

## Chickpea Seed Treatment Options

### Disease Reference - Action Thresholds and Registered Seed Treatment Options

| Pathogen (Disease)   | Threshold on Seed  | Action if Over Threshold   | Seed Treatment Options     |                        |                                  |  |                       |  |                             |   |                          |                                   |                                      |   |  |
|--|--|--|----------------------------|------------------------|----------------------------------|--|-----------------------|--|-----------------------------|---|--------------------------|-----------------------------------|--------------------------------------|---|--|
|  |  |  | Agrox® FL (Norac Concepts) | Allegiance® FL (Bayer) | Apron® Advance (Syngenta Canada) | ApronMaxx® RTA + Vibrance 500 FS (co pack) (Syngenta Canada) | Belmont™ 2.7 FS (UAP) | CruiserMaxx® Vibrance Pulses** (Syngenta Canada) | Insure Pulse® (BASF Canada) | INTEGO™ Solo Fungicide (Valent Canada/NuFarm Agriculture) | Trilex® EverGol® (Bayer) | Trilex® EverGol® SHIELD** (Bayer) | Vibrance® Maxx RFC (Syngenta Canada) | Rancona Trio (UPL AgroSolutions Canada) | Zeltera Fungicide (Valent Canada/NuFarm Agriculture) |
| <i>Ascochyta rabiei</i>                                      | 0-0.3%   | Use seed treatment   |                            |                        |                                  |  |                       |  |                             |   |                          |                                   |                                      |   |  |
|  | Greater than 0.3%  | Do not plant seed  |                            |                        | X                                | X  |                       | X  | X                           |   | X*                       | X*                                | X                                    | X                                       |  |
| <i>Botrytis</i> spp. (seed-borne)                            | 10% on seed (total of Fusarium, Botrytis, and Sclerotinia)                       | Use seed treatment   |                            |                        | X                                | X  |                       | X  | X*                          |   | X                        | X                                 | X                                    | X                                       |  |
| <i>Fusarium</i> spp.   | 10% on seed (total of Fusarium, Botrytis, and Sclerotinia)<br>Soil-borne as well | Use seed treatment   |                            |                        | X                                | X  |                       | X  | X                           |   | X                        | X                                 | X                                    | X                                       |  |
| <i>Pythium</i> spp.  | Not applicable<br>Soil-borne disease only  | Use seed treatment if:<br>History of disease, seeding under cool-moist conditions, planting Kabuli chickpeas |                            | X                      | X                                | X  | X                     | X  | X                           | X   | X                        | X                                 | X                                    | X                                       |  |
| <i>Rhizoctonia</i> spp.                                      | Unknown<br>Primarily soil-borne disease  | Use seed treatment if:<br>History of disease, seeding under cool-moist conditions                            |                            |                        | X                                | X  |                       | X  | X                           |   | X                        | X                                 | X                                    | X                                       | X  |
| <i>Sclerotinia sclerotiorum</i> (seed-borne)                 | 10% on seed (total of Fusarium, Botrytis, and Sclerotinia)                       | Use seed treatment   |                            |                        |                                  |  |                       | X  |                             |   | X                        | X                                 | X                                    |   |  |
| General seed rot, root rot, damping-off, and seedling blight | Not applicable   | Use seed treatment if:<br>History of disease, seeding under cool-moist conditions                            | X                          |                        |                                  | X  |                       |  |                             |   |                          |                                   |                                      | X                                       |  |

\* Product registered for suppression only

\*\* Product contains an insecticide component

(See next page for seed treatments to manage insect pests)

## Chickpea Seed Treatment Options (continued)

### Insect Reference - Recommendations and Registered Seed Treatment Options

| Insect               | Recommendation  | Seed Treatment Options         |  |                                    |                            |                                   |
|----------------------|---|--------------------------------|--|------------------------------------|----------------------------|-----------------------------------|
|                      |   | Cruiser® 5FS (Syngenta Canada) | CruiserMaxx® Vibrance Pulses** (Syngenta Canada) | Lumivia™ CPL (Corteva Agriscience) | Stress Shield® 600 (Bayer) | Trilex® EverGol® SHIELD** (Bayer) |
| Armyworm and Cutworm | Use seed treatment if:<br>History of insect pressure on the field or in the nearby area |                                |  | X                                  |                            |                                   |
| Wireworm             | Use seed treatment if:<br>History of insect pressure on the field or in the nearby area | X                              | X  |                                    | X                          | X                                 |

\*\* Product contains fungicide components

**Action thresholds have not been identified for all disease and insect risks in chickpeas, so the recommendations provided are based on thresholds from similar crops, identified action thresholds for chickpeas, or rules of thumb.**

Understanding seed quality and using seed treatments on pulse seed when risk of disease or insect damage is present, is critical to maximizing yield.

Fungicide seed treatments protect the seed and seedlings from soil-borne diseases, as well as those diseases found on the surface of the seed or carried inside of the seed. Seed treatments will not act as a cure for seed that has high disease levels or is poor quality.

In order for a seed treatment to provide effective protection, it is important to ensure that adequate coverage of the seed is achieved and appropriate rates are used for the target pest(s).

Seed treatments will breakdown as the plant begins to develop and as a result, their limit of protection to the seed will only last for the early part of the plant's growth.

When using a seed treatment in combination with an inoculant, it is important to check with the inoculant manufacturer to ensure that there is compatibility with the seed treatment, prior to use.

Seed treated with a seed treatment may pose a risk to other organisms or plants in the environment. Dispose of all leftover treated seed properly, and do not leave treated seed on the soil surface.

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