

GROUP	1 7	FUNGICIDE
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CROWN[®]

SOLUTION

A COMBINATION SYSTEMIC AND CONTACT SEED PROTECTANT FOR USE ON LENTILS AND CHICKPEAS. CROWN[®] PROVIDES CONTROL OF SEED-BORNE ASCOCHYTA (*ASCOCHYTA RABIEI*) ON CHICKPEAS

AGRICULTURAL

GUARANTEE:

Carbathiin..... 92 g/L
Thiabendazole..... 58 g/L

REGISTRATION No. 23430
PEST CONTROL PRODUCTS ACT

KEEP OUT OF REACH OF CHILDREN

READ THE LABEL BEFORE USING

Net Contents: 10L, 200L; 1000L



Manufactured by:
Chemtura Canada Co./Cie
25 Erb Street
Elmira, Ontario N3B 3A3

24 HOUR EMERGENCY PHONE 1-866-744-3060
GROWER INFORMATION 1-800-350-1745

GENERAL INFORMATION:

CROWN[®] is a liquid seed treatment for use on lentils and chickpeas. CROWN can be applied directly to the seed in the hopper box or seed drill at planting.

DISEASE CONTROL:

CROWN contains the fungicides carbathiin and thiabendazole to control a broad spectrum of seed and seedling diseases. Carbathiin is a systemic fungicide that moves into the germinating seed to provide disease protection within the seedling. Thiabendazole has both contact and systemic activity surrounding the seed in a coat of protection from diseases that come into direct contact with the seed and providing protection to the developing seedling.

CROWN can be used on lentils to control the following diseases:

- seed borne ascochyta (*Ascochyta lentis*),
- post-emergence damping off,
- seed rots (including *Botrytis cinerea*, *Fusarium*).

CROWN can be used on chickpeas to control the following disease:

- seed borne ascochyta caused by *Ascochyta rabiei*.

CROWN will generally increase emergence and plant stands of lentils by reducing seed-borne seed rots and post-emergence damping off.

ADDITIONAL BENEFITS AND FEATURES:

CROWN reduces operator exposure to chemicals because unlike powder seed treatments, CROWN is a liquid and non-dusty. CROWN adheres to seed and will not cause build-up in the hopper box or seed drill, which would restrict the flow of seed.

DIRECTIONS FOR USE:

Lentil Rate of Application : For lentils, apply CROWN at 75 to 150 ml to 25 kg of lentil seed for control of seed rots and post-emergence damping off caused by *Rhizoctonia solani*, *Fusarium* spp, or *Botrytis cinerea*. Apply the higher rate when there is a history of high disease pressures in the field. Note that the 75 ml rate will not control Ascochyta blight on lentils, and the product must be applied at the 150 ml rate for control of this disease

Chickpea Rate of Application: Apply 75 to 150 mL of CROWN to 25 kg of chickpea seed.

For control of seedborne Ascochyta on chickpea, apply CROWN once as a seed treatment at 75 – 150 mL/25 kg of seeds. The lower rate will provide sufficient control in most cases. Use the higher rate for smaller seed size varieties. Treated seeds for use in the Prairie provinces and Ontario only. Do not graze or harvest for livestock feed.

Method of Application:**Commercial Treaters and On-Farm Auger Treating:**

CROWN is a ready to use formulation designed for commercial treaters and on-farm auger treating. CROWN is added directly to the seed as it enters a mixing chamber or auger. It is important that the seed and chemical are mixed quickly and uniformly. See instructions supplied with the applicable treater system for information on proper application techniques. When a grain auger is used for treating, running the auger less than full is the key to adequate mixing. Augers used for handling treated seed should not be used to move seed for food, feed or oil processing.

Application to seed in a Hopper Box or Seed Drill:

Partially fill the hopper box or seed drill with a pre-measured amount of seed. Apply the proper amount of CROWN evenly over the surface of the seed using 150 mL of CROWN per 25 kg of lentil or chickpea seed. DO NOT pour in one area. Mix with a paddle until all seed is of a uniform red colour, indicating adequate coverage. DO NOT MIX WITH BARE HANDS. Repeat this procedure until the hopper box or seed drill is filled. Seed can be planted immediately after treatment without drying.

Seed Treatment and Inoculum Sticker:

CROWN's unique liquid properties enable this product to perform as a sticker for inoculants. CROWN is safe to the nitrogen fixing bacterium found in peat and granular inoculants. CROWN plus inoculum

applied at planting provides disease protection and root nodulation.

Partially fill the hopper box or seed drill with a pre-measured amount of seed. Apply the proper amount of CROWN evenly over the surface of the seed using 150 ml of CROWN per 25 kg of seed. DO NOT pour in one area. Mix with a paddle until all seed is of a uniform red colour, indicating adequate coverage. DO NOT MIX WITH BARE HANDS. Read inoculum label before use. Apply the recommended amount of inoculum evenly over the treated seed and mix thoroughly with a paddle. Repeat this procedure until the hopper box or seed drill is filled. See notes under "USE PRECAUTIONS".

Seed treated with CROWN will remain damp for a period of time following treatment. This enables inoculant added to the hopper box or seed drill to adhere uniformly to seed thus ensuring adequate nodulation of lentil and chickpea seedlings.

RESISTANCE MANAGEMENT:

For resistance management, please note that CROWN contains a Group 1 and a Group 7 fungicide. Any fungal population may contain individuals naturally resistant to CROWN and other Group 1 and/or 7 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- Where possible, rotate the use of CROWN or other Group 1 and 7 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicide from a different group when such use is permitted.
- Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development.
- If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact Chemtura Canada Co./Cie at 1-800-350-1745 or at www.chemtura.com.

PRECAUTIONS:

1. Mix CROWN well prior to use by shaking the 10L container.
2. CROWN must be evenly and thoroughly distributed on the seed to achieve adequate disease control.
3. Keep hopper box and seed drill lids closed during seeding to prevent dust and dirt from sticking to seed.
4. Stir CROWN-treated seed vigorously if the seeding operating has been interrupted for several hours or overnight. This will ensure a uniform seed flow.
5. Unit planters equipped with monitoring devices may be interrupted with any foreign material such as seed debris, dust or seed treatments.
6. Seed treatment has the potential to reduce the flow of seed through equipment at a given setting compared with untreated seed. Always recalibrate before planting CROWN treated seed.
7. Left-over treated seed should not be stored, but should be double-sown around the headland.

USE RESTRICTIONS:

1. DO NOT use treated seed for food, feed or oil processing.
2. Do not contaminate food, feed domestic or irrigation water supplies, lakes, streams and ponds.
3. All bags containing treated seed for sale or use in Canada must be labelled or tagged as

follows:

"This seed has been treated with carbathiin and thiabendazole. Wear a long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seeds. DO NOT use treated seed for food, feed or oil processing. Store away from food and feed. Baggers, sowers and workers involved in handling treated seeds must wear a long-sleeved shirt and long pants, chemical-resistant gloves, shoes and socks, and a dust mask or appropriate respirator to minimize exposure to dust from treated seeds."

5. Do not graze or feed livestock on treated areas for four (4) weeks after planting.

SAFETY PRECAUTIONS:

1. **KEEP OUT OF REACH OF CHILDREN.**
2. All workers involved in treating seeds, clean-up, repair and maintenance of seed treatment equipment must wear a long-sleeved shirt and long pants, chemical-resistant gloves, and shoes and socks. Baggers, sowers and workers involved in handling treated seeds must wear a long-sleeved shirt and long pants, chemical-resistant gloves, shoes and socks, and a dust mask or appropriate respirator to minimize exposure to dust from treated seeds.
3. As CROWN is an eye irritant, protective eye wear should be worn when handling this product.
4. **DO NOT MIX WITH BARE HANDS.**
5. Use good personal hygiene, washing hands and exposed skin before eating, drinking or smoking. No food, drink or tobacco should be allowed in areas of chemical storage or use.
6. May be harmful if swallowed or absorbed through skin. Wash exposed skin after use.

TOXICOLOGICAL INFORMATION:

NOTE TO PHYSICIANS: There is no specific antidote. If swallowed, induce vomiting with SYRUP OF IPECAC or INTUBATE the stomach. This product contains petroleum distillate. Vomiting may cause aspiration pneumonia. Treat symptomatically.

FIRST AID:

IF SWALLOWED:

Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

IF IN EYES:

Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

IF ON SKIN OR CLOTHING:

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

IF INHALED:

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or product name and Pest Control Registration Number with you when seeking medical attention.

ENVIRONMENTAL HAZARDS:

The product contains a petroleum distillate, which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Also in cleaning of equipment or disposing of wastes, do not contaminate water used for human or animal consumption or by wildlife and aquatic life or for irrigation purposes.

Treated seed may be hazardous to birds and mammals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

CLEANUP:

Non-staining pigments are incorporated into CROWN to allow easy clean-up. CROWN will not

permanently stain planting - equipment. Following seeding, CROWN can be washed easily out of the hopper box or seed drill with a hose. Spills should be absorbed with a material such as vermiculite or sand, shoveled into a container and disposed of. See notes under "DISPOSAL".

STORAGE AND DISPOSAL:

STORAGE: Store product in original container only, away from other pesticides, fertilizer, food or feed. Keep container closed. Do not store CROWN in direct sunlight. Do not store CROWN above 35°C or below 0°C.

DISPOSAL:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

NOTICE TO USER:

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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