

Container

GROUP	2	HERBICIDE
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## Habitat® Aqua

Herbicide

SOLUTION

### COMMERCIAL + RESTRICTED

For the control of the following invasive plants: Invasive Phragmites (European reed), Cordgrasses (denseflower, salt-meadow, smooth and common), Flowering rush and certain invasive Knotweeds (Japanese, Himalayan, Bohemian and giant) growing within non-cropland areas, including areas in or around specified aquatic sites

**ACTIVE INGREDIENT:** Imazapyr, present as the isopropylamine salt ..... 240 g/L

**REGISTRATION NO. 32374**

**PEST CONTROL PRODUCTS ACT**

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

IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY  
INVOLVING THIS PRODUCT, CALL DAY OR NIGHT,  
1-800-454-2673

NET CONTENTS: 1 L - 1000 L

BASF Agricultural Solutions Canada Inc.  
510 - 28 Quarry Park Blvd. SE  
Calgary, Alberta T2C 5P9  
1-877-371-2273

HABITAT is a registered trade-mark of BASF Agrochemical Products B.V.,  
used under license by BASF Agricultural Solutions Canada Inc.

## PRECAUTIONS

### KEEP OUT OF REACH OF CHILDREN.

DO NOT take internally. Harmful if swallowed.

Avoid contact with skin, eyes or clothing.

Avoid breathing spray and mist. Use with adequate ventilation.

Wash (skin/hands) thoroughly with soap and water after handling and before eating, drinking, chewing gum/tobacco, smoking/vaping, or using the toilet. If the product comes in contact with clothing/PPE, remove all contaminated clothing, wash skin with soap and water and dress in clean clothing. Launder contaminated clothing regularly and separately from other laundry. Aircraft cockpit, Remotely Piloted Aircraft Systems (RPAS) and vehicle cabs must be decontaminated regularly.

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Gloves are not required during application within a closed cab and/or cockpit or when piloting RPAS. Gloves are required at all times when handling an RPAS (e.g. Battery changing, refilling, transporting, cleaning).

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

Do not apply to any area not specified on the label.

Do not enter or allow others to enter treated areas until sprays have dried.

## ENVIRONMENTAL PRECAUTIONS

Toxic to aquatic plants and non-target terrestrial plants. Observe spray drift management recommendations as specified under DIRECTIONS FOR USE.

Application should be made in such a way as to maximize spray interception by the target vegetation while minimizing overspray that enters the water. **Habitat Aqua** does not control plants which are completely submerged or have a majority of their foliage under water.

Avoid application when heavy rain is forecast.

## FIRST AID

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. 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 eye. Call a poison control centre or doctor for treatment advice.

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

## TOXICOLOGICAL INFORMATION

Treat symptomatically.

## STORAGE

Store this product away from food or feed.

Keep containers closed to avoid spills and contamination.

Store at temperatures above -12°C.

**Habitat Aqua** should be mixed, stored and applied only in stainless steel, fiberglass, plastic and plastic-lined steel containers or spray tanks.

## DISPOSAL

### For Recyclable Containers

Disposal of container: 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 or territorial requirements.

**Returnable-Refillable Containers**

Disposal of container: 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 registrant or the provincial or territorial regulatory authority. Contact the registrant and the provincial or territorial regulatory authority in case of a spill, and for clean-up of spills.

**RESTRICTED USE**

**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.

This product contains both Commercial and Restricted class aquatic site uses.

Commercial Class Aquatic Applications: Aquatic pesticide application in water bodies wholly confined to the property of the user where there is no outflow beyond the property limits, such as farm ponds, fishponds, fire ponds, dugouts, storm water management ponds and non-irrigation ditches.

Restricted Class Aquatic Applications: Aquatic pesticide application in water bodies that are not wholly confined to the property of the user or where there is outflow beyond the property limits, and in all other aquatic sites such as rivers, lakes and irrigation canals.

**NATURE OF RESTRICTION**

This product must be used in the manner authorized.

For restricted aquatic applications, this product is only to be used by individuals holding an appropriate pesticide applicator certificate or license recognized by the provincial or territorial pesticide regulatory authority where the pesticide application is to occur or as authorized by the provincial or territorial regulatory authority.

This registration is granted under the *Pest Control Products Act* and does not exempt the user from any other legislative requirements. Use of this product in or immediately adjacent to water bodies must be appropriately authorized and used in accordance with the *Fisheries Act* and its regulations. Use of this product must also be in accordance with any other applicable federal, provincial and territorial laws and authorizations under those laws. Consult with federal, provincial and territorial regulatory authorities, where the pesticide application is to occur, on any authorizations required prior to use of this product.

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This product contains both Commercial and Restricted class aquatic site uses.

Commercial Class Aquatic Applications: Aquatic pesticide application in water bodies wholly confined to the property of the user where there is no outflow beyond the property limits, such as farm ponds, fishponds, fire ponds, dugouts, storm water management ponds and non-irrigation ditches.

Restricted Class Aquatic Applications: Aquatic pesticide application in water bodies that are not wholly confined to the property of the user or where there is outflow beyond the property limits, and in all other aquatic sites such as rivers, lakes and irrigation canals.

### **NATURE OF RESTRICTION**

This product must be used in the manner authorized.

For restricted aquatic applications, this product is only to be used by individuals holding an appropriate pesticide applicator certificate or license recognized by the provincial or territorial pesticide regulatory authority where the pesticide application is to occur or as authorized by the provincial or territorial regulatory authority.

This registration is granted under the *Pest Control Products Act* and does not exempt the user from any other legislative requirements. Use of this product in or immediately adjacent to water bodies must be appropriately authorized and used in accordance with the *Fisheries Act* and its regulations. Use of this product must also be in accordance with any other applicable federal, provincial and territorial laws and authorizations under those laws. Consult with federal, provincial and territorial regulatory authorities, where the pesticide application is to occur, on any authorizations required prior to use of this product.

## GENERAL INFORMATION

**Habitat Aqua** is intended for use for the control and management of the following invasive plants:

- Invasive Phragmites: European reed (*Phragmites australis subsp. australis*)
- Cordgrasses: Denseflower (*Spartina densiflora*), Salt-meadow (*Spartina patens*), Smooth (*Spartina alterniflora*) and Common (*Spartina anglica*)
- Flowering rush (*Butomus umbellatus*)
- Invasive Knotweeds (Japanese, Bohemian, giant, Himalayan)

**Habitat Aqua** is an aqueous solution to be mixed with water and Aquasurf Non-ionic Spray Adjuvant or other non-ionic surfactant and applied as a spray solution for control of undesirable invasive vegetation growing in non-cropland areas, including areas in or around aquatic sites when applications may result in entry into surface water. Aquatic sites consist of wetlands, riparian areas, estuarine/marine tidal areas, swamps, bogs, marshes, transitional areas between terrestrial and aquatic sites, seasonal wet areas, seeps, gravel bars, non-irrigation ditches, sloughs, lakes, ponds, and slow-moving rivers and streams. Aquasurf Non-Ionic Spray Adjuvant must be used in and around aquatic sites. Terrestrial non-cropland areas consist of industrial sites, roadside and railroad ballast, rail, transportation and hydro rights-of-way, and stations associated with pipeline rights-of-way, including well sites, battery stations, compressor or valve stations and other associated works. Aquasurf Non-Ionic Spray Adjuvant or other non-ionic surfactant must be used for terrestrial sites. **Habitat Aqua** may also be used in directed applications for control of invasive plants in naturalized areas, including privately owned, provincial, federal or other public lands and parks.

**Habitat Aqua** must be applied to emergent foliage of the target vegetation, avoiding over-application or run-off. **Habitat Aqua** does not control plants which are completely submerged or have a majority of their foliage under water. For maximum activity, the spray solution must include Aquasurf Non-Ionic Spray Adjuvant or other non-ionic surfactant, depending on where it is being used.

**Habitat Aqua** is readily absorbed through foliage and is translocated rapidly throughout the plant. Treated plants stop growing soon after spray application. Chlorosis appears first in the newest leaves, and necrosis spreads from this point. In perennials, the herbicide is translocated into, and kills, underground or submerged storage organs, which prevents regrowth. Chlorosis and tissue necrosis may not be apparent until the season following application.

## PRODUCT USE PRECAUTIONS AND RESTRICTIONS

Precautions for irrigation water and ditches: DO NOT use water treated with **Habitat Aqua** to irrigate crops. DO NOT apply **Habitat Aqua** to ditches used for irrigation.

DO NOT apply where runoff water may flow onto agricultural land as injury to terrestrial crops may result.

DO NOT apply **Habitat Aqua** directly to the water surface or where fast-moving water such as streams and rivers may result in transport of the herbicide outside the intended treatment area.

Applications made to emergent plants located in and around slow-moving bodies of water should be made while travelling upstream.

DO NOT use on terrestrial food crops.

DO NOT use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

**Aerial application to aquatic sites is permitted only for invasive Phragmites (European reed) control and is restricted to helicopter or RPAS (Remotely Piloted Aircraft Systems) only.** Observe spray drift management recommendations as specified under DIRECTIONS FOR USE.

Making applications at the lowest possible height (helicopter, RPAS, ground driven spray boom) that is safe and practical reduces exposure of droplets to evaporation and wind.

Untreated desirable plants can be affected by root uptake of **Habitat Aqua** from treated soil or water. Injury or loss of desirable plants may result if **Habitat Aqua** is applied on or near desirable plants, on areas where their roots extend, or in locations where the treated soil or water may be washed or moved into contact with their roots. When making applications along shorelines where desirable plants may be present, caution should be exercised to avoid spray contact with their foliage or spray application to the soil or water in which they are rooted.

Thoroughly clean all traces of **Habitat Aqua** from application equipment, including landing gear, immediately after use. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part. Flush tank, pump, hoses and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Drain and flush equipment away from desirable trees and plants. Do not contaminate water when disposing of equipment wash waters.

For control of labelled invasive cordgrasses in estuarine/marine tidal areas, apply **Habitat Aqua** at least 4 hours before treated plants are covered by tidewater.

**Grazing and haying restrictions:** There is no grazing restriction following **Habitat Aqua** applied at a maximum rate of 4.68 L/ha. DO NOT cut forage for hay for 7 days after **Habitat Aqua** application. DO NOT graze, cut or feed treated vegetation to livestock if application rate exceeds 4.68 L/ha.

**Application to public waters:** Applications may be made to aquatic sites such as wetlands, riparian areas, estuarine/marine tidal areas, swamps, bogs, marshes, transitional areas between terrestrial and aquatic sites, seasonal wet areas, seeps, gravel bars, non-irrigation ditches, sloughs, lakes, ponds, and slow-moving rivers and streams.

Consult local or provincial or territorial water control authorities and/or fish and wildlife agencies before applying this product to public waters. Permits may be required to treat such water.

**Application to private waters:** Applications may be made to private waters that are still and where there is minimal or no outflow to public waters, including aquatic sites adjacent to but not on agricultural land. Aquatic sites include ponds, lakes, non-irrigation ditches, sloughs, wetlands, riparian areas, swamps, bogs, marshes, transitional areas between terrestrial and aquatic sites, seasonal wet areas and seeps.

Consult local or provincial or territorial water control authorities and/or fish and wildlife agencies before applying this product to private waters. Permits may be required to treat such water.

**Recreational use of water in treatment area:** There are no restrictions on the use of water in the treatment area for recreational purposes, including swimming and fishing.

**Livestock use of water in/from treatment area:** There are no restrictions on livestock consumption of water from the treatment area.

**Precautions for potable water intakes:** DO NOT apply **Habitat Aqua** to water within 1 km upstream of an active potable water intake in slow-moving water (i.e. river, stream, etc.) or within 1 km of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. To make aquatic applications around and within 1 km of active potable water intakes, the water intake **must** be turned off during application and for a minimum of 48 hours after the application. These aquatic applications may be made only in the cases where there are alternative water sources or holding ponds that would permit the turning off of an active potable water intake for a minimum period of 48 hours after the applications. **Note:** Existing potable water intakes which are no longer in use, such as those replaced by connections to wells or a municipal water system, are not considered to be active potable water intakes.

## **DIRECTIONS FOR USE**

### **Application Sites**

This product contains both Commercial and Restricted class aquatic application sites. Refer to the NOTICE TO USER for definitions and examples of commercial and restricted aquatic sites, and to the NATURE OF RESTRICTION and the PRODUCT USE PRECAUTIONS AND RESTRICTIONS sections for restrictions and limitations pertaining to restricted aquatic applications.

A post-emergence application of **Habitat Aqua** can be used to control invasive Phragmites, flowering rush and invasive knotweeds growing on terrestrial non-cropland areas and non-irrigation ditch banks, as well as in and around aquatic sites when applications may result in entry into surface water. **Habitat Aqua** may be applied to invasive Phragmites, flowering rush and invasive knotweeds in and around still and slow-moving water, including wetlands, riparian areas, swamps, bogs, marshes, transitional areas between terrestrial and aquatic sites, seasonal wet areas, seeps, gravel bars, non-irrigation ditches, sloughs, lakes, ponds, rivers and streams.

For control of labelled cordgrasses in estuarine/marine tidal areas, **Habitat Aqua** may be applied as a post-emergence spray solution when the tide has receded. Apply at least 4 hours before treated plants are covered by tidewater.

## Application Directions

**Habitat Aqua** may be selectively applied by using low-volume directed application techniques or may be broadcast applied by using ground equipment, watercraft, or aircraft (aerial applications to aquatic sites must be made by helicopter or RPAS). Apply with application equipment that will provide thorough spray coverage of weed foliage while minimizing direct application to water. See Weed Specific Application Instructions for application equipment restrictions that may apply.

Apply **Habitat Aqua** using the following water volumes:

Helicopter-applied aerial application: Use minimum of 50 L/ha (invasive Phragmites only)

Remotely Piloted Aircraft Systems (RPAS) application: Use minimum of 100 L/ha (invasive Phragmites only)

Low-volume application directed: Use a minimum of 100 L/ha

Surface application: 100 - 550 L/ha

**Habitat Aqua** must be applied to emergent foliage of the target vegetation or temporarily modified site conditions that duplicate emergent conditions (e.g. water drawdown during treatment). **Habitat Aqua** does not control plants which are completely submerged or have a majority of their foliage under water. **Habitat Aqua** concentrations resulting from direct application to water are not expected to be of sufficient concentration nor duration to provide control of target vegetation. Application should be made in such a way as to maximize spray interception by the target vegetation while minimizing overspray that enters the water.

Apply **Habitat Aqua** at 3.0 to 7.0 L/ha depending on the species present and weed density. Consult the **Aquatic Weeds Controlled** table of this label for specific use rates and application directions. DO NOT apply more than once per year.

Post-emergence applications of **Habitat Aqua** require the addition of a non-ionic surfactant. For application in and around aquatic sites, including transitional areas between terrestrial and aquatic sites, apply **Habitat Aqua** with Aquasurf Non-Ionic Spray Adjuvant. For terrestrial non-cropland sites, apply **Habitat Aqua** with Aquasurf Non-Ionic Spray Adjuvant or an equivalent non-ionic surfactant (NIS).

## TANK MIXING

This product may be tank mixed 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 BASF Agricultural Solutions Canada Inc. ("BASF") at 1-877-371-2273 for information before mixing any pesticide that is not specifically recommended on this label.

## Tank Mix Compatibility Determination

To determine compatibility, mix all components of the finished spray in proportionate quantities in a small jar. Add components to the test jar in the following order: wettable powders and water dispersible granules, liquid flowables and suspensions, emulsifiable concentrate formulations, and solutions. If the mixture does not ball-up or form flakes, sludge, jelly, oily films or layers, or other precipitates within 2 hours after mixing and can easily be resuspended with agitation, then the tested spray-mix is compatible. Always follow the most restrictive label regarding any precautions when tank mixing.

## Spray Drift Management

Field sprayer application: **DO NOT** apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE) S572 (572.1 to 572.3) Medium classification. Boom height must be 60 cm or less above the crop or ground.

Conventionally piloted aircraft application: Apply only by rotary wing (helicopter) aircraft. **DO NOT** apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE) S572 (572.1 to 572.3) Medium classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Remotely Piloted Aircraft System (RPAS) application: **DO NOT** apply when wind speed is less than 1 km/h. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural and Biological Engineers (ASABE) S572 (572.1 to 572.3) Medium classification. Pilots must operate their RPAS in compliance with Part IX of the Canadian Aviation Regulations (SOR/96-433).

Apply only by aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate specified for aerial application on this 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 a Global Positioning System (GPS).

## Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial or RPAS application as outlined in the relevant manuals, as provided by the provincial/territorial pesticide regulatory authority where the pesticide application is to occur.

## Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the registrant at 1-877-371-2273 or obtain technical advice from the distributor or your provincial or territorial agricultural representative.

When using **Habitat Aqua** to treat invasive plants in aquatic and terrestrial areas, mandatory spray buffer zones are not required. However, damage to non-target terrestrial and emergent aquatic plants may be observed within the downwind distances that are identified in the following table. These advisory distances should be considered when protecting important non-target plants downwind of application.

For applications by hand-held (low-volume) equipment, avoid directing spray towards non-target vegetation.

Method of Application	Crop/Site		Damage to Non-target Plants May be Observed Within the Following Distances Downwind from Application (metres)
Field sprayer or other high-volume spray equipment	Flowering rush		20
	Invasive Phragmites (European reed), labelled Knotweeds		30
	Cordgrasses (denseflower, saltmeadow, smooth and common)		40
Aerial	Invasive Phragmites (European reed)	Rotary wing	450
		RPAS	450

RPAS = Remotely Piloted Aircraft Systems

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 (ASABE) category indicated on the labels for those tank mix partners.

The distance where damage may be observed for conventional application equipment can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Drift Mitigation portion of the Canada.ca website.

The distance where damage may be observed for application of this product with a Remotely Piloted Aircraft System (RPAS) CANNOT be modified based on weather conditions and spray equipment configuration.

MINIMIZE DRIFT BY USING THE BEST AVAILABLE PRACTICES FOR SPRAYING. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO REDUCE DRIFT TO NON-TARGET PLANTS. The Risk Reduction Measures and Best Management Practices described below can mitigate potential exposure and adverse effects on non-target plants.

To reduce spray drift:

- For high-pressure hydraulic sprayers, spray from the outside edge of the target areas towards the inside of the cluster of plants and away from non-target vegetation.
- Use low drift nozzles and pressure combinations which reduce drift.
- Apply during optimal weather conditions such as high humidity and moderate temperature.

## RISK REDUCTION MEASURES AND BEST MANAGEMENT PRACTICES

The following precautionary measures are recommended to reduce exposure and adverse effects on non-target plants:

- Use accurate mapping and GPS tools to pre-determine the exact locations of the target area to be treated and strict observance of these boundaries to prevent overlapping of spray swath as well to prevent off-target application.
- Subdivide treatment areas into small blocks to avoid spraying of non-target surface areas within and around target areas.
- DO NOT apply to open water or wetland habitats beyond target areas.

### Aquatic Weeds Controlled (Terrestrial/Marginal)

**Habitat Aqua** will control the following aquatic weeds. Use the higher labelled rate where heavy or well-established infestations occur. Read and follow the **Weed Specific Application Instructions** below.

Common Name	Scientific Name	Use Rates and Application Directions
Cordgrasses (denseflower, salt-meadow, smooth and common)	<i>Spartina densiflora</i> ( <i>Sporobolus montevidensis</i> )*, <i>Spartina patens</i> , ( <i>Sporobolus pumilus</i> )*, <i>Spartina alterniflora</i> , ( <i>Sporobolus alterniflorus</i> )*, <i>Spartina anglica</i> , ( <i>Sporobolus anglicus</i> )*	Apply 4.68 to 7.0 L/ha to emergent green foliage. Refer to weed specific application instructions under section 2.0 Post-emergent Control of Invasive Cordgrasses in Tidal Areas.
Flowering rush	<i>Butomus umbellatus</i>	Apply 3.0 L/ha to emergent green foliage. Refer to weed specific application instructions under section 3.0 Post-emergent Control of Emergent Flowering Rush and Knotweeds.
Knotweeds (Japanese, Bohemian, giant, Himalayan)	<i>Reynoutria japonica</i> ( <i>Fallopia japonica</i> )*, <i>Reyneutria bohemica</i> ( <i>Fallopia bohemica</i> )*, <i>Reyneutria sachalinensis</i> ( <i>Fallopia sachalinensis</i> )*, <i>Koenigia polystacha</i> ( <i>Polygonum polystachyum</i> )*	Apply 3.0 to 4.68 L/ha to actively growing emergent green foliage. Refer to weed specific application instructions under section 3.0 Post-emergent Control of Emergent Flowering Rush and Knotweeds.

Common Name	Scientific Name	Use Rates and Application Directions
Invasive Phragmites (European reed)	<i>Phragmites australis subsp. australis</i>	Apply 3.0 to 4.68 L/ha to green foliage after full leaf elongation. Ensure thorough coverage. If stand has a substantial amount of old stem tissue, mow or burn, allow to regrow to approximately 1.5 m tall before treatment. Refer to weed specific application instructions under sections 1.0 – 1.2 Post-emergent control of invasive phragmite.

\* Synonyms

## Weed Specific Application Instructions

### 1.0 Post-emergent Control of Invasive Phragmites (European reed)

Apply a rate of 3.0 to 4.68 L/ha of **Habitat Aqua** in tank mix with 0.25% v/v Aquasurf Non-Ionic Spray Adjuvant using application equipment that will provide thorough spray coverage of weed foliage. Use the higher labelled rate where heavy or well-established infestations of Phragmites occur. For terrestrial uses only (areas where surface water is not present). An equivalent non-ionic surfactant (NIS) may be substituted for Aquasurf Non-Ionic Spray Adjuvant.

Apply as a directed spray to the foliage, not to the soil or surface waters, or by broadcast-application to the foliage using ground equipment, watercraft or helicopter. Apply to green foliage after full leaf elongation; ensure thorough coverage. For optimum results, treat in late summer or early fall when translocates are directed towards the roots of the plants. Apply in sufficient water to get thorough coverage of the foliage only. DO NOT spray the foliage to runoff.

**Habitat Aqua** must be applied to emergent foliage of the target vegetation. **Habitat Aqua** does not control plants which are completely submerged or have a majority of their foliage under water. **Habitat Aqua** concentrations resulting from direct application to water are not expected to be of sufficient concentration nor duration to provide control of target vegetation. Application should be made in such a way as to maximize spray interception by the target vegetation while minimizing the amount of overspray that enters the water.

**Habitat Aqua** may be selectively applied by using low-volume directed application techniques or may be broadcast applied by using ground, watercraft, or helicopter application equipment. Apply with application equipment that will provide good spray coverage of weed foliage. When applying by helicopter or RPAS (Remotely Piloted Aircraft Systems), follow directions under the **Aerial Application** section of this label, otherwise refer to the section on **Surface Application** when using surface equipment.

Avoid wash-off of sprayed foliage by spray boat or recreational backwash for one hour after application.

Due to the dense nature of invasive Phragmites, treatment over several years may be necessary to achieve complete control. Visual control symptoms will be slow to develop. For large monocultures of invasive Phragmites, work from the periphery inward in successive years to allow competing vegetation to establish in the treated area.

A long-term control strategy should include measures to control both established plants and seedlings. Sprayed areas should be monitored to determine the appropriate follow-up management. Early detection and treatment of second and third generation seedlings is important to prevent re-infestation of invasive Phragmites. Desirable native plant communities will then have a chance to become re-established.

DO NOT apply more than once per year.

### **1.1 Surface Application for Invasive Phragmites Control**

Observe spray drift management recommendations as specified under DIRECTIONS FOR USE.

#### **Equipment**

High Volume Spray Equipment (high pressure handguns and vehicle or boat mounted high volume directed spray equipment) and Boom (conventional boom mounted, manifold mounted, and off-centered nozzles):

For best results, apply **Habitat Aqua** using the least amount of water practical to obtain uniform coverage of the vegetation foliage. Using excessive spray volumes which may cause runoff from the plant foliage and may result in reduced performance. Apply uniformly with properly calibrated ground equipment in 100 to 550 litres of water per hectare with a spray pressure of 175 kPa to 425 kPa.

Low Volume Hand-held Equipment:

Backpack, knapsack, and other pump-up type or hydraulic mounted pressure sprayers may be used to direct applications to weed foliage. Apply in a minimum of 100 litres of water per hectare.

DO NOT apply using a hand-wicking/wiping method (that is, an absorbent glove soaked in the herbicide). Wicking/wiping with a handheld tool or other system that allows mechanical contact with weeds is permitted.

### **1.2 Aerial Application (for Invasive Phragmites Control ONLY)**

Aerial application to aquatic sites is restricted to helicopter or RPAS (Remotely Piloted Aircraft Systems) only. Apply only by rotary aircraft or RPAS equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Observe spray drift management recommendations as specified under DIRECTIONS FOR USE.

Ensure thorough coverage of foliage. Consult nozzle manufacturer's recommendation for spray pressures for specific nozzles.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate specified for aerial application on this 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 a Global Positioning System (GPS).

### **Operator Precautions**

The field crew and the mixer/loaders must wear chemical resistant gloves, a long-sleeved shirt, long pants, coveralls, shoes plus socks, and goggles or face shield during handling, mixing/loading, cleanup and repair. Applicators piloting RPAS must wear long-sleeved shirt, long pants, and shoes plus socks. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

### **Use Precautions**

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial or RPAS application as outlined in the relevant manuals, as provided by the provincial/territorial pesticide regulatory authority where the pesticide application is to occur.

## **2.0 Post-emergent Control of Invasive Cordgrasses in Tidal Areas**

Apply 4.68 to 7.0 L **Habitat Aqua** per hectare in tank mix with 0.25 - 0.5% v/v Aquasurf Non-Ionic Spray Adjuvant using hand-held (e.g. back-pack sprayer) or mounted equipment that will provide thorough spray coverage of weed foliage. Apply in sufficient water to get thorough coverage of the foliage only.

Apply as a directed application to the foliage. Application should be made in such a way as to maximize spray interception by the emergent foliage during low tide only, while minimizing the amount of overspray. Schedule applications in order to allow 4 hours before treated plants are covered by tidewater. Use higher labeled rates for heavy weed infestations.

Observe spray drift management recommendations as specified under DIRECTIONS FOR USE.

For best results, apply **Habitat Aqua** using the least amount of water practical to obtain uniform coverage of the vegetation foliage. Using excessive spray volumes which may cause runoff from the plant foliage may result in reduced performance. Apply in a minimum water volume of 100 L/ha.

DO NOT apply using a hand-wicking/wiping method (that is, an absorbent glove soaked in the herbicide). Wicking/wiping with a handheld tool or other system that allows mechanical contact with weeds is permitted.

DO NOT apply more than once per year.

DO NOT apply by air.

DO NOT harvest *Salicornia* spp. within 24 hours of Habitat Aqua application.

DO NOT harvest *Salicornia* spp. growing within 5 m of Habitat Aqua application.

### 3.0 Post-emergent Control of Emergent Flowering Rush and Knotweeds

Apply **Habitat Aqua** in tank mix with 0.25% v/v Aquasurf Non-Ionic Spray Adjuvant. Consult the **Aquatic Weeds Controlled** table of this label for specific use rates. For terrestrial uses only (areas where surface water is not present), Aquasurf Non-Ionic Spray Adjuvant may be substituted with 0.25% v/v of an equivalent non-ionic surfactant (NIS). Apply as a directed spray to the foliage, not to the soil or surface waters, or by broadcast-application to the foliage using surface application equipment that will provide thorough spray coverage of weed foliage. Apply in sufficient water to get thorough coverage of the foliage only. DO NOT spray the foliage to runoff.

**Habitat Aqua** must be applied to emergent foliage of the target vegetation. **Habitat Aqua** does not control plants which are completely submerged or have a majority of their foliage under water. **Habitat Aqua** concentrations resulting from direct application to water are not expected to be of sufficient concentration nor duration to provide control of target vegetation. For maximum activity, it is recommended that treatments occur during dry substrate conditions or where majority of foliage is above water. Application should be made in such a way as to maximize spray interception by the target vegetation while minimizing the amount of overspray that enters the water. Use of low pressure and narrow fan nozzles are recommended to help minimize unintended off-site application to surface water.

Observe spray drift management recommendations as specified under DIRECTIONS FOR USE.

High Volume Spray Equipment: (high pressure handguns and vehicle or boat mounted high volume directed spray equipment) and Boom (conventional boom mounted, manifold mounted, and off-centered nozzles):

For best results, apply **Habitat Aqua** using the least amount of water practical to obtain uniform coverage of the vegetation foliage. Using excessive spray volumes which may cause runoff from the plant foliage may result in reduced performance. Apply uniformly with properly calibrated ground equipment in 100 - 550 litres of water per hectare with a spray pressure of 175 kPa - 425 kPa.

Low Volume Hand-held Equipment: Backpack, knapsack, and other pump-up type pressure sprayers may be used to direct applications to weed foliage. Apply in a minimum 100 litres of water per hectare.

DO NOT apply using a hand-wicking/wiping method (that is, an absorbent glove soaked in the herbicide). Wicking/wiping with a handheld tool or other system that allows mechanical contact with weeds is permitted.

DO NOT apply more than once per year.

DO NOT apply by air.

## GENERAL MIXING INSTRUCTIONS

Mix the proper amount of **Habitat Aqua** and Aquasurf Non-Ionic Spray Adjuvant or non-ionic surfactant in water in the spray tank with the agitator running.

## RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **Habitat Aqua** is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to **Habitat Aqua** and other Group 2 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 **Habitat Aqua** or other Group 2 herbicides within a growing season (sequence) or among growing seasons 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. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- 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.
- 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 areas by cleaning equipment when moving between locations.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- 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 and to report suspected resistance, contact BASF at 1-877-371-2273.