CEREAL CROPS - WHEAT

General Information

GENERAL INFORMATION:

IPCO VITAFLO SP Fungicide is a combination of a systemic fungicide (carbathiin) and a contact fungicide (thiram) to control the following diseases:

BARLEY: false loose, covered and true loose smut and leaf stripe, provides suppression of net blotch. Controls seed rot and seedling blight caused by Pythium spp. and Penicillium spp. Provides control of seed rot, seedling blight and suppression of root rot caused by Fusarium spp. and Cochliobolus sativus. Also controls seed rot due to storage fungi Aspergillus spp. and Alternaria.

WHEAT: loose smut, stinking smut or common bunt and seed-borne dwarf bunt. Controls seed rot and seedling blight caused by Pythium spp., and Penicillium spp. Provides control of seed rot, seedling blight and suppression of root rot caused by Fusarium spp. and Cochliobolus sativus. Also controls seed rot due to storage fungi Aspergillus spp. and Alternaria. Controls seed-borne Septoria.

OATS: loose and covered smut. Controls seed rot and seedling blight caused by Pythium spp. and Penicillium spp. Provides control of seed rot, seedling blight caused by Fusarium spp. and suppression of root rot caused by Cochliobolus sativus. Also controls seed rot due to storage fungi Aspergillus spp. and Alternaria.

RYE: damping-off, seedling blight and seed decay, stem smut. Controls seed rot and seedling blight caused by Pythium spp., and Penicillium spp. Provides control of seed rot, seedling blight and suppression of root rot caused by Fusarium spp. and Cochliobolus sativus. Also controls seed rot due to storage fungi Aspergillus spp. and Alternaria.

TRITICALE: damping-off, seedling blight and seed decay.

FLAX AND EDIBLE OIL FLAX INCLUDING LOW LINOLENIC ACID VARIETIES: seed rot, root rot and seedling blight caused by Rhizoctonia solani and Fusarium.

CORN: damping-off and seed decay.

DRY COMMON BEANS: early season seed rot, root rot and seedling blight caused by Rhizoctonia solani. Also controls seedborne Anthracnose (Colletotrichum lindemuthianum). Will not protect from wind borne spores. This product will not control Anthracnose if seed is severely infected.

SNAP COMMON BEANS: early season seed rot, root rot and seedling blight caused by Rhizoctonia solani. Also controls seedborne Anthracnose (Colletotrichum lindemuthianum). Will not protect from wind borne spores. This product will not control Anthracnose if seed is severely infected.

PEAS: seed rot and seedling blight caused by Mycosphaerella (Ascochyta), Fusarium spp. and Rhizoctonia solani and Pythium.

LENTILS: control of seed rot, early season root rot and seedling blight caused by Botrytis cinerea, Fusarium, Pythium spp. and Rhizoctonia solani.

SOYBEANS: seed rot and seedling blight caused by Phomopsis spp., Rhizoctonia solani and Fusarium spp.

IPCO VITAFLO SP Fungicide will generally increase emergence and plant stands of wheat, oats, barley and peas by reducing seed-borne seed rots and seedling blights.

IPCO VITAFLO SP Fungicide has no vapour action. Thorough seed coverage is required.

DIRECTIONS FOR USE:

IPCO VITAFLO SP Fungicide is designed to be used undiluted in commercial seed treaters. Undiluted IPCO VITAFLO SP Fungicide can be used at temperatures down to -20?C. Treater calibration will be affected by temperature and should be rechecked on a regular basis.

Centrifugal pumps are not recommended for pumping IPCO VITAFLO SP Fungicide. Use of a Vitaflo Pump is recommended. Contact your IPCO VITAFLO SP Fungicide dealer for complete information on the Vitaflo Pump.

Lines with a minimum inside diameter of 2 cm are recommended for pumping IPCO VITAFLO SP Fungicide. Polypropylene lines are preferred.

SHAKE, STIR OR OTHERWISE MIX THIS PRODUCT WELL BEFORE USING. If containers of IPCO VITAFLO SP Fungicide have been in storage for several months, some settling may occur and require agitation to re-suspend the product. To re-suspend the settled material prior to application:

- 1L to 10L containers can be shaken;

- 10L to 200L containers should be turned upside down for ½ hour and then rolled back and forth several times;

- 200L to bulk must be mechanically agitated or recirculated.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that IPCO VITAFLO SP Fungicide contains a Group 7 and a Group M fungicide. Any fungal population may contain individuals naturally resistant to IPCO VITAFLO SP Fungicide and other Group 7 or M 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 IPCO VITAFLO SP Fungicide or other Group 7 or M 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 Interprovincial Cooperative Limited at (1-204-233-3461) or at www.ipco.ca.

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. Do not store IPCO VITAFLO SP Fungicide in direct sunlight. Do not store IPCO VITAFLO SP Fungicide at temperatures above 35?C.

4. IPCO VITAFLO SP Fungicide becomes more viscous under extreme cold temperatures. This product works best at temperatures of -20?C and above.

5. Mixing of IPCO VITAFLO SP Fungicide with other seed treatment products may result in gelling or sedimentation. Seed treater lines and reservoirs should therefore be thoroughly cleaned before changing over to IPCO VITAFLO SP Fungicide. For cleaning lines and reservoirs, flush with water containing a detergent.

6. Seeding rate should be checked during planting.

7. Do not graze or feed livestock on treated areas for 4 weeks after planting except for the following crops:

Soybeans – Do not graze or feed livestock on forage and hay on treated areas.

Dry Beans – Do not graze or feed on bean forage for 60 days after planting.

8. Do not graze or feed on treated area for six weeks after planting: Barley, Oats, Wheat

9. All bags containing treated seed for sale or use in Canada must be labeled or tagged as follows:

\"This seed has been treated with carbathiin and thiram. Wear a long-sleeved shirt, long pants, shoes and socks, 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.”

10. IPCO VITAFLO SP Fungicide treated wheat, oats, barley, rye, triticale and flax seed may be stored for up to 18 months without reduction in germination due to the treatment chemical.

11. IPCO VITAFLO SP Fungicide treated corn seed may be stored for up to one year without reduction in germination due to the treatment chemical.

12. Do not store treated snap common bean, dry common bean, peas, lentils or soybean seed.

PRECAUTIONS:

1. KEEP OUT OF REACH OF CHILDREN.

2. Warning: Eye Irritant. DO NOT get into eyes. The operator is advised to wear goggles to protect eyes from possible splashing. In case of contact with eyes, flush IMMEDIATELY with running water and seek medical attention.

3. Harmful if swallowed, inhaled or absorbed through the skin. Do not swallow, do not get on skin or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash separately before reuse.

4. ALWAYS SHAKE, STIR OR OTHERWISE MIX THIS PRODUCT WELL BEFORE USING.

5. 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.

6. Because of possible unpleasant side effects, alcoholic beverages should be avoided for 24 hours before or after working with IPCO VITAFLO SP Fungicide or treated seed.

7. If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada’s web site at www.croplife.ca.

Limitations, Restrictions, and Exceptions

IPCO Vitaflo SP Fungicide is a dual action seed treatment fungicide that protects against a wide variety of seed and soil borne diseases on both pulse and cereal crops. What makes Vitaflo SP Fungicide an excellent addition to any crop protection program is that it has two active ingredients: thiram, which provides immediate contact protection from soil borne diseases, and carbathiin, which provides lasting systemic protection. Because of the extensive range of pathogens it protects against and the wide variety of crops it can be used on, Vitaflo SP Fungicide will prove to be an effective, versatile and economical crop protection tool on any farm, to help maximize the yield potential of your crop.

- Low rate gives partial control of true loose smut in wheat/barley and stem smut in rye. Use high rate for Septoria, seed rot and seedling blight, and suppression of root rot. Also use high rate for control of dwarf bunt in winter wheat.

Application Information:

Vitaflo SP Fungicide is designed to be used undiluted in commercial seed treaters, however, it can be diluted to for use in slurry treaters. DO NOT dilute to more than 25% water. Beyond this, the active ingredient will settle out of solution and the product will not be as effective. If diluted Vitaflo SP Fungicide is left in storage, some agitation may be required.

Compatibility with Rhizobium – based Inoculants for Pulse Crops:

Vitaflo SP Fungicide is compatible with many Rhizobium–based inoculants on today's market, however there are some products that are not compatible or have restrictions2 when used with Vitaflo SP Fungicide. The use of liquid Rhizobium inoculants in combination with Vitaflo SP Fungicide is not recommended on peas and lentils. For other pulse crops, see the inoculant label for compatibility and restrictions, as there may be reduced times between treatment and planting when using an inoculants in conjunction with Vitaflo SP Fungicide. There are no restrictions when using a granular Rhizobium–based inoculant with Vitaflo SP Fungicide.

Restrictions

All seed treated with Vitaflo SP Fungicide must be labeled as follows: "This seed has been treated with IPCO Vitaflo SP Fungicide liquid seed protectant containing carbathiin and thiram. Do not use for feed, food or oil processing."

Grazing

DO NOT graze or feed livestock on treated area for four weeks after planting except for the following crops:

Crop Grazing Interval

Soybean: DO NOT graze or feed livestock on forage and hay on treated areas

Bean: DO NOT graze or feed on bean forage for 60 days

Wheat: DO NOT graze or feed on treated area for 6 weeks

Barley: DO NOT graze or feed on treated area for 6 weeks

Method

Seed Treatment

Rates

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Timings

N.A.