



Streptomycin – Residues and Resistance

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ZESPRI/KVH R&D Programme



Residue testing

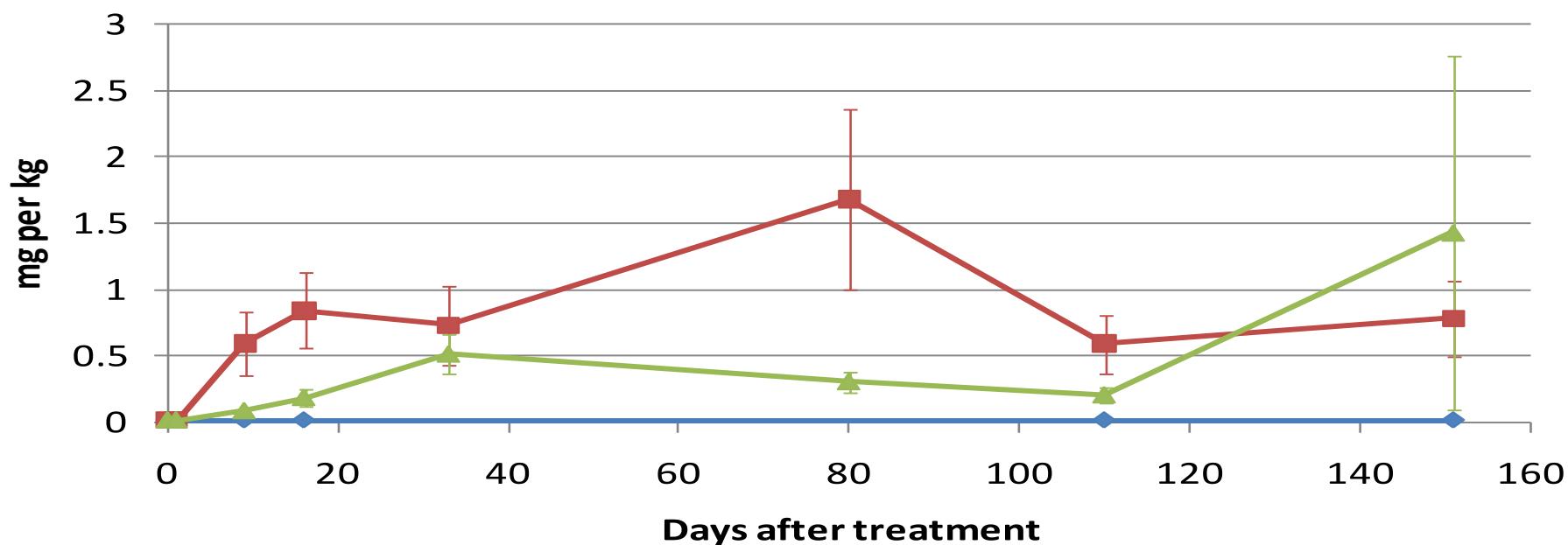
Korean Trials:

- One treatment per vine
 - Injection
 - Foliar application
- Replicated on 6 – 10 vines
- Regular samples taken for residue analysis (from an authorised NZ laboratory)



Residue testing

Fruit residues following injection

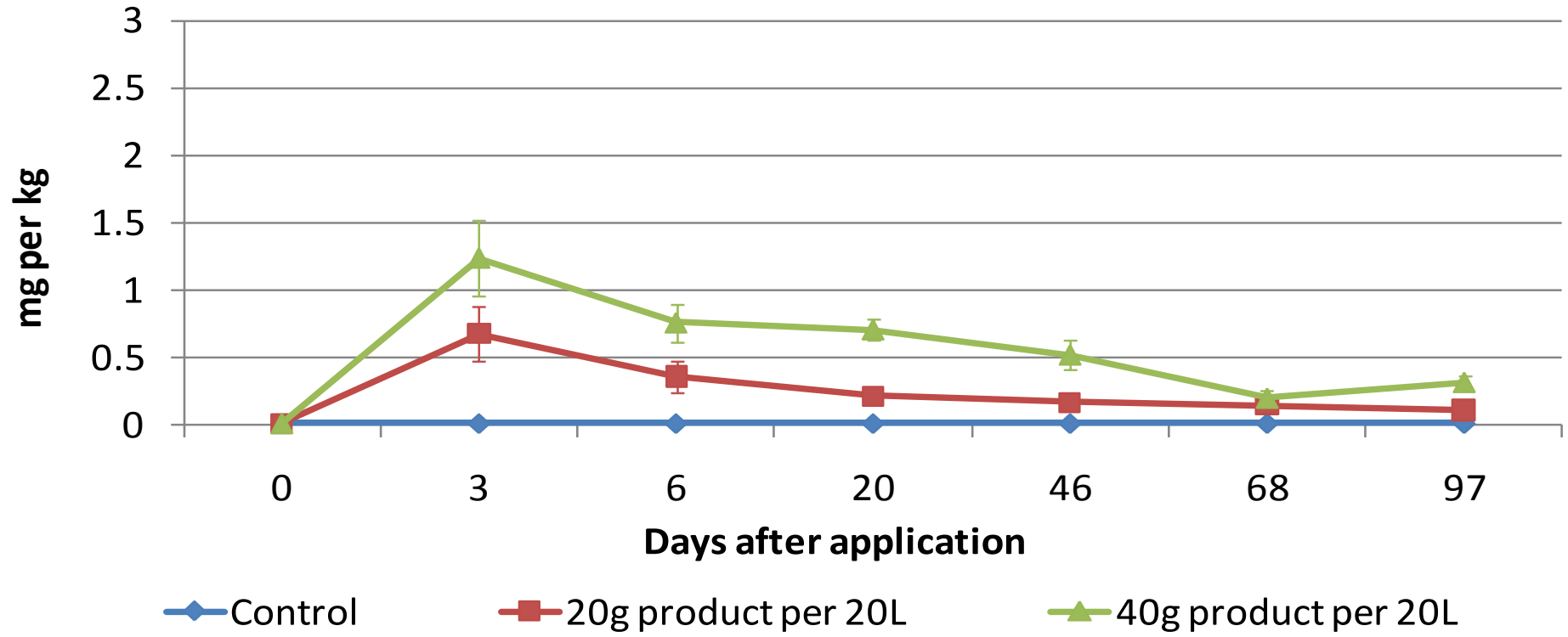


- ◆ Control: Side Winder injection water only
- Korean Drip (passive): 20g product per 4L of water per vine
- ▲ Stem Shot injection: 20g product per 100ml of water per vine



Residue testing

Fruit residues following foliar application



Residue testing

NZ Injection Trial:

- Under an ACVM trial approval
- One treatment per vine on 22nd October (pre-flowering)
- Hort16A vines
- All fruit to be destroyed at harvest
- Regular samples taken for residue analysis



Residue testing

Cultivar	Tissue sampled	Days after treatment	Treatment	Mean residues found (mg kg ⁻¹)
Hort16A	Mature leaves	9	Control	0.00
			Streptomycin	14.60
Hort16A	Mature leaves	74	Control	0.00
			Streptomycin	0.92
Hort16A	Mature leaves	124	Control	0.00
			Streptomycin	0.10



Residue testing

Cultivar	Tissue sampled	Days after treatment	Treatment	Mean residues found (mg kg ⁻¹)
Hort16A	Fruit	74	Control	0.00
			Streptomycin	0.33
Hort16A	Fruit	124	Control	0.00
			Streptomycin	0.37



Resistance monitoring

Resistance monitoring programme

- Includes Copper and Streptomycin resistance
- Psa-V orchards that have used authorised Streptomycin as part of their management plan
- 18 Orchards included
- Samples taken pre and post application
- Samples of Psa-V taken and tested for resistance
- Tested in December and February

RESULT: No resistance found



Streptomycin residue policy

- ZESPRI has been very clear that a nil-residue policy applies to Streptomycin, and that it must be used in accordance with MAF approvals
- ZESPRI will be testing all orchards for Streptomycin residues (involving more than 9000 tests)
- Pre-season testing has encountered a small number of positive residues, believed to be associated with unauthorised use



Streptomycin residue policy

- Where there has been use outside of the approved window, or via injection, or at high rates, there is a high risk of fruit residue
- If you have done this, we encourage you to disclose, so that we can work with you to segregate fruit from treated and untreated vines



Streptomycin residue policy

- MAF has notified ZESPRI that they will take into account all relevant factors, including the actions of growers in coming forward to voluntarily declare their actions, and such actions are likely to result in remedial actions short of prosecution
- MAF has advised that, where growers fail to voluntarily disclose use which may put the industry at risk, they reserve the right to take a hard line approach, as outlined in the ACVM Act 1997



Streptomycin residue policy

- Residues detected in exports of New Zealand kiwifruit could have devastating consequences for the industry as a whole



Streptomycin residue policy

- Declarations posted late last week
- Declarations due in before harvest, or by 23rd March (whichever comes first)
- You can call ZESPRI or David Steven to discuss your situation if you wish to clarify ZESPRI's, or your situation

