

Zebra Chip Management in the Pacific Northwest

Managing zebra chip (ZC) will require an intensive program if the insect vector, potato psyllid, and causative bacterial pathogen become established in potato growing areas of the Pacific Northwest. Management programs should begin with a neonicotinoid-based foundation program (seed treatment or soil-applied) followed by a foliar program incorporating multiple modes of action (MOA) in rotation.

> Zebra Chip Management Program

- Apply **CruiserMaxx® Potato** insecticide/fungicide seed treatment or apply **Platinum® 75 SG** insecticide at planting or through chemigation at last hilling for broad spectrum insect control including aphids, Colorado potato beetle, leafhoppers and psyllids.
- Apply **Agri-Mek® SC** insecticide early in your foliar rotation because it is effective against all potato psyllid life stages — adults, nymphs and eggs. Agri-Mek SC is also effective on Colorado potato beetle.
- Apply **Fulfill®** insecticide to stop psyllid adults and nymphs from feeding, reducing their ability to transmit the bacterium. Fulfill is also effective on aphids.
- Foliar programs should use 2 consecutive applications (block) with the same MOA. No single product should be used more than twice in the program.

> Best Practices

- Always use a high quality penetrating-type adjuvant with both Agri-Mek SC and Fulfill; avoid tank-mixing these with sticker-type adjuvants or with fungicides that have a sticker type component.
- If neonicotinoid products are used either in-furrow or as a seed treatment, ensure any further use in a foliar program follows label recommendations on resistance management and does not exceed the total allowable amount of active ingredient per season allowed on potatoes.
- Use of pyrethroids should be restricted to end-of-season only to avoid causing mite flare-ups.

ZC (ZEBRA CHIP): MANAGEMENT OPTIONS



CruiserMaxx® Potato insecticide/ fungicide seed treatment ¹ , Platinum® 75 SG insecticide ¹ applied in-furrow or via chemigation prior to crop emergence	Agri-Mek® SC insecticide/ miticide ^{2, 5}	Agri-Mek SC insecticide/ miticide ^{2, 5}	Insect growth regulator (IGR) or a lipid biosynthesis inhibitor (LBI) ³ <i>(Two applications)</i>		Fulfill® Insecticide ^{4, 5}	Fulfill Insecticide ^{4, 5}	Apply product that doesn't impact beneficial insects	Apply product that doesn't impact beneficial insects
Approx. 0-70+ days protection with at-planting treatment	Approx. 50-70+ days after planting	7-10 days between treatments	7-10 days between treatments	7-10 days between treatments	7-10 days between treatments	7-10 days between treatments	Mature Vine	Vine Kill

Notes

¹ When using neonicotinoids in a program follow instructions on the label to prevent insects from acquiring resistance to this class of chemistry.

² Apply at 1.75–3.5 fl oz/A. Use higher rate for the first application. Begin applications when psyllids are detected in the field or the area using scouting methods recommended by local universities. Use of sticky traps for adult monitoring and leaf counts for nymphs will help ensure judicious use of foliar insecticides. Always add a penetrating adjuvant (such as an NIS at 0.25 percent v/v) with Agri-Mek SC.

³ Rotate with products that have a different mode of action such as a Lipid Biosynthesis inhibitor (LBI) or as an Insect Growth Regulator (IGR)

⁴ Apply Fulfill at 5.5 fl oz/A. Recommend a crop or seed oil blend adjuvant with Fulfill. The use of an oil blend adjuvant is critical when Fulfill is tank-mixed with products containing or requiring sticker/binder agents. Fulfill is not recommended in tank mixtures with pesticides containing sticker/binder adjuvant such as Bravo Weather Stik® or Dithane Rainshield® fungicides.

⁵ MRL's for both Agri-Mek and Fulfill are established for most key export markets.

Always follow label directions.



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Agri-Mek SC is a Restricted Use Pesticide. Agri-Mek SC and Platinum 75SG are highly toxic to bees exposed to direct treatment on blooming crops and weeds. Do not apply these products or allow them to drift onto blooming plants while bees are foraging adjacent to the treatment area. CruiserMaxx Potato is an on-seed application of Cruiser 5FS insecticide and Apron XL and Maxim 4FS fungicides.

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G&S 402.55508

SLC 1836A 12-2012