

## **PREHARVEST TREATMENT**

### General Information

#### GENERAL INFORMATION

Do not apply this product using aerial spray equipment except under conditions as specified within the label.

Observe buffer zones specified in Section 5.3

IPCO Factor 540 Liquid Herbicide, a water soluble liquid, mixes readily with water for application as a foliage spray for the control or destruction of most herbaceous plants. It may be applied through most standard industrial or field type sprayers after dilution and thorough mixing with water in accordance with the booklet instructions.

This herbicide moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days but on most perennial weeds may not occur until 7 to 10 days. Extremely cool or cloudy weather at treatment time may slow down activity of this product and delay visual effects of control. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above ground growth and deterioration of underground plant parts.

Delay application until vegetation has emerged to the stages described for control of such vegetation under the "Annual and Perennial Weed Control" (section 7.0 and 8.0) to provide adequate leaf surface to receive the spray. Unemerged plants arising from underground rhizomes or root stocks of perennials will not be affected by the spray and will continue to grow. For this reason best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per hectare within the recommended range when weed growth is heavy or dense, or weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease

or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

This product does not provide residual weed control. For subsequent residual weed control follow a label approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

Rainfall occurring within 60 minutes of treatment may result in reduced weed control. Heavy rainfall immediately after application may wash the chemical off the foliage and a repeat treatment may be required. Do not apply if rainfall is forecast for the time of application.

Do not mix with any surfactant, pesticide, herbicide oils or any other material other than water unless specified in this booklet. For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of run-off.

#### RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, IPCO Factor 540 Liquid Herbicide is a Group 9 herbicide.

Any weed population may contain or develop plants naturally resistant to IPCO Factor 540 Liquid Herbicide and other Group 9 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field.

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 herbicide resistance:

- Where possible, rotate the use of IPCO Factor 540 Liquid Herbicide or other Group 9 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical

information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.

- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Interprovincial Cooperative at 1-204-233-3461.

## PRECAUTIONS

ATTENTION: AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES SINCE SEVERE INJURY OR DESTRUCTION MAY RESULT.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

DO NOT USE IN GREENHOUSES. REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

Clean sprayers and parts immediately after using this product by thoroughly flushing with water. Do not contaminate water sources by disposal of wastes or cleaning of equipment.

NOTE: Use of this product in any manner not consistent with this booklet may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

## MIXING WITH WATER

For ground or industrial type sprayers, fill the spray tank with one-half the required amount of water. Add the proper amount of herbicide, see "Weed Control" (sections 7.1 and 8.1) and mix well before adding the remaining portion of water. Placing the filling hose below the surface of the liquid solution will prevent excessive foaming.

Removing hose from tank immediately will avoid back siphoning into water source. Use of mechanical agitators may cause excessive foaming. Bypass lines should terminate at the bottom of the tank.

For use in knapsack sprayers, it is suggested that the proper amount of this herbicide be mixed with water in a larger container. Fill sprayer with the mixed solution.

## BOOM EQUIPMENT

For control of perennial weeds and woody brush and trees listed in this booklet using conventional boom equipment – apply this product in 50 to 300 litres of clean water per hectare as a broadcast spray using no more than 275 kPa pressure. See “Weed Control” (sections 7.1 and 8.1) for rates to control specific weeds.

For control of annual weeds listed in this booklet using conventional boom equipment – Apply this product in 50 to 100 litres of clean water per hectare as a broadcast spray, except as otherwise stated on the label using no more than 275 kPa pressure. See “Weed Control” (sections 7.1 and 8.1) for rates to control specific weeds.

## HAND HELD AND HIGH VOLUME EQUIPMENT

(use coarse sprays only)

For control of weeds and woody brush and trees listed in the “Weed Control” section (6.0) of the label using knapsack sprayers or high volume spraying equipment utilizing handguns or other suitable nozzle arrangements – Unless otherwise specified, make a 0.67 percent solution of this product in water (0.67 litres of this product in 100 litres of water) and apply to foliage of vegetation to be controlled.

For best results, use a 1.34 percent solution (1.34 litres of this product in 100 litres of water) on harder to control perennials such as field bindweed, hemp dogbane, milkweed and Canada thistle.

Applications should be made on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to point of run-off. Handgun applications should be properly directed to avoid spraying desirable plants.

## SELECTIVE EQUIPMENT

Selective equipment such as WIPER and ROLLER applicators can be used for weed control in soy and dry beans, orchards, vineyards, cranberries, strawberries and non-crop areas. For information regarding use of this product with selective equipment, refer to “Selective Equipment” (section 9.12).

## AERIAL EQUIPMENT

Aerial application can only be used for weed control in preharvest situations or industrial rights-of-way. Refer to section 5.3, 9.9.2 and 10.2.2 for more information.

### Directions for use

Apply only by fixed-wing or rotary aircraft which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of the label. Ensure that the maximum boom width does not exceed 65% of the wing span. Nozzle type, size and orientation must be configured to deliver a droplet size VMD in the coarse (400 - 600 microns) or very coarse (600 - 1000) range. Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate(s) recommended for aerial application on the label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices, or equivalent electronic positioning systems (GPS). The use of spotter planes is recommended.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills.

**PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART.**

**LANDING GEAR ARE MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38412 may prevent corrosion.

### Use Precautions

Use only when meteorological conditions at the treatment site allow for complete and even target coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides. Do not apply to any body of water. Avoid drifting of spray onto any body of water or other nontarget areas. Specified buffer zones should be observed.

Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Limitations, Restrictions, and Exceptions

#### PREHARVEST TREATMENT

#### CONTROL OF QUACKGRASS, CANADA THISTLE, MILKWEED, TOADFLAX AND DANDELION; SEASON-LONG CONTROL OF PERENNIAL SOW THISTLE, AND HARVEST MANAGEMENT

For control of quackgrass, Canada thistle, common milkweed, toadflax and dandelion; and season-long control of perennial sow thistle, IPCO Factor 540 Liquid Herbicide can be applied prior to harvest of wheat, barley (including malting barley), oats, canola (rapeseed) (including glyphosate tolerant varieties), flax (including low linolenic acid varieties), lentils, peas, dry beans, soybeans (including glyphosate tolerant varieties) and forages. DO NOT apply to crops if grown for seed production.

This treatment may also provide harvest management benefits, by drying down crop and weed vegetative growth, for example, where late flushes of annual weeds, green vegetative crop growth, or late tillering may interfere with harvest operations.

EXTREMELY COOL, WET AND/OR CLOUDY WEATHER CONDITIONS BETWEEN THE TIME OF APPLICATION AND THE ANTICIPATED HARVEST DATE MAY SLOW DOWN ACTIVITY OF THIS PRODUCT, THEREBY DELAYING CROP DRYDOWN AND HARVEST DATE. Preharvest treatment to glyphosate tolerant varieties of canola and soybean provides weed control only.

IPCO Factor 540 Liquid Herbicide should be applied preharvest at 1.67 litres per hectare in 50 to 100 litres per hectare of clean water, by ground application only. Apply only when the crop has 30 percent or less grain moisture content. This stage

typically occurs 7 to 14 days before harvest. For forage crops, apply this product at 1.67 to 3.33 litres per hectare 3 to 7 days prior to the last cut before rotation or forage renovation. Consult the table “Guidelines for Timing of Preharvest Applications” (section 9.9.1) for visual indicators of this stage in each crop. For the best weed control results, quackgrass should be actively growing and have at least 4 to 5 green leaves. Canada thistle and perennial sow thistle should be actively growing and at or beyond the bud stage for best results.

Common milkweed should be at the bud to bloom stage and actively growing for best results. Applications for weed control (not for harvest management) must be made at the correct stage of both weed and crop growth.

Apply only during the period 7 to 14 days (or 3 to 7 days for forage applications) before harvest to ensure best weed control and to maximize harvest management benefits. Earlier application may reduce crop yield and/or quality, and may lead to excess glyphosate residues in the crop.

Overspray or drift to important wildlife habitats such as bodies of water, wetlands (e.g., sloughs), shelterbelts, woodlots and other cover on the edges of fields frequented by wildlife, should be avoided. Leave a 15 metre buffer zone between the last spray swath and the edge of any of these habitats.

Do not expose or contaminate any body of water or non-target vegetation by direct application, spray drift, or when cleaning and rinsing spray equipment.

**DO NOT APPLY BY AIR.**

#### **PREHARVEST AERIAL APPLICATION**

Refer to the general guidelines for aerial application in Sections 5.2 and 5.3 as well as specific instructions in this section

#### **RESTRICTED USE**

#### **AERIAL PREHARVEST APPLICATION**

**PRAIRIE PROVINCES ONLY (including PEACE RIVER REGION OF B.C.)**

#### **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.

**NATURE OF RESTRICTION:** This product is to be used only in the manner authorized. For use only by aerial applicators and aerial application services approved by the provincial regulatory agency to apply this product with aerial application equipment. To qualify for consideration of provincial approval, the following requirements must be demonstrated to the provincial regulatory agency:

1. Aircraft used in the application of this product must have been configured and calibrated to acceptable standards at a recognized calibration (patterning) clinic within 20 months of the date of application. The spray system must not have been subjected to major changes (new nozzles, booms or configurations) since the calibration, and must meet critical drift management standards e.g. maximum boom width 65% of wing span; nozzle type, size and orientation to minimize drift and deliver droplet size VMD in the coarse (400 - 600 microns) or very coarse (600 - 1000 microns) range.
2. Aircraft used in the application of this product must carry a minimum of \$25,000 drift insurance in addition to any provincial requirements for general comprehensive insurance coverage.
3. Applicators using this product must have successfully completed a ROUNDUP herbicide aerial application training course provided by Monsanto Canada Inc.
4. Aerial application services applying this product must employ on staff at least one pilot applicator with at least 250 hours of actual aerial application time and a minimum of 100 hours within the last 24 month period. All pilots who do not meet the minimum experience standard must work under the direct daily supervision of a qualified pilot. Refer to general directions and precautions concerning aerial application and Buffer zones, sections 5.2, and 5.3.

#### DIRECTIONS FOR USE

IPCO Factor 540 Liquid Herbicide may be applied with aerial application equipment for control of quackgrass, Canada thistle, common milkweed, toadflax and dandelion, and seasonlong control of perennial sow thistle. IPCO Factor 540 Liquid Herbicide can be applied prior to harvest of wheat, barley (including malting



barley), oats, canola (rapeseed), flax (including low linolenic acid varieties), lentils, peas, dry beans and soybeans. DO NOT use on forages. DO NOT apply to any crops if grown for seed production.

This treatment may also provide harvest management benefits, by drying down crop and weed vegetative growth, for example, where late flushes of annual weeds, green vegetative crop growth, or late tillering may interfere with harvest operations.

EXTREMELY COOL, WET AND/OR CLOUDY WEATHER CONDITIONS BETWEEN THE TIME OF APPLICATION AND THE ANTICIPATED HARVEST DATE MAY SLOW DOWN ACTIVITY OF THIS PRODUCT, THEREBY DELAYING CROP DRYDOWN AND HARVEST DATE.

IPCO Factor 540 Liquid Herbicide should be applied at 1.67 L/ha in 20 - 50 L/ha of clean water with aerial application equipment. Apply only when the crop has 30% of less grain moisture content. This stage typically occurs 7 to 14 days before harvest. Consult the table "Guidelines for Timing of Preharvest Applications" (Section 9.9.1) for visual indicators of this stage in each crop. For the best weed control results quackgrass should be actively growing and have at least 4 to 5 green leaves. Canada thistle and perennial sow thistle should be actively growing and at or beyond the bud stage for best results.

Common milkweed should be at the bud to bloom stage and actively growing for best results. Applications for weed control (not for harvest management) must be made at the correct stage of both weed and crop growth.

Apply only during the period 7 - 14 days before harvest to ensure best weed control and to maximize harvest management benefits. Earlier application may reduce crop yield and/or quality, and may lead to excess glyphosate residues in the crop.

Method

[Broadcast/Foliar Ground](#)

Rates

[field rates 0](#)

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Timings

[Preemergence \(Weed\)](#)