

22 Aug 2010

## **Potato / Tomato Psylid**

### **Have you potatoes with no size or yield?**

The Potato Psylid is a recent introduction prevalent in USA, Canada, and Mexico.

It is known to have established from Bay of Islands to Ashburton.

It is probably the most serious and devastating insect pest yet for home gardeners.

This pest devastates potatoes reducing the yield to virtually nothing. It also affects tomatoes, capsicums, aubergines, and tamarillos.

The adult, a small dark coloured fly about the size of a winged aphid,(3-4mm) lays eggs on the leaves. The young grow through five nymph stages and hatch to adults with a generation taking approximately 33 days. There are 4 – 7 overlapping generations per season.

Both adults and nymphs feed on the plants. Serious damage is caused by the nymphs which are firmly attached to the leaves. As they feed on the sap of potato leaves they inject a toxin into the plant which inhibits the growth of the tubers. The initial symptoms are a reduction in vigour, yellowing of leaves, shortened internodes and multi-branching of the potato tops. When harvested the tubers are small, usually not more than 5 cm long, and misshapen.

Once the psylid is established on the potato crop it is usually too late to affect control.  
By the time the symptoms are evident it is certainly too late.

This makes this pest the most significant for home gardeners who grow potatoes.

### **Latest New Zealand Research**

The recent newsletter to Commercial Potato Growers, reports progress from NZ research on the potato psylid.

There are two items of note from the research that are relative to Home Gardeners.

1. Psylid numbers are very low until late December. During January they increase rapidly to a high peak in February, and decline in Late March – April.
2. Of the insecticides available to home gardeners, Yates Mavrik effected the best control

Hence our recommendations for the coming season are –

### **Potatoes -**

1. In areas where potato / tomato psyllids have occurred previously, plant potatoes early (early Sept) so that they are close to maturity / harvest before psyllids build up in numbers in Jan – Feb.
2. Where the pest has occurred previously, keep a close watch for the adult or small limpet like insects on the undersides of leaves. Begin a spray programme at first sight, or from early December – spraying with Mavrik at two weekly intervals. This is especially important for late planted crops.
3. Where the pest has never occurred before – keep a close watch for the adult or small 1 - 3mm 'limpet' like insects on the undersides of potato leaves. At very first sign, begin a spray programme, or from early December – spraying with Mavrik at two weekly intervals. This is especially important for late planted crops.
4. It is important to begin spraying in early December, and carry out regular spraying through January, February, March, and April, to stop the psyllid from establishing. If it establishes and begins feeding it will have already injected the toxin into the plant and spraying at that late stage may control the psyllid but will not save the potatoes.
5. Mavrik is the only insecticide available to home gardeners, that has been proven effective against the psyllid in research to date.  
As further research is carried out, other insecticides may be proven effective.  
There is no proven biological control at this stage but there are promising leads

Mavrik is a synthetic pyrethroid - a soft environmentally friendly chemical, which is safe to bees and soft on ladybirds.

Organic Eco Oil alternatives have only been partially effective, and are unlikely to reduce psyllid numbers sufficient to avoid severe crop damage.

### **Tomatoes and Capsicums**

Mavrik is a commonly used insecticide for control of aphids, caterpillars and white fly on tomatoes and capsicums. Hence if Mavrik is used for these insects it is likely to give control of tomato / potato psyllid.

The damage in these crops may not be so severe, as the regular spraying normally used for white fly is likely to keep them free.