

Potato Psyllid Monitoring & General Thoughts

By:

Bryan Hart, Area Manager, Pukekohe

Stephen McKennie, Technical & Marketing Manager

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Monitoring Experiences 2008-09

- Traps placed on perimeter & on headlands
- Aim? – trend only or threshold data ?
- Look to pressure factors:
 - Houses / gardens
 - Greenhouses
 - Prevailing winds
 - Fallow blocks & volunteers in other crops
 - Pack house potato dumps etc



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Trap Requirements

- Should be in each corner of the block
- Larger blocks will require more traps
- Should reflect pressure factors
- Place just into the crop row
- Trap just above the crop height
- Trap tied securely



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Monitoring Frequency

- Traps must be changed weekly
- Insects more difficult to ID after 3 to 4 days
- ID training required
- Good magnifying glass required



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Psyllids on sticky traps



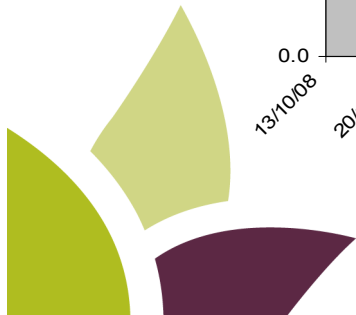
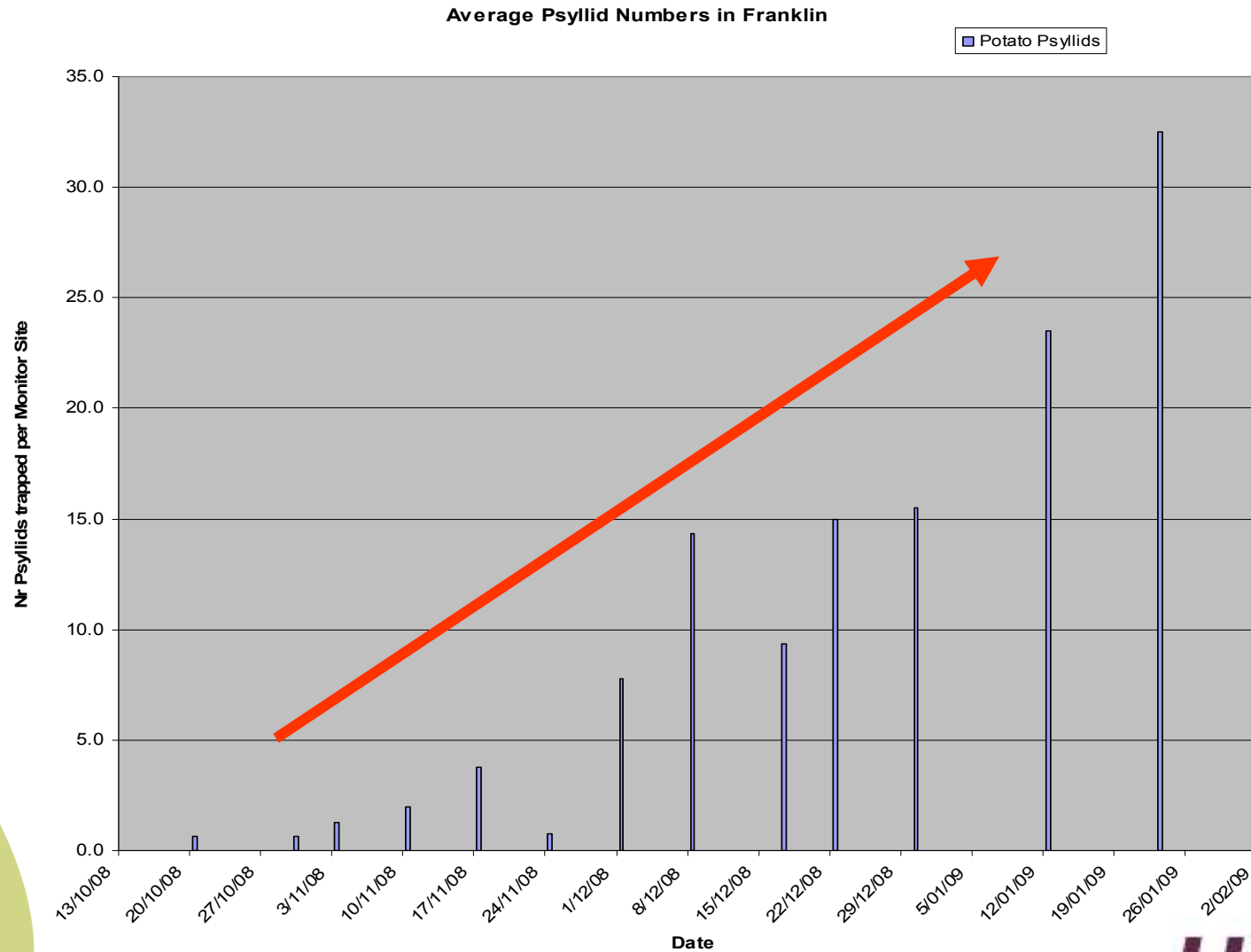
Photo by Dominic Hartnett, Plant & Food, 2009

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General Trend from 2008-09



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Thoughts

- Traps are helpful at start of season – early ID
- Traps may ID “flights” or “peaks” in adult No.’s
- Traps may assist in chemistry choice
- Traps NO SUBSTITUTE for walking crop
- Probably one Psyllid is one too many – ZC
- Need to focus on headlands



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Headlands

- First incursion seen at ends of rows –psyllid yellows?
- Host weeds = problem

Weed host plants of the potato/tomato psyllid

NICHOLAS MARTIN, NEW ZEALAND INSTITUTE FOR CROP & FOOD RESEARCH LIMITED, AUCKLAND

- Source Grower Magazine, Dec 2008, p36



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Headlands cont'd

- Extra attention to outside spray run
- Add Physical Mode of Action products to perimeter of crop



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Other Points

- Target Chemistry to life stage of pest
- Ensure thorough coverage >400L/ha mature crop
- Check tank mix pH – avoid hydrolysis



Physical Mode of Action Products

Why consider these?

- Need to optimise full knockdown & benefit from existing chemistry options.
- Up to 500 eggs (on average) over 21 days.
- Incubation period (eggs) 3 - 15 days (nymphs) 5 instars in 12 – 21 days before winged adults.
- Resistance management &/or better coverage &/or improved efficacy

What are options?

- Horticultural oils; (e.g mineral & plant based)
- Plant extracts; (e.g alginates, sucrose, etc)



Physical Mode of Action Products

- How do they work?
 - Assumes full coverage.
 - Horticultural oils – spread (across the leaf) & penetrate (insect exoskeletons)
 - Suffocation effect and repellency (by deterring Psyllid ovipositioning) due to the oily residue, + reduce drift, & some U.V protection
 - Plant extracts – (glue insects to the plant & can suffocate)



Physical Mode of Action Products

- When to use these?
 - Oils; In with crop protection products (as / where indicated)
 - Plant Extracts; on their own & in-between crop protection chemistries (for resistance management) (NB: coverage of target (pest) is essential)
 - Focus on headlands in early crop stages

