. Generally showing a huge increase in yield --- up to 200%---using tomatoes, day-neutral strawberries and peppers and 3.5 or 4x the production in sweet potatoes. Raspberry trials are underway now.

Sponsor: Really Local Harvest Coop and Université de Moncton

JeanPierre Prive also offered a handout entitled New Methods for Organic Raspberry Production in Polyethylene Tunnels.