

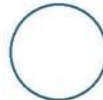
Bee non-contact periods Presentation from the Horticulture Industries

17 February 2015

Nikki Johnson

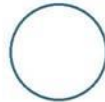
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Outline of presentation

- Submitter background
- Overall comments
- Industry specific comments
 - Citrus
 - Strawberries
 - Greenhouse
- Conclusions



Industry Groups Represented

Industries that can comply with control:

- Citrus (other than lemons)
- Boysenberry
- Baby leaf lettuce
- Tamarillo
- Kumara
- Outdoor tomato
- Maize & sweetcorn
- Onion
- Carrot/parsnip
- Potato (spraying at night)



Industry Groups Represented

Industries that cannot comply with control:

- Lemons - Acephate
- Strawberries – Methomyl
- Greenhouse crops – Methomyl & Oxamyl

Together worth \$251m



Comments on process

- Timing of modified reassessment frustrating
- Concerns should have been raised in initial reassessment – NBA did not comment during this process
- NBA requested a review of Dimethoate only – would have been no problem
- Industry questions EPA reference to ‘new’ information – was available during last reassessment
- Horticulture does not wish to see bees harmed – previous assessment indicated risk was direct exposure only – significant change.



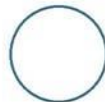
Key issues

- The proposed control means that where crops flower continuously, the products cannot be used
 - Lemons = all year around
 - Greenhouse = all production season
 - Strawberry = April – September
- EPA appear to have included purpose bred pollinators in the control
 - Bumblebees for greenhouse crops
- EPA have failed to properly assess impact of the control
- EPA have failed to consider alternative controls proposed by industry



Impact assessment

- Most disappointing aspect of EPA reassessment application
- No attempt has been made to quantify impact of proposed control
- Focus on the fact that it used to be a requirement
- No risk vs benefit assessment has been undertaken
- Significant information was provided by industry to support impact assessment



E&R Report

- E&R report disappointing. Fails to address several points made in horticulture submission
 - EPA has not quantified the risk to wild pollinators so it cannot be assessed against benefits of continued use
 - Alternative controls have been dismissed without full evaluation
 - EPA have not specified what alternative pest control options they think are available to growers
 - EPA is the applicant yet it considers that the burden of proof is on industry
 - EPA has not sufficiently addressed the issue of bumblebees and whether it is appropriate to include them in controls



Alternative controls

- Industry has suggested alternative control – notification of all beekeepers within 2km of intended acephate/methomyl use
 - Lemon and strawberry only
 - Reduces risks to local colonies of honey bees to negligible
 - Allows critical use in strawberry & lemon to continue
- For use in Greenhouse, industry proposes exclusion of bumblebees from the control



Lemon Industry

**Rick Curtis - Chairman
New Zealand Citrus Growers Incorporated**

Sector statistics (2013)

No. growers	Land area (ha)	Total value \$(m)
59	178	6.2

Citrus Flower Moth



(A) Lemon bud infested with a citrus flower moth (CFM) larva, (B,C) Citrus flowers damaged by CFM larvae.

Photo: Plant & Food Research [Chhagan et.al., 2009]

Damage



(A, B, C) Rind-spot damage on immature lemon fruit.

Photo: Plant & Food Research [Chhagan et.al., 2009]

Risk

- Lemons are not bee pollinated
- Risks to other pollinators not quantified by EPA – what is the likelihood of significant impact
- Foliar residue risk not relevant since bees if present would fly to and land on flowers, not foliage
- Beekeepers report no concerns over the use of acephate
- No reports of bee damage from acephate use in lemons



Arysta Research

- Study performed specifically for EPA to reflect lemon use in NZ
- EPA have criticised and disregarded the new information
 - Oil was not included because it does not reflect GAP in NZ – label would have been changed to exclude oil
 - Rate of 1600 g ai/ha was used because this reflects use on lemons in NZ (EPA was advised of this rate in industry written submission)
 - Pre-flowering period was 7 days because this reflected EPA proposal.
- EPA staff made no attempt to discuss their concerns on the trial with either Arysta or industry.

Grower experience

- Acephate is used at periods of lowest flowering on tree
- Use has changed, now restricted to 1-2 sprays for CFM = same time of minimal flowering
- Beekeepers report no concerns over the use of acephate on lemons
- No reports of bee damage from acephate use in lemons

Alternatives

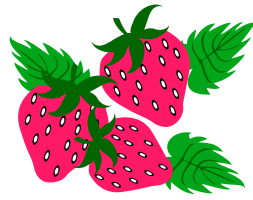
- NZCGI actively looking for alternatives
- >\$220k in industry money and more in crown investment
- Chemical and non-chemical options trialed
- More research underway now
- EPA have indicated alternatives are available but provided no detail on what these are
- Industry is open to alternatives but don't have any right now

Impact

- Impact = no control for citrus flower moth = fruit will get rindspot and can't be sold
- \$10.6 million p.a. at stake
- Previously, the EPA has acknowledged the benefits of acephate to regional economy (Northland and Gisborne)
- EPA have not considered this impact
- EPA have focussed only on risk

Strawberry Industry

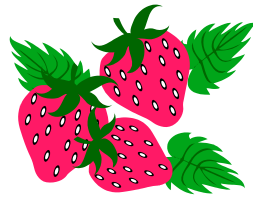
Strawberry Growers New Zealand



Peter McIntyre
Geoff Langford

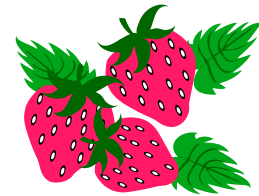
Strawberries are a special case!





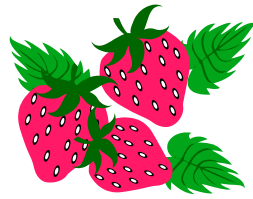
Why

- They flower and fruit continuously from August to April
- They are primarily wind pollinated
- Bees are only occasional visitors to strawberries
- Bees transmit several pollen borne viruses of strawberry
- Methomyl is a critical chemical for strawberry production



Methomyl in strawberry production

- Controls sucking (aphids, mealy bugs, thrips) and chewing insects (leaf rollers, other caterpillars, beetles)
- 2 day withholding period.
- It is also generally compatible with Integrated Pest Management (as long as not used frequently)
- We have been unsuccessfully seeking alternatives to methomyl for the past 15 years
- Methomyl has been used by strawberry growers during flowering for the past about 30 years (applied in the evening)
- Methomyl is only used when absolutely necessary
- Australia permit both methomyl and carbaryl use in strawberries – both with a 3 day withholding period



NZ benefits at risk

- \$30-50m strawberry industry likely to be severely damaged
- Loss estimated to be at least \$20m
- Over 9000 jobs put at risk
- \$7.4 million export value (as at 2014) likely to be severely impacted



Greenhouse Industry

Ben Smith (Status Produce)



Sector statistics (2013)

No. growers	Glass house area (ha)	Total value \$(m)
192	191	193.1

Conclusions

- Risks overstated
 - Foliar residue not relevant
 - Greenhouse not relevant
 - Risks limited to strawberry & lemon – neither are bee pollinated
- No impact assessment has been made
- No consideration of alternative controls
- Poor engagement from EPA
 - Alternative controls not discussed
 - Issues with new data not discussed
- Industry asks the panel to consider true risk and true benefits/impacts

