



Crucifer Disease Meeting
Fungicides for Control of
Black Leg

David Priebe
Pesticides Program
Oregon Department of Agriculture
(503)986-4656
dpriebe@oda.state.or.us

Crucifer Disease Meetings

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Fungicides for Control of Black Leg

- Overview of Registered Fungicides
- ODA – New Special Local Need Registrations
- Crops Grown for Seed vs. Food/Feed/Oil Crops
- Residue Tolerances and Crop Groups
- Obtaining Tolerances We Need
- Q & A

ODA Pesticide Registrations Team

- Rose Kachadoorian
 - Team Leader for Registrations, Applicator Certification/Licensing, Pesticide Stewardship/Water Quality, Endangered Species Protection, Pollinator Protection
- Ann Ketter
- Grant Jackson
- David Priebe

Registered Fungicides for Crucifer Seed Crops

- **Seed Treatments:**
 - **42-S Thiram**, EPA Reg. No. 264-929
(a.i. thiram, FRAC Group M3)
 - **Maxim 4FS**, EPA Reg. No. 100-758
(a.i. fludioxonil, FRAC Group 12)
 - **Dynasty**, EPA Reg. No. 100-1159
(a.i. azoxystrobin, FRAC Group 11)

All registered to treat seeds of ALL *Brassica* spp. vegetables, radish/daikon, and rapeseed/canola

Registered Fungicides for Crucifer Seed Crops

- **Seed Treatments, continued:**
 - **Coronet**, EPA Reg. No. 7969-274
(a.i. boscalid, FRAC Group 7 +
a.i. pyraclostrobin, FRAC Group 11)
 - Registered to treat rapeseed/canola and *Brassica* **leafy** vegetables: broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, kohlrabi, mustard greens, rape greens,...
 - NOT registered on radish/daikon or *Brassica* **root** vegetables: rutabaga and turnip

Registered Fungicides for Crucifer Seed Crops

- **Foliar Applications:**

- **Cabrio EG**, EPA Reg. No. 7969-187

(a.i. pyraclostrobin, FRAC Group 11)

Registered on *Brassica* leafy and root vegetables, radish/
daikon; NOT registered for rapeseed/canola

- **Quadris Flowable**, EPA Reg. No. 100-1098

(a.i. azoxystrobin, FRAC Group 11)

Registered on *Brassica* leafy and root vegetables, radish/
daikon, rapeseed/canola

Registered Fungicides for Crucifer Seed Crops

- **Foliar Applications, continued:**
 - **Proline 480 SC**, EPA Reg. No. 264-825
(a.i. prothioconazole, FRAC Group 3)
Registered only on canola.
 - **Priaxor Xemium Brand**, EPA Reg. No. 7969-311
(a.i. fluxapyroxad, FRAC Group 7 +
a.i. pyraclostrobin, FRAC Group 11)
Registered on rapeseed/canola (main label) and on
Brassica leafy vegetables (supplemental label).
NOTE: Approved on *Brassica* root vegetables
(turnip and rutabaga) and radish/daikon, BUT THESE
USES NOT YET ON A LABEL.

Registered Fungicides for Crucifer Seed Crops

NOTE: Above-mentioned pesticide products are registered for seed treatment or foliar applications on the crops (as noted) being grown for human food or animal feed, or for oilseed. These products may also be used on those crops being grown for seed, unless otherwise indicated on the label.

(These are full registrations under Section 3 of FIFRA.)

FIFRA Section 24(c) Special Local Need (SLN) Registrations

Special Local Need: An existing or imminent pest problem for which the State ... has determined that an appropriate federally registered pesticide is not sufficiently available.

- State may register a new end-use product for any use, or an additional use of a federally registered product.
- If a food or feed use, it must be covered by the necessary tolerance or exemption from tolerance.
- If a nonfood/nonfeed use

FIFRA Section 24(c) Special Local Need (SLN) Registrations

Pesticide Use on Crops Grown for Seed Production:

In Oregon... “certain crops when grown exclusively for seed production with the sole intent of the seed being planted, or with the sole intent of the seed being processed to produce nonedible industrial or nonedible cosmetic oil, shall be considered nonfood/nonfeed sites. If certain conditions are met..., a pesticide residue tolerance is not required to obtain a pesticide registration on the crop.”

CONDITIONS: None of the seed produced using such a registered pesticide, nor any other portion of the treated crop, may be used or distributed for human or animal consumption for one year (365 days) following the pesticide application.

SLN Registrations for Crucifer Seed Crops

- **Existing SLN for Foliar Applications:**

- Rovral Brand 4 Flowable**

- EPA Reg. No. 279-9564

- EPA SLN No. OR-130001

- (a.i. iprodione, FRAC Group 2)

- Registered for use on all *Brassica* **leafy** vegetable and *Brassica* **root** vegetable crops grown for seed. NOT registered on rapeseed/canola.
 - Only one tolerance: Broccoli

SLN Registrations for Crucifer Seed Crops

- **NEW** SLN for Seed Treatment Application

Rovral Brand 4 Flowable

EPA Reg. No. 279-9564

EPA SLN No. OR-140013

(a.i. iprodione, FRAC Group 2)

- SLN-registered for use on all *Brassica leafy* vegetable and *Brassica root* vegetable crops, *Sinapis* spp. mustards, and turnip x *Brassica* forage hybrids grown for seed. NOT registered on rapeseed/canola.
- Commercial seed treatments only, no on-farm.
- Only one tolerance: Broccoli

SLN Registrations for Crucifer Seed Crops

- **NEW SLN for Seed Treatment Application**

Mertect 340-F

EPA Reg. No. 100-889

EPA SLN No. OR-100014

(a.i. thiabendazole, FRAC Group 1)

- Newly revised label for existing SLN for clover grown for seed. Revised to add seed treatment use on all *Brassica leafy* vegetable, *Brassica root* vegetable, radish/daikon, *Sinapis* spp. mustards, and turnip x *Brassica* forage hybrid crops grown for seed. NOT registered on rapeseed/canola.
- On-farm and commercial seed treatments allowed.
- NO TOLERANCES.

SLN Registrations for Crucifer Seed Crops

- **PROPOSED SLN for Seed Treatments:**
Coronet, EPA Reg. No. 7969-274

(a.i. boscalid, FRAC Group 7 +
a.i. pyraclostrobin, FRAC Group 11)

- Recall: Registered (Sec. 3 main label) to treat seeds of rapeseed/canola and *Brassica leafy* vegetables: broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, kohlrabi, mustard greens, rape greens,...
- Proposed SLN: For seed treatments of *Brassica root* vegetables (turnip, rutabaga), radish/daikon, *Sinapis* spp. mustards, and turnip x *Brassica* forage hybrid crops grown for seed.
- Commercial seed treatments only.

SLN Registrations for Crucifer Seed Crops

- **PROPOSED SLN for Seed Treatments:**
Coronet, EPA Reg. No. 7969-274
(a.i. boscalid, FRAC Group 7 +
a.i. pyraclostrobin, FRAC Group 11)
 - Registrant (BASF Corporation) has pledged to pursue this SLN registration, but the product cannot be supplied in appropriate packaging for this use until 2015.

SLN Registrations for Crucifer Seed Crops

- **SLNs Under Consideration/Development for Foliar Applications:**
 - **Tilt**, EPA Reg. No. 100-617
(a.i. propiconazole, FRAC Group 3)
 - **Topsin M or T-Methyl 4.5F**
(a.i. thiophanate-methyl, FRAC Group 1)
 - **Proline 480 SC**, EPA Reg. No. 264-825
(a.i. prothioconazole, FRAC Group 3)

SLN Registrations for Crucifer Seed Crops

- **Process for (these) SLNs**
 - **Beg, cajole, finesse, prod, persuade ... Earn buy-in of registrant**
 - **Data: disease control efficacy and crop safety**
 - **Letters of support from University researchers, extension, crop advisors, growers, seed processors**
 - **Label development (OSU, ODA, registrant)**
 - **Transmittal letter, other documentation to EPA**
 - **EPA may have questions, concerns, require label revisions, or disallow**

Residue Tolerances and EPA Crop Groups

Tolerances needed for Coronet full registration on Crucifer crops (i.e., to treat seeds to be planted to grow the crops for food/feed/oil):

<u>Crop Group or Commodity</u>	<u>Boscalid</u>	<u>Pyraclostrobin</u>
Root veg, except sugar beet, subgroup 1B	no	✓
Root veg, subgroup 1A, except sugar beet, garden beet, radish, and turnip	✓	X
Leaves of root/tuber vegetables, Group 2	no	✓
Turnip greens	✓	X
Brassica, head and stem, subgroup 5A	✓	✓
Brassica, leafy greens, subgroup 5B	✓	✓
Oilseed Group 20 (Canola/ <i>Synapis</i> spp.)	✓	✓

CORONET®

FUNGICIDE SEED TREATMENT

For use in brassicas, bulb vegetables, and cotton

Active Ingredients*:

pyraclostrobin: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxy]methyl]phenyl]methoxy-, methyl ester)	9.0%
boscalid: 3-pyridinecarboxamide, 2-chloro-N-(4-chloro(1,1'-biphenyl)-2-yl)-	18.0%
Other Ingredients:	73.0%
Total:	100.0%

*Contains 0.83 pound of pyraclostrobin and 1.67 pounds of boscalid per gallon.

EPA Reg. No. 7969-274

EPA Est. No. 51036-GA-001

Crop-specific Directions For Use


Crop	Target Disease	Product Use Rate in fl ozs/100 lbs Seed (lb ai/100 lbs seed)
Brassica vegetables	Seed and seedling disease (damping off) caused by <i>Rhizoctonia solani</i> , <i>Phoma lingam</i> and other seedborne fungi causing seed decay, seedling damping off, including <i>Penicillium</i> spp.	5.1 to 6.2 (0.1 to 0.12)
Bulb vegetables	Seed and seedling disease (damping off) caused by seedborne fungi (<i>Botrytis</i> , <i>Aspergillus</i> and <i>Penicillium</i> spp.) causing seed decay, seedling damping off	5.1 to 6.2 (0.1 to 0.12)
Cotton¹	Seed and seedling disease (damping off) caused by <i>Rhizoctonia solani</i> , seedborne fungi causing seed decay, and seedling damping off	3.1 to 6.2 (0.06 to 0.12)

¹For control of seed and seedling disease (damping-off) caused by *Pythium* spp., use **Coronet® fungicide seed treatment** only in conjunction with labeled rates of metenoxam- or metalaxyl-containing seed treatment products.

Getting Tolerances We Need For Full Registrations on Crucifer Crops Grown for Food/Feed/Oil

Boscalid + Pyraclostrobin, Iprodione, Prothioconazole, Thiophanate-methyl

- Registrants
- University and private research cooperators
- IR-4 Project
 - USDA program to support pesticide residue trials, especially in small-acreage specialty crops
 - Field trials, lab and data analyses, tolerance petitions to EPA
- Minimum 2 – 3 year process



David Priebe
Pesticides Division
Oregon Department of Agriculture
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dpriebe@oda.state.or.us