

GROWING **Opportunities**

# VGAM Update

## Minor Use Registrations & Projects

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# Minor Use Registrations 2009 – 2011 (March)

# Root Vegetables



| Pest               | Crop       | Product                          | Active       |
|--------------------|------------|----------------------------------|--------------|
| White mould (PH)   | carrot     | ER: Scholar<br>December 31, 2010 | fludioxonil  |
| <i>Rhizoctonia</i> | crop group | Dynasty<br>Import only           | azoxystrobin |

## Resistance Management:

Dynasty and Quadris (azoxystrobin) are both registered for use in certain root vegetables.

If you import seed treated with Dynasty, avoid using Quadris in-crop (Quadris label restricts use to 1 application per season in many crops, including certain root vegetables). Please refer to the labels.

# Root Vegetables

| Pest            | Crop              | Product  | Active                      |
|-----------------|-------------------|----------|-----------------------------|
| <i>Botrytis</i> | crop group<br>1B* | Switch** | cyprodinil +<br>fludioxonil |

\*CG 1B includes beet, carrot, parsnip, rutabaga, etc.

\*\*Switch is currently not marketed in western Canada.

# Root Vegetables

| <b>Pest</b>    | <b>Crop</b> | <b>Product</b>    | <b>Active</b>  |
|----------------|-------------|-------------------|----------------|
| Labelled weeds | carrot      | Dual II<br>Magnum | s- metolachlor |
| Labelled weeds | beet        | Upbeet            | trifensulfuron |

NB – velvetleaf is the only weed listed on the Upbeet label. The registrant indicated that Upbeet is best used as a tank mix with Betamix – which is still not registered, but hopefully will be soon...

# Root Vegetables

| Pest  | Crop   | Product                          | Active           |
|---|--------|----------------------------------|------------------|
| Silver scurf (PH), suppression              | potato | ER: Confine<br>December 31, 2010 | phosphorous acid |
| Late blight, pink rot (foliar), suppression | potato | ER: Confine<br>December 31, 2010 | phosphorous acid |

## Did you know:

Data generated here in MB (led by Peak, assisted by MAFRI) was used to support the emergency use registration for suppression of silver scurf in potatoes other than russet and/or processing types.

# Bulb Vegetables

| Pest               | Crop       | Product                               | Active             |
|--------------------|------------|---------------------------------------|--------------------|
| <i>Rhizoctonia</i> | crop group | Dynasty<br>Import only                | azoxystrobin       |
| Onion thrips       | onion      | <b>ER: Carzol</b><br>October 31, 2010 | <b>formetanate</b> |

Emergency use registration of Carzol going on to 4<sup>th</sup> year in Canada.  
Emergency use requests for Carzol in the US were denied last year (likely due to product chemistry and non-target exposure concerns).  
Many new 'softer' chemistries in the works for onion thrips in onion.



# Brassicas

| Pest                           | Crop       | Product                | Active                    |
|--------------------------------|------------|------------------------|---------------------------|
| Clubroot                       | crop group | Allegro                | fluazinam                 |
| <i>Botrytis</i> , downy mildew | crop group | Pristine               | boscalid + pyraclostrobin |
| downy mildew                   | crop group | Reason                 | fenamidone                |
| <i>Rhizoctonia</i>             | crop group | Dynasty<br>Import only | azoxystrobin              |

2009/2010 survey of ~150 Canola fields and 2 vegetable fields in Manitoba tested negative for clubroot (MAFRI Oilseed Specialist).

# Cucurbits

| Pest               | Crop       | Product                | Active                       |
|--------------------|------------|------------------------|------------------------------|
| Downy mildew       | crop group | Tattoo C               | propamocarb + chlorothalonil |
| <i>Rhizoctonia</i> | crop group | Dynasty<br>Import only | azoxystrobin                 |

# Other Vegetables

| <b>Pest</b>    | <b>Crop</b>   | <b>Product</b>    | <b>Active</b>       |
|----------------|---------------|-------------------|---------------------|
| Labelled weeds | Field peppers | Dual II<br>Magnum | s- metolachlor      |
| corn borer     | Field peppers | Rimon             | novaluron           |
| corn borer     | Field peppers | Coragen           | chlorantraniliprole |

# Emergency Use for 2011?

- Onion thrips in onion
  - Likely pursue product other than Carzol (using Carzol 4 years in a row is not the best strategy to deal with a resistance issue 😊)
  - Other possibilities: Success/Entrust (spinosad), Delegate (spinetoram), Movento (spirotetramat), Cyazapyr (cyantraniliprole)
- White mould in stored carrot
  - Scholar
- Silver scurf in stored potato (suppression)
  - Confine

# Emergency Use for 2011?

- Root maggot in rutabaga
  - No solution at this time
  - Emergency use registration of Clutch (clothianidin) seed treatment did not work in BC in 2009
  - Ongoing trials

# Minor Use Submissions

(up to March 2011)

# Root Vegetables: CG 1B

Crop group 1B: Carrot, radish, rutabaga, parsnip, etc.

| Pest                        | Product | Active    | Comments |
|-----------------------------|---------|-----------|----------|
| Cabbage maggot, swede midge | Rimon   | novaluron |          |

# Root Vegetables: Carrot

| Pest   | Product | Active      | Comments     |
|--|---------|-------------|--------------|
| White mould (PH)                                   | Scholar | fludioxonil | 2008 project |
| White mould, <i>Alternaria</i> , <i>Cercospora</i> | Allegro | fluazinam   | Joint IR-4   |
| <i>Pythium</i>                                     | Reason  | fenamidone  | Joint IR-4   |
| Labelled weeds                                     | Sencor  | metribuzin  | 2008 trials  |

# Root Vegetables: Beet

| Pest  | Product               | Active                        | Comments     |
|-------|-----------------------|-------------------------------|--------------|
| Weeds | Select /<br>Centurion | clethodim                     |              |
|       | Betamix*              | desmedipham +<br>phenmedipham | 2007 project |

\*Outstanding data requirements for Betamix submitted to the PMRA January 31, 2011. So it is moving forward...

# Root Vegetables: Rutabaga

| Pest           | Product | Active          | Comments |
|----------------|---------|-----------------|----------|
| Swede midge    | Assail  | acetamiprid     |          |
|                |         |                 |          |
| Labelled weeds | Muster  | ethametsulfuron |          |

# Root Vegetables: Radish

| <b>Pest</b>       | <b>Product</b>     | <b>Active</b>    | <b>Comments</b>  |
|-------------------|--------------------|------------------|------------------|
| <i>Alternaria</i> | Flint              | trifloxystrobin  | Joint IR-4       |
| Cabbage maggot    | Cyazapyr           | Cyantraniliprole |                  |
| Labelled weeds    | Select / Centurion | clethodim        | radish & parsnip |

# Root Vegetables: Potato

2,4-D for colour enhancement in red potatoes may be registered later this season...

Will notify Peak and VGAM when registration is final.

# Bulb Vegetables: Onion

| Pest            | Product | Active       | Comments                |
|-----------------|---------|--------------|-------------------------|
| <i>Botrytis</i> | Elevate | fenhexamid   | Joint IR-4<br>DB, green |
| White rot       | Folicur | tebuconazole | Joint IR-4<br>DB        |
| Onion maggot    | Success | spinosad     | DB, green               |
|                 | Lorsban | chlorpyrifos | green                   |

# Bulb Vegetables: Onion

| Pest         | Product             | Active           | Comments                |
|--------------|---------------------|------------------|-------------------------|
| Onion thrips | Carzol              | formetanate      | DB                      |
|              | Success/<br>Entrust | spinosad         | DB, green               |
|              | Movento             | spirotetramat    | Joint IR-4<br>DB, green |
|              | Delegate            | spinetoram       | Joint IR-4<br>DB, green |
|              | Cyazypyr            | cyantraniliprole | DB                      |

# Bulb Vegetables: Garlic

| Pest            | Product | Active       | Comments   |
|-----------------|---------|--------------|------------|
| <i>Fusarium</i> | Scholar | fludioxonil  |            |
| White rot       | Folicur | tebuconazole | Joint IR-4 |

# Brassicas: Crop Group

| Pest               | Product  | Active       | Comments                  |
|--------------------|----------|--------------|---------------------------|
| Downy mildew       | Quadris  | azoxystrobin | Joint IR-4<br>Reg'n soon? |
|                    | Acrobat  | dimethomorph | Joint IR-4                |
| <i>Xanthomonas</i> | Actigard | acibenzolar  | cauliflower<br>ONLY       |

# Brassicas: Crop Group

| Pest           | Product             | Active        | Comments     |
|----------------|---------------------|---------------|--------------|
| Cabbage maggot | Rimon               | novaluron     | 2004 project |
|                | Brigade             | bifenthrin    | cabbage ONLY |
| Swede midge    | Movento             | spirotetramat |              |
| Thrips         | Matador             | cyhalothrin   |              |
|                | Success/<br>Entrust | spinosad      |              |

# Brassicas: Crop Group

| Pest           | Product | Active      | Comments |
|----------------|---------|-------------|----------|
| Labelled weeds | Goal    | oxyfluorfen |          |

# Fruiting Vegetables: Peppers

| <b>Pest</b>           | <b>Product</b> | <b>Active</b>               | <b>Comments</b> |
|-----------------------|----------------|-----------------------------|-----------------|
| <i>Phytophthora</i>   | Allegro        | fluazinam                   |                 |
|                       | Acrobat        | dimethomorph                | 2005 project    |
| <i>Anthracnose</i>    | Switch         | fludioxonil +<br>cyprodinil | Joint IR-4      |
| Bacterial<br>diseases | Kasumin        | kasugamycin                 | Joint IR-4      |

# Fruiting Vegetables: Peppers

| Pest           | Product | Active      | Comments     |
|----------------|---------|-------------|--------------|
| Labelled weeds | Command | clomazone   | 2004 project |
|                | Chateau | flumioxazin |              |

# Cucurbit Vegetables: Crop Group

| Pest                                  | Product             | Active                    | Comments |
|---------------------------------------|---------------------|---------------------------|----------|
| Downy mildew                          | Tanos               | famoxadone +<br>cymoxanil |          |
| <i>Phytophthora</i> ,<br>downy mildew | Acrobat             | dimethomorph              |          |
| <i>Phytophthora</i>                   | CP100, Pic-<br>Plus | chlorpicrin               |          |

# Cucurbit Vegetables: Crop Group

| <b>Pest</b>         | <b>Product</b> | <b>Active</b>      | <b>Comments</b> |
|---------------------|----------------|--------------------|-----------------|
| Armyworm, C. looper | Avaunt         | indoxacarb         | withdrawn       |
| Cucumber beetle     | Cruiser        | thiomethoxam       | Joint IR-4      |
|                     | Clutch         | clothianidin       |                 |
|                     | Matador        | lambda-cyhalothrin |                 |
| Leafhoppers         | Applaud        | buprofenzin        | Joint IR-4      |

# Cucurbit Vegetables: Crop Group

| Pest  | Product           | Active        | Comments                       |
|-------|-------------------|---------------|--------------------------------|
| Weeds | Dual II<br>Magnum | s-metolachlor |                                |
|       | Command*          | clomazone     | FMC supports submission for MB |

\*Currently registered in eastern Canada

# Cucurbit Vegetables: Cucumber

| Pest            | Product  | Active                        | Comments                 |
|-----------------|----------|-------------------------------|--------------------------|
| <i>Pythium</i>  | Ranman   | cyazofamid                    |                          |
| Cucumber beetle | Gaucho   | imidacloprid                  | 2006 project<br>+ squash |
|                 | Mycotrol | <i>Beauvaria<br/>bassiana</i> | 2009 project<br>organic  |

# Asparagus

| <b>Pest</b>    | <b>Product</b> | <b>Active</b> | <b>Comments</b>       |
|----------------|----------------|---------------|-----------------------|
| Rust           | Folicur        | tebuconazole  | 2004 project          |
| Labelled weeds | Authority      | sulfentrazone | Registrant submission |

# Questions?

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