

MANITOBA WEEKLY VEGETABLE REPORT

Manitoba Agriculture, Food & Rural Initiatives

Crops Knowledge Centre

Vegetable Report

August 20, 2009

General Comments

Hopefully everyone enjoyed those three days of summer. Due to the wet conditions of this week, very limited scouting was carried out. Obviously disease pressure is considerable at this time and from our diagnostic lab come reports of Septoria leaf spot on tomato and Botrytis as well. Leaf spot diseases are likely to be coming on soon, in part thanks to that kick of heat. It is also worth noting that Late Blight was confirmed in the southern potato growing region of the province so this is something of concern as well. It was only a single report though, so it is not a widespread issue at this time.

Carrots

Remarkably I was able to get into both carrot fields, finding just the precise gap in the weather to get some sweeping done and take another look at those aphids.

There are still no symptoms of aster yellows in the two fields being scouted at this time as leafhopper numbers continue to remain relatively low. We collected five(5) and twelve (12) leafhoppers in the two fields (100 – 180° sweeps per field) yielding aster yellows index (AYI) values of 20 and 60, both below the level of the economic threshold for resistant varieties. We are using an estimate of 4% for the infectivity level this year.

With respect to the aphids, I took a closer look at the field this week and much to my surprise found a tremendous number of aphid 'mummies' on the foliage. Aphid mummies are the shells of aphids that have had a parasite inside them. The parasite feeds within the aphid and when it is ready to emerge as an adult kills the host aphid, leaving behind a hard, empty shell that looks like an aphid. The leaves were positively loaded with aphid mummies. In the picture to the right you can see the number of mummies on a leaf (circled) and also on the closer photo (below) the single mummy is clearly visible with the exit hole where the parasite emerged from the aphid.



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(Single mummy showing exit hole)

What was surprising was the large number of live aphids that were still present and crawling on the foliage. None of them seemed to be feeding too much and there was no associated wilting of the foliage, as water has been in ample supply and no heat to aid in the wilting. So the question becomes “is it worth it to spray these aphids that are present in high numbers?” I suspect the answer is no. In many cases, high populations of insects result because of a breakdown in the natural enemy complex that can happen for a variety of reasons. The sheer number of aphid mummies present in this carrot field is a very strong indication of the high parasitoid population and my guess is that many of the aphids present on the foliage that are still alive are also parasitized at this point but are doing just enough feeding to sustain the parasitoids growing within the aphids. That’s probably sufficient to keep damage to the carrots non-economical and any sprays to knock back the aphids would most assuredly have a major impact on the parasitoids as well. Given the exceptional job the parasitoids are currently doing, it would be wisest to leave them alone in my estimation.

No indications of plant disease were observed again this week, but the heat and humidity are cause for concern.

Crucifers

No fields were scouted this week, but the possibility of damage from cabbage butterflies (*Pieris rapae*) remains present. The adults wouldn’t be terribly active during the wet weather, but there has been enough stretches of no rain they could have easily been ovipositing during this time. Plenty of eggs were laid in the previous two weeks as well, so potential for damage is reasonably high. It doesn’t appear anywhere near as severe as the outbreak of a couple of years ago, but damage could certainly be economical.

Cucurbits

No fields were scouted this week.

Onions

No fields were scouted this week.

Sweet Corn

No fields were scouted this week.