MGK Update

IR-4 Food Use Workshop
Atlanta, GA
September 9-10, 2014
Agenda

• Pyrethrins and PBO
  – Existing Tolerances
  – IR-4 Crop Trials
  – Task Force Crop Trials
  – Crops Not Supported
  – Status to date

• Sabadilla
  – Veratran D update
Tolerance History

• Pyrethrins and PBO have been exempt from tolerance for pre-harvest use since late 1940’s

• Are existing post-harvest uses being added and re-evaluated with residue studies

• But because we do see residues in many crops, EPA had PJV and PBTF II do residue studies to set tolerances
Pre-harvest Crop Tolerances Approved by EPA in Reregistration

- Root & Tuber for Py Only
- Cucurbit Vegetables for Py and PBO
- Fruiting Vegetables for Py Only
- Citrus for Py Only
IR-4 Crop Trials

- Leafy Vegetables-2 trials
- Brassica Vegetables-2 trials
- Fruiting Vegetables-GH Tomatoes-2 trials
- Stone Fruit-8 trials
- Berries-5 trials
- Citrus-growing for PBO; PH for Py & PBO; 4 trials
- Tree Nuts-PH; 5 trials
- Herbs & Spices-8 trials
PJV & PBO Task Force Trials

- Root & Tuber Vegetables - PBO & Leaves - both
- Bulb Vegetables
- Leafy Vegetables
- Fruiting Vegetables
- Brassica Leafy Vegetables
- Legumes & Foliage
- Pome Fruit
- Berries
- Alfalfa & Clover - forage
Crop Groups **Not Supported**

- Cereal Grains-Growing & Forage
- Tree Nuts-Growing
- Grass-forage
- Cotton-growing or forage
- Oil Seeds
- Soybeans
- Miscellaneous crops (Tropical fruits)
Miscellaneous Crops **NOT** supported for Pre-harvest

**From RED:**
Birdseed, asparagus, atamoya, avocado, cacao, cherimoya, coconut-green, cottonseed, date, durian, fig, flax, guava (acerola, feijoa, passion fruit rambutan, starfruit), jojoba, kiwifruit, lychee, mango, okra, papaya, peanut, persimmon, pomegranate, pineapple, safflower, sugarcane, sunflower, tea
Miscellaneous Crops Supported

- Banana (MGK) for import tolerance
- Coffee and edible fungi (IR-4)
- Post-harvest of many fruits for import tolerances
Current Status

• Residue Studies submitted to EPA for review.
• Preparing tolerance petitions for Py and PBO pre- and post-harvest.
• Anticipate tolerances will be proposed by EPA in 18-24 months within Registration Review process.
- Only product registered with EPA using *sabadilla* as primary active ingredient

- Veratran D now OMRI-listed and NOP-approved
Veratran D – current status

- Very encouraging results in past year with efficacy in lab bioassays and preliminary field trials

- Focus for Veratran D field efficacy trials:
  1. Key invasive pests
  2. Highest opportunity crop groups
  3. Organic/Sustainable segment

- R&D efforts underway to standardize sabadilla formula (similar to pyrethrum)
Efficacy on Bagrada Bug
University of Arizona - Lab Bioassay
Yuma Agricultural Center
April, 2014

Cumulative% Mortality

Hours After Treatment

Veratran D (15 lbs)  Entrust SC (4 oz)  Untreated

3 hrs  6 hrs  12 hrs  24 hrs  48 hrs  72 hrs
BMSB Lifestage efficacy on Bell Pepper

University of Maryland
Beltsville Research and Education Center. June, 2013

- Untreated
  - Adults: 8.1
  - Late instars: 7.1
  - Early instars: 6.3

- PFR-97 (1.5 lbs)
  - Adults: 7.5
  - Late instars: 6.4
  - Early instars: 5.1

- M-Pede (2%)
  - Adults: 5.9
  - Late instars: 4.3
  - Early instars: 3.1

- Entrust (5 oz)
  - Adults: 6.8
  - Late instars: 2.3
  - Early instars: 0.4

- Veratran D (15 lbs)
  - Adults: 4.8
  - Late instars: 1.4
  - Early instars: 0.1
Veratran D 2014 Field Efficacy trials

– Univ Minnesota
  • Colo Potato Beetle on potato

– Rutgers
  • Brown Marm. Stink Bug on peaches
  • Spotted Wing Drosophila on berries

– Cornell
  • Squash bug, Striped Cuke Beetle, Flea Beetle, Swede Midge, Onion Thrips, Colo Potato Beetle

– North Carolina St.
  • SWD on blackberries

– Michigan St.
  • SWD on caneberries
Near-term label expansion opportunities

- Crop Group 13 (Berries)
- Crop Group 9 (Cucurbit Vegetables)
- Crop Group 8 (Fruiting Vegetables)
Thank you for your support!

MGK Crop Protection
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