

2024-03-07
2023-1396
Container Label

GROUP 1	HERBICIDE
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ARROW ALL IN®

POST-EMERGENCE HERBICIDE

FOR CONTROL OF GRASSES IN HIGHBUSH BLUEBERRIES, CRANBERRY, CANOLA (including imazethapyr-tolerant varieties), FLAX (including low linolenic acid varieties), FIELD PEAS, LENTILS, DESI and KABULI CHICKPEAS, DRY ONIONS, POTATOES, MUSTARD (oriental, brown, yellow) (condiment type only), SOYBEANS, SEEDLING ALFALFA, SUNFLOWERS, DRY BEANS (Pinto, Black, Great Northern, Red, Pink and Navy), CORIANDER, FENUGREEK, PRAIRIE CARNATION and SPINACH

COMMERCIAL (AGRICULTURAL)

EMULSIFIABLE CONCENTRATE

ACTIVE INGREDIENT: CLETHODIM 120 g/L

REGISTRATION NO. 33225 PEST CONTROL PRODUCTS ACT



CAUTION

POISON

KEEP OUT OF REACH OF CHILDREN
READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

NET CONTENTS: 1-1050 Litres

ADAMA Agricultural Solutions Canada Ltd.
300 - 191 Lombard Avenue
Winnipeg, MB R3B 0X1
1-855-264-6262

For emergency medical help and health/safety inquiries call ProPharma Group at 1.877.250.9291
(24 hours a day)

For spill, leak or fire call INFOTRAC at 1.800.535.5053 (24 hours a day)

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN. May irritate skin and eyes. Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes immediately. Do not inhale fumes. Avoid breathing vapours or spray mist. After use, wash hands and other exposed skin. When using, do not eat, drink or smoke. Remove and launder contaminated clothing separately from household laundry before reuse. When handling the concentrate, mixing, loading or during cleanup and repair, wear goggles or face shield, rubber apron, chemical-resistant gloves, rubber boots, long-sleeved shirt and long pants. Wear long-sleeved shirt and long pants during application. In addition, for hand-held application equipment, including backpack sprayer, wear chemical-resistant gloves during application. Apply only to agricultural crops when the potential for drift to areas of human habitation and areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

DO NOT enter or allow worker into treated areas for 12 hours following application.

ENVIRONMENTAL PRECAUTIONS

TOXIC to aquatic organisms and non-target terrestrial plants.
Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

This product contains an active ingredient and aromatic petroleum distillates, which are toxic to aquatic organisms.

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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 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.

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 the eye. Call a poison control centre or doctor for treatment advice.

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

TOXICOLOGICAL INFORMATION

Treat the patient symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

STORAGE AND DISPOSAL

STORAGE: Store this product away from food or feed.

DISPOSAL:

RECYCLABLE CONTAINER DISPOSAL: Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial/territorial requirements.

RETURNABLE CONTAINER DISPOSAL: DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

REFILLABLE CONTAINERS FOR THE USER BY THE DISTRIBUTOR/DEALER: For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

DISPOSAL OF UNUSED, UNWANTED PRODUCT: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill, and for cleanup 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.

Booklet Label

GROUP 1 HERBICIDE

ARROW ALL IN®

POST-EMERGENCE HERBICIDE

FOR CONTROL OF GRASSES IN Highbush blueberries, CRANBERRY, CANOLA (including imazethapyr-tolerant varieties), FLAX (including low linolenic acid varieties), FIELD PEAS, LENTILS, DESI and KABULI CHICKPEAS, DRY ONIONS, POTATOES, MUSTARD (oriental, brown, yellow) (condiment type only), SOYBEANS, SEEDLING ALFALFA, SUNFLOWERS, DRY BEANS (Pinto, Black, Great Northern, Red, Pink and Navy), CORIANDER, FENUGREEK, PRAIRIE CARNATION and SPINACH

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GENERAL INFORMATION

THE PRODUCT

ARROW ALL IN® is a selective post-emergence herbicide for control of a broad range of grasses in highbush blueberries, cranberry, canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers, dry beans (Pinto, Black, Great Northern, Red, Pink and Navy), coriander, fenugreek, Prairie carnation and spinach.

ARROW ALL IN® is a systemic herbicide which is translocated from the treated foliage to the growing points of the leaves, shoots and roots. Uptake into the plant is primarily through its leaves. Thorough coverage of the foliage is important for consistent grass control. Susceptible grasses that are actively growing will undergo a burn-back and colour change after treatment. Leaf foliage will first change from green to yellowish, then purplish and finally brown colour. The time required for complete control is normally 7 to 21 days following treatment, depending on growing conditions and crop competition.

SAFETY AND HANDLING

PRECAUTIONS, PROTECTIVE CLOTHING AND EQUIPMENT AND RE-ENTRY RESTRICTIONS

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. May irritate skin and eyes. Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes immediately. Do not inhale fumes. Avoid breathing vapours or spray mist. After use, wash hands and other exposed skin. When using, do not eat, drink or smoke. Remove and launder contaminated clothing separately from household laundry before reuse. When handling the concentrate, mixing, loading or during cleanup and repair, wear goggles or face shield, rubber apron, chemical-resistant gloves, rubber boots, long-sleeved shirt and long pants. Wear long-sleeved shirt and long pants during application. In addition, for hand-held application equipment, including backpack sprayer, wear chemical-resistant gloves during application. Apply only to agricultural crops when the potential for drift to areas of human habitation and areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

DO NOT enter or allow worker into treated areas for 12 hours following application.

FIRST AID AND TOXICOLOGICAL INFORMATION

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TOXICOLOGICAL INFORMATION: Treat the patient symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

ENVIRONMENTAL PRECAUTIONS

TOXIC to aquatic organisms and non-target terrestrial plants.

Observe spray buffer zones specified under DIRECTIONS FOR USE.

Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). Minimize spray drift to reduce harmful effects on beneficial arthropods in habitats next to the application site such as hedgerows and woodland.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

This product contains an active ingredient and aromatic petroleum distillates, which are toxic to aquatic organisms.

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

STORAGE

Store this product away from food or feed.

DISPOSAL

RECYCLABLE CONTAINER

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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.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

PRODUCT OVERVIEW

ARROW ALL IN® is to be used only on highbush blueberries , cranberry, canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers, dry beans (Pinto, Black, Great Northern, Red, Pink and Navy), coriander, fenugreek, Prairie carnation and spinach.

Apply a maximum of one application per season on dry common beans (*Phaseolus vulgaris* varieties only).

DO NOT APPLY BY AIR.

APPLICATIONS AND USE LIMITATIONS

Not for use in greenhouses

A 30-day plant-back interval should be observed for all unlabelled crops.

Apply ARROW ALL IN® when the annual grasses and volunteer cereals are in the 2 to 6 leaf stage as specified under APPLICATION TIMING. Most effective control is achieved when application is made prior to tillering when annual grasses are small and actively growing.

For suppression or control of quackgrass, apply ARROW ALL IN® when the quackgrass is in the 2 to 6 leaf stage and 6 to 15 cm in height. Most effective results are achieved when application is made at the 3 to 5 leaf stage, when the canopy is uniform and actively growing.

ARROW ALL IN® will be less effective when plants are stressed by lack of moisture, excessive moisture, low temperature and/or very low relative humidity. Regrowth by tillering may occur if application is made under any of the above stress conditions. In wide row crops, where the canopy may be slow to close, cultivation may be necessary to control grasses that emerge after treatment.

Highbush blueberries, cranberry, canola (including imazethapyr-tolerant varieties), flax (including low linolenic acid varieties), field peas, lentils, Desi and Kabuli chickpeas, dry onions, potatoes, mustard (oriental, brown, yellow) (condiment type only), soybeans, seedling alfalfa, sunflowers, dry beans (Pinto, Black, Great Northern, Red, Pink and Navy), coriander, fenugreek, Prairie carnation and spinach are tolerant to ARROW ALL IN® at all stages of growth. However, the pre-harvest interval outlined in the Crop Recommendations table must be followed to avoid excessive crop residues.

For Desi and Kabuli chickpeas, apply ARROW ALL IN® at a maximum of one application per season before the crop reaches the 9 node stage (18 cm height maximum) and when the annual grasses and volunteer cereals are in the 2 to 6 leaf stage.

Cranberry is tolerant to ARROW ALL IN® at all stages of growth, however, do not apply ARROW ALL IN® between the hook stage and full fruit set.

For Ground Application, use sprayers equipped with standard flat fan nozzles. For optimum spray coverage use nozzles tilted 45° forward.

The use of flood jet or hollow cone nozzles is not recommended, because of uneven and inadequate spray coverage. Thorough and uniform spray coverage over the entire leaf area of the target weeds is necessary for optimum weed control.

Thoroughly clean all screens to prevent nozzle clogging, especially when water volumes of 55 to 110 L/ha are used.

In general, use water volumes of 55 to 225 L/ha and a minimum of 275 kPa pressure. For applications to dense weed infestations or to dense crop canopies, use a minimum of 110 litres of water per hectare at pressures of 275 to 425 kPa.

RESTRICTIONS AND LIMITATIONS:

1. Use only for crops listed on the label.
2. Thorough pre-plant tillage operations are required to fields where sod or forage grass crops may have grown in the previous year.
3. Take necessary precautions to avoid sprayer overlaps.
4. Rainfall within one hour of application may reduce the effectiveness of the spray.
5. Do not mix or apply ARROW ALL IN® with any other additive, pesticide or with fertilizer except as specifically recommended on the label.
6. Allow 4 days between application of ARROW ALL IN® and any other chemical not recommended as a tank-mix combination on the label.
7. Do not apply more than 0.76 L/ha (90 grams a.i./ha) per season.
8. Do not use crops for grazing of livestock or green feed following application of ARROW ALL IN® until after the appropriate interval as specified in the crop recommendations table has been observed.

Do not cut treated crops for forage until the appropriate interval as specified in the crop recommendations table has been observed.

9. DO NOT APPLY BY AIR. Use ground equipment only.

PRE-HARVEST, GRAZING AND FEEDING INTERVALS

Refer to the REGISTERED USES and TANK-MIXES section of the label for Pre-Harvest and Grazing/Feeding restrictions.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) coarse classification. Boom height must be 60 cm or less above the crop or ground.

SPRAY BUFFER ZONES

A spray buffer zone is NOT required for:

- uses with hand-held application equipment permitted on this label,
- low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop	Spray Buffer Zones (metres) Required for the Protection of:		
		Freshwater Habitat of Depths:		Terrestrial habitat
		Less than 1 m	Greater than 1 m	
Field sprayer	All crops	1	1	1

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

REGISTERED USES, APPLICATION TIMING AND TARGET PEST

REGISTERED USE:

Crops	Maximum Application Rate of ARROW ALL IN®	Pre-Harvest Interval
Highbush blueberries ^{1,2,5}	0.76 L/ha	14 days
Cranberry ^{1, 5, 6}	0.76 L/ha	30 days
Canola	0.76 L/ha	60 days
Flax (including low linolenic acid varieties)	0.76 L/ha	60 days
Field Peas	0.76 L/ha	75 days
Lentils	0.76 L/ha	60 days
Desi and Kabuli Chickpeas	0.38 L/ha	60 days
Dry Onions ^{1, 5}	0.76 L/ha	45 days
Potatoes	0.76 L/ha	60 days
Mustard (oriental, brown, yellow), (condiment type only)	0.76 L/ha	60 days
Soybeans	0.76 L/ha	75 days
Seedling Alfalfa	0.76 L/ha	30 days
Sunflowers	0.76 L/ha	72 days
Dry Beans (Pinto, Black, Great Northern, Red, Pink and Navy) ⁷	0.38 L/ha	60 days
Coriander ^{1, 3, 5}	0.76 L/ha	60 days
Fenugreek ^{1, 3, 5}	0.76 L/ha	30 days
Prairie Carnation ^{1, 3, 5}	0.38 L/ha	N/A
Spinach ^{4, 5}	0.38L/ha	14 days

1. Apply a maximum of one application per year.
2. Apply Arrow All In as a broadcast spray directed to the ground.
3. Do not harvest treated prairie carnations or greens of treated fenugreek as a vegetable or leaves of treated coriander (cilantro) for human consumption.
4. Apply a maximum of two applications per year
5. Refer to section “MINOR USES” in this label for additional use instructions.
6. NOTE: Varieties of this crop may vary in their tolerance to herbicides, including ARROW ALL IN®. Since not all crop varieties have been tested for tolerance to ARROW ALL IN®, first use of ARROW ALL IN® should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice. Additionally, consult your supplier for information on the tolerance of specific varieties to ARROW ALL IN®.
7. Apply ARROW ALL IN® at 0.25 to 0.38 L/ha when grassy weeds are in the 2 to 6 leaf stage. Apply a maximum of one application per year, post-emergent by ground application.

APPLICATION TIMING AND TARGET PEST

Rates of use are given below to control various grass species. Refer to the REGISTERED USE section for the maximum use rate on each crop.

Grass Species	Leaf Stage	Application Rate of ARROW ALL IN®	OPTIONAL: Rate of additional adjuvant**
Foxtail (green, yellow), Wild oats, Volunteer cereals (wheat, barley, oats)	2-4	0.25 L/ha*	30% phosphate ester surfactant at 0.5% v/v, or
Barnyard Grass, Witchgrass, Fall panicum, Proso millet, Volunteer Corn, Volunteer canary grass	2-6	0.25 L/ha	
Wild Oats, Volunteer cereals, (wheat, barley, oats), Foxtail (green, yellow), Persian darnel, Crabgrass (smooth and large), Proso millet, Witchgrass, Fall panicum, Barnyard grass, Volunteer corn. Volunteer canary grass, Quackgrass suppression	2-6	0.38 L/ha	Methylated Seed Oil at 0.5% v/v, or Non-ionic surfactant at 0.25%.
Quackgrass control	2-6	0.76 L/ha	

*ARROW ALL IN® applied at 0.25 L/ha for the control of weeds listed in this section of the table should only be applied under the following conditions:

- Good crop stand
- Early application (as in above table, prior to tillering)
- Do not apply to volunteer winter cereals
- Light to moderate weed infestation
- Adequate moisture and fertility
- Absence of stress, good growing conditions

If any one of the above conditions is not present at the time of application, use 0.38 L/ha rate of ARROW ALL IN®.

**An optional additional adjuvant may be used under circumstances of heavy weed pressure or when environmental conditions (e.g., drought) are not ideal for weed control. Adjuvants, such as those containing 30% phosphate ester surfactant, non-ionic surfactants (e.g. ADAMA Adjuvant 80) or methylated seed oil, can be added to ARROW ALL IN® at the indicated leaf stage of the grassy weed.

MIXING INSTRUCTIONS AND TANK MIXES

MIXING INSTRUCTIONS:

1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
2. Fill clean spray tank half full with clean water. Start agitation system.
3. Add the required amount of the tank-mix partner. NB. Consult the tank-mix partner label and follow the proper mixing order and related instructions. Continue to agitate.
4. Add the correct amount of ARROW ALL IN®. Continue to agitate.
5. OPTIONAL: For use of Arrow All In alone (not in a tank mixture), add the correct amount of adjuvant (30% phosphate ester surfactant, methylated seed oil or non-ionic surfactant).
6. Continue to add the remaining amount of water to fill the spray tank. Continue to agitate.
7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.

9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

TANK-MIXES:

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262 for information before applying any tank mix that is not specifically recommended on this label.

FLAX

ARROW ALL IN® AND BADGE®:

ARROW ALL IN® may be tank-mixed with BADGE® for control of certain broadleaf and grassy weeds in flax (**including low linolenic acid varieties**) in one spray operation. Apply in 55 – 110 litres of water per hectare at a spray pressure of 275 kPa. DO NOT spray this tank-mix on plants under stress. DO NOT spray during periods of hot, humid weather.

Time of Application: Flax (including low linolenic acid varieties), may be treated from 5 cm high to the early bud stage. For best results, apply when flax (including low linolenic acid varieties) is 5 cm to 10 cm high and weeds are in the seedling stage. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

Application Rate: ARROW ALL IN® at 0.38 – 0.76 L/ha tank-mixed with BADGE® at 1.25 L/ha.

Weeds Controlled: As listed for ARROW ALL IN® used alone, plus certain seedling broadleaf weeds.

ARROW ALL IN® AND MCPA ESTER:

ARROW ALL IN® may be tank-mixed with MCPA ESTER (e.g. 500 or 600 g a.e./L) for control of certain broadleaf and grassy weeds in flax (**NOT including low linolenic acid varieties**) in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

NOTE: THIS TANK-MIX MAY NOT BE APPLIED TO LOW LINOLENIC ACID VARIETIES OF FLAX.

Time of Application: Flax may be treated from 5 cm tall to just before the bud stage. Do not apply after the early bud stage. Apply when the grassy weeds are in the 2 to 6 leaf stage and broadleaf weeds are in the seedling stage and actively growing. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

Application Rate: ARROW ALL IN® at 0.38 - 0.76 L/ha tank-mixed with MCPA ESTER at 420 g a.e./ha.

Weeds Controlled: As listed for ARROW ALL IN® used alone, plus certain seedling broadleaf weeds.

ARROW ALL IN® AND LONTREL® 360:

ARROW ALL IN® may be tank-mixed with Lontrel® 360 for control of certain broadleaf and grass weeds in flax (**NOT including low linolenic acid varieties**) in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

NOTE: THIS TANK-MIX MAY NOT BE APPLIED TO LOW LINOLENIC ACID VARIETIES OF FLAX.

Time of Application: Flax may be treated from 5 cm to 10 cm in height. Apply when the grassy weeds are in the 2 to 6 leaf stage and the broadleaf weeds are actively growing.

Application to Canada thistle should be made when Canada thistle is in the rosette to pre-bud stage of growth. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

Application Rate: ARROW ALL IN® at 0.38 L/ha tank-mixed with Lontrel® 360 at 0.56 to 0.83 L/ha.

Weeds Controlled: Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats, wild buckwheat.

Canada thistle	0.56 L Lontrel® 360/ha	Season-long control
	0.83 L Lontrel® 360/ha	Control extended into following year

ARROW ALL IN® AND CURTAIL® M

ARROW ALL IN® may be tank-mixed with Curtail® M for control of certain broadleaf and grass weeds in flax (**including low linolenic acid varieties**) in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

Time of Application: Flax may be treated from 5 to 15 cm in height. Apply when the grassy weeds are in the 2-6 leaf stage and the broadleaf weeds are actively growing. Application to Canada thistle should be made when Canada thistle is between 10 cm and up to the pre-bud stage. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

Application Rate: ARROW ALL IN® at 0.38 L/ha tank-mixed with Curtail® M at 1.5 to 2.0 L/ha.

Weeds Controlled: Weed claims listed on the ARROW ALL IN® Herbicide label plus weed claims listed on Curtail® M label.

Grazing Interval: Do not cut treated crops for feed or graze until 60 days after application.

CANOLA

ARROW ALL IN® AND LONTREL® 360:

ARROW ALL IN® may be tank-mixed with Lontrel® 360 for control of certain broadleaf and grass weeds in canola in one spray operation. Apply in a minimum of 100 L/ha spray volume at a pressure of 275 kPa.

Time of Application: Canola may be treated from the 2 to 6 leaf stage. Apply when the grassy weeds are in the 2 to 6 leaf stage and the broadleaf weeds are actively growing. Application to Canada thistle should be made when Canada thistle is in the rosette to pre-bud stage of growth. If broadleaf weeds and grass weeds are not in recommended treatment stage at the same time, then separate applications should be made.

Application Rate: ARROW ALL IN® at 0.38 L/ha tank-mixed with Lontrel® 360 at 0.42 to 0.83 L/ha.

Weeds Controlled: Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats.

Wild Buckwheat	0.56 L Lontrel® 360/ha	Season-long control
Canada thistle	0.42 L Lontrel® 360/ha	Top growth control to 6 - 8 weeks
	0.56 L Lontrel® 360/ha	Season-long control
	0.83 L Lontrel® 360/ha	Control into following year

ARROW ALL IN® AND PURSUIT®:

Imazethapyr Tolerant Canola (e.g. canola varieties with the SMART trait)

ARROW ALL IN® may be tank-mixed with Pursuit® for control of certain broadleaf and grassy weeds in imazethapyr-tolerant canola varieties in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa.

Time of Application: Imazethapyr-tolerant canola varieties may be treated after the crop has developed one (1) fully expanded leaf. Apply when grassy weeds are in the 2 to 6 leaf stage. Apply up to the 4 leaf stage for control of broadleaf weeds.

Application Rate: ARROW ALL IN® at 0.38L/ha tank-mixed with Pursuit® at 0.105 or 0.21 L/ha.

Weeds Controlled: As listed for ARROW ALL IN® plus the following additional weeds. Pursuit® at 0.105 L/ha for control of chickweed, hempnettle, redroot pigweed*, stinkweed, volunteer canola (not imazethapyr-tolerant), wild mustard and wild buckwheat*, in the 1 to 4 leaf stage.

*For the control of light infestations only. For heavy infestations use the 0.21 L/ha rate of Pursuit®. Pursuit® at 0.21 L/ha for control of weeds as listed on the Pursuit® label.

ARROW ALL IN® AND MUSTER®:

ARROW ALL IN® may be tank-mixed with Muster® for control of certain broadleaf and grassy weeds in canola in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa.

Time of Application: Canola may be treated from the 2 leaf stage to the beginning of bolting. Apply when the grassy weeds are in the 2 to 6 leaf stage and when the broadleaf weeds are in the cotyledon to 6 leaf stage. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

Application Rate: ARROW ALL IN® at 0.38 L/ha tank-mixed with Muster® at 20 or 30 g/ha.

Weeds Controlled: Muster® at 20 or 30 g/ha: Wild oats, green foxtail, volunteer barley, volunteer oats, volunteer wheat, hempnettle, wild mustard, green smartweed, flixweed (spring seedlings), stinkweed*, and redroot pigweed.

* *Stinkweed suppression at the lower rate. Apply to stinkweed in the 1 to 4 leaf stage.*

ARROW ALL IN® AND LIBERTY®:

For use on Glufosinate Ammonium tolerant canola varieties only (e.g. varieties or hybrids labelled LibertyLink®).

ARROW ALL IN® may be tank-mixed with Liberty® for control of certain broadleaf and grass weeds in Glufosinate Ammonium tolerant canola varieties in one spray operation. Apply in a minimum of 110 L/ha spray volume at a pressure of 275 kPa.

Time of Application: Glufosinate Ammonium tolerant canola varieties may be treated from the cotyledon stage up to the early bolting stage. Apply when the wild oats, volunteer wheat, volunteer oats and green foxtail are in the 1 to 5 leaf stage. Refer to Liberty® label for application timing on all remaining grass and broadleaf weeds for 2.7 or 3.3 L/ha.

Application Rate: ARROW ALL IN® at 0.125 L/ha tank-mixed with Liberty® at 2.7 to 3.3 L/ha.

Weeds Controlled: Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats plus all remaining grass weeds and broadleaf weeds listed on the Liberty® label at the application rates of 2.7 and 3.3 L/ha.

FIELD PEAS

ARROW ALL IN® AND PHANTOM® 240 SL or PURSUIT®:

ARROW ALL IN® may be tank-mixed with Phantom® 240 SL or Pursuit® for control of certain broadleaf and grassy weeds in field peas in one spray operation. Apply in a minimum of 100 litres of water per hectare at a spray pressure of 275 kPa.

Time of Application: Field peas may be treated up to the sixth (6th) trifoliolate leaf stage. Apply when volunteer wheat, volunteer barley, wild oats and green foxtail are in the 2 to 6 leaf stage. Apply up to the 4 leaf stage for control of broadleaf weeds. If broadleaf weeds and grassy weeds are not in the recommended treatment stage at the same time, then separate applications should be made.

Application Rate: ARROW ALL IN® at 0.38 L/ha tank-mixed with Phantom® 240 SL or Pursuit® at 210 mL/ha.

Weeds Controlled: Wild oats, green foxtail, volunteer barley, volunteer wheat plus the weeds as listed on the Phantom® 240 SL or Pursuit® label.

GLYPHOSATE TOLERANT SOYBEANS

ARROW ALL IN® may be tank-mixed with Roundup Weathermax® (or other liquid glyphosate products registered for use on glyphosate tolerant soybeans) for control of volunteer glyphosate tolerant corn and other weeds listed on the product labels. All weeds listed on each label can be controlled in one spray operation. Apply in a minimum of 100L/ha spray volume at a pressure of 275 kPa.

Time of application: Glyphosate tolerant soybeans may be treated from 1st trifoliolate through to flowering, observing the 75 day PHI. Apply when the grassy weeds are in the 2-6 leaf stage and the broadleaf weeds are actively growing.

Application Rate: ARROW ALL IN® at 0.38 L/ha tank-mixed with 900 to 1800 g a.e./ha of a liquid glyphosate product that is registered for use on glyphosate tolerant soybeans (equivalent to 1.67 to 3.33 L/ha of Roundup Weathermax®, a 540 g/L product).

Weeds Controlled: Weed claims listed on the ARROW ALL IN® Herbicide label (volunteer glyphosate tolerant corn in particular) plus weed claims listed on the glyphosate product label.

Grazing Interval: Do not cut treated crops for feed or graze until 60 days after application

MINOR USES

MINOR USES:

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR USE ON THE FOLLOWING MINOR USE CROPS

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than ADAMA Agricultural Solutions Canada Ltd. (ADAMA) under the User Requested Minor Use Label Expansion program. For these uses, ADAMA has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

Crop	Weeds Controlled	Application Rate of ARROW ALL IN®	Time of Application
DRY ONIONS	Suppression of annual bluegrass and control of other annual weeds listed on the ARROW ALL IN® label.	0.76 L/ha	Apply ARROW ALL IN® post-emergent when the crop is in the 1 to 4 leaf stage and when annual bluegrass is in the 2-6 leaf stage. One application per year. Observe a PHI of 45 days. Ground application only.
PRAIRIE CARNATION	Annual weeds listed on the ARROW ALL IN® label. Refer to weed/rate chart in this label.	0.38 L/ha	Apply ARROW ALL IN® post-emergence of weeds and crop. Apply a maximum of one application per year using ground equipment. Apply in a minimum spray volume of 110 L/ha. Do not harvest treated prairie carnations for human consumption. Ground application only.
HIGHBUSH BLUEBERRY	ARROW ALL IN® labelled grassy weeds. Refer to weed/rate chart in this label.	0.38-0.76 L/ha	Apply ARROW ALL IN® post-emergence of weeds and crop. Apply a maximum of one application per year, post-emergent by ground equipment. Apply as a broadcast spray directed to the ground. Apply in a minimum spray volume of 100 L/ha. Observe a PHI of 14 days. Ground application only

CORIANDER	Annual weeds listed on the ARROW ALL IN® label	Refer to ARROW ALL IN® weed/rate chart in this label.	Apply ARROW ALL IN® post-emergent when coriander is in the 2 to 5 leaf stage. Apply a maximum of one application per year, using ground equipment. Observe a PHI of 60 days. Do not harvest leaves of treated coriander (cilantro) for human consumption. Ground application only.
FENUGREEK	Annual weeds listed on the ARROW ALL IN® label	Refer to ARROW ALL IN® weed/rate chart in this label.	Apply ARROW ALL IN® post-emergent when fenugreek is in the 3 to 5 leaf stage. Apply a maximum of one application per season, using ground equipment. Observe a PHI of 30 days. Do not graze or feed ARROW ALL IN® -treated fenugreek forage to livestock. Do not use the greens of treated fenugreek as a vegetable for human consumption. Ground application only.
SPINACH	Annual Weeds listed on the ARROW ALL IN® label	Refer to ARROW ALL IN® weed/rate chart in this label.	Apply a maximum of two applications per year with 14 days between applications, post emergent by ground application when grassy weeds are in the 2 to 6 leaf stage. Observe a PHI of 14 days. Ground application only.
CRANBERRY	Labelled grassy weeds. Refer to weed/rate chart in this label.	0.38-0.76 L/ha	Apply ARROW ALL IN® post emergence of weeds and crop. Do not apply between the hook stage and full fruit set. Apply a maximum of one application per year using ground equipment. Apply in a minimum spray volume of 110 L of water/ha. Observe a PHI of 30 days. Ground application only.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management ARROW ALL IN® is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to ARROW ALL IN® and other Group 1 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:

1. Where possible, rotate the use of ARROW ALL IN® or other Group 1 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.
2. Use tank mixtures with herbicides from a different group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
3. Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
4. Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
5. Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
6. 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 ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262 or at www.adama.com/canada.

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