

# CANOLA

## General Information

### PRODUCT INFORMATION

Helix Vibrance is a seed treatment product that contains both insecticide and fungicide components with activity against certain early season insects, and seed borne and damping off diseases of canola. Thiamethoxam, the insecticide component, provides activity against aphids, flea beetles, seedcorn maggot, white grubs, and wireworms. The remaining components are fungicides with activity against diseases caused by *Alternaria* species, *Pythium* species, *Fusarium* species, *Rhizoctonia* species, and seed-borne blackleg (*Leptosphaeria maculans*).

### SEED BAG LABEL REQUIREMENTS

The Federal Seed Act requires that bags containing treated seeds shall be labeled with the following statements:

- This seed has been treated with thiamethoxam insecticide and fludioxonil, difenoconazole, mefenoxam, and sedaxane fungicides.
- Do not use for feed, food, or oil purposes.
- User is responsible for ensuring that the seed bag meets all requirements under the Federal Seed Act.

In addition, the U.S. Environmental Protection Agency requires the following statements on bags containing seeds treated with Helix Vibrance:

#### - Ground Water Advisory:

Thiamethoxam has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into the ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Mefenoxam is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

#### - Pollinator Precautions:

Thiamethoxam is highly toxic to bees, and effects are possible as a result of exposure to translocated residues in blooming crops.

- Excess treated seed may be used for ethanol production only if (1) byproducts are not used for livestock feed and (2) no measurable residues of pesticide remain in the ethanol by-products that are used in agronomic practice.
- Do not allow children, pets, or livestock to have access to treated seed.
- Store away from feeds and foodstuffs.
- Wear long-sleeved shirt, long pants and chemical resistant gloves when handling treated seed.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading.
- Treated seed must be planted into the soil at a depth greater than 1/2 inch.
- Dispose of all excess treated seed. Leftover treated seed may be double-sown around the headland or buried away from water sources in accordance with local requirements.
- Do not contaminate water bodies when disposing of planting equipment wash waters.
- Dispose of seed packaging in accordance with local requirements.
- For seed treated with Helix Vibrance, do not graze or feed livestock on treated areas for 45 days after planting.
- In the event of a crop failure or harvest of a crop grown from Helix Vibrance treated seed, the field may be replanted immediately to canola, soybean, barley, oat, rye, triticale and wheat, sweet corn, and chickpea.
- Alfalfa, Brassica (cole) leafy vegetables, buckwheat, corn, pearl millet, proso millet, popcorn, rice (dry-seeded), sorghum, teosinte, wild rice, cotton, cucurbit vegetables, dry bulb onions, fruiting vegetables, leafy vegetables, legume vegetables, mint (peppermint and spearmint), oil seed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, peanuts, rapeseed seed, and safflower seed), root vegetables, strawberry, sunflowers, tobacco, and tuberous and corm vegetables may be planted 30 days from the date the Helix Vibrance treated seed was planted.
- For any other crop, the minimum plant back interval is 120 days from the date the Helix Vibrance treated seed was planted. A cover crop other than the crops listed above that is planted for erosion control or soil improvement may be planted sooner than the 120 day interval; however, the crop may not be grazed or harvested for food or feed.

- Do not use at a rate that will result in more than 0.05 lb thiamethoxam per acre (22.7 grams ai/A) per year as a seed treatment application.
- This seed has been treated with 0.01 mg ai thiamethoxam per seed.
- Do not make any soil or foliar applications containing thiamethoxam to crops grown from seed treated with Helix Vibrance.

## RESISTANCE MANAGEMENT

For resistance management, please note that Helix Vibrance contains Group 3/difenoconazole, Group 4/mefenoxam, Group 7/sedaxane and Group 12/ fludioxonil fungicides. Any fungal populations may contain individuals naturally resistant to Helix Vibrance and other Group 3, Group 4, Group 7 or Group 12 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

Difenoconazole belongs to the triazole class of chemistry and is a demethylation inhibitor of sterol biosynthesis (DMI) which disrupts membrane synthesis of the fungal cell. Mefenoxam belongs to the phenylamide class of chemistry which interferes with fungal RNA synthesis. Sedaxane is a succinate dehydrogenase inhibitor (SDHI) and belongs to the carboxamide class of chemistry which disrupts cellular respiration and energy generation. Fludioxonil belongs to the phenylpyrrole class of chemistry which interferes with osmotic signal transduction.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of Helix Vibrance or other Group 3, Group 4, Group 7 or Group 12 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicide from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to

manage resistance.

- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crop and pathogens.
- For further information or to report suspected resistance contact Syngenta at 1-866-Syngent(a) (866-796-4368). You can also contact your pesticide distributor or university extension specialist to report resistance.

For resistance management, Helix Vibrance contains a Group 4A/thiamethoxam insecticide. Any insect population may contain individuals naturally resistant to Helix Vibrance and other Group 4A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

Thiamethoxam is a systemic insecticide belonging to the neonicotinoid class of chemistry which includes nicotinic acetylcholine receptor (nAChR) agonists.

In order to maintain susceptibility to this class of chemistry:

- Avoid using Group 4A insecticides exclusively for season long control of insect species with more than one generation per crop season.
- For insect species with successive or overlapping generations, apply [brand name] or other Group 4A insecticides using a “treatment window” approach. A treatment window is a period of time as defined by the stage of crop development and/or the biology of the pests of concern. Within the treatment window, depending on the length of residual activity, there may either be single or consecutive applications (seed treatment, soil, foliar, unless otherwise stated in the Directions for Use) of the Group 4A insecticides. When using Helix Vibrance seed treatment in the first treatment window rotate to effective products with a different mode of action in the subsequent treatment window before making additional applications of Group 4A insecticides.
- A treatment window rotation, along with other IPM practices for the crop and use area, is considered an effective strategy for preventing or delaying a pest’s ability to develop resistance to this class of chemistry.
- If resistance is suspected, do not apply Helix Vibrance or any other Group 4A insecticides.

Other Insect Resistance Management (IRM) practices include:

- Incorporating IPM techniques into your insect control program.
- Monitoring treated insect populations for loss of field efficacy.
- Using tank-mixtures or premixes with insecticides from a different target site of action group as long as the involved products are all registered for the same crop outlet and effective rates are applied.

For additional information on Insect Resistance Management:

- Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations.
- Visit the Insecticide Resistance Action Committee (IRAC) on the web at:  
<http://www.irc-online.org/>.

Syngenta encourages responsible product stewardship to ensure effective long term control of the fungal and insect pests on this label.

## Limitations, Restrictions, and Exceptions

### Canola

To provide early season protection against aphids, flea beetles, seedcorn maggot, white grubs, wireworms, seed-borne blackleg (*Leptosphaeria maculans*), seed-borne *Alternaria*, and the seedling disease complex (damping-off, seedling blight, seed rot, and root rot) caused by *Pythium* species, *Fusarium* species, and *Rhizoctonia* species, apply Helix Vibrance at 23 fluid ounces of product per 100 pounds of seed.

### Method

#### [Seed Treatment](#)

### Rates

#### [field rates 0](#)

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### Timings

#### [Early season](#)