

241-401

07-07-2011

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7504P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Registration Number:

241-401

Date of Issuance:

JUL 7 2011

NOTICE OF PESTICIDE:

- Registration
- Reregistration

(under FIFRA, as amended)

Term of Issuance: **Unconditional**

Name of Pesticide Product:

Habitat Release Herbicide

Name and Address of Registrant (include ZIP Code):

BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

EPA received a label amendment request submitted on July 6, 2011. EPA grants this request under the authority of section 3(c)(5) of the Federal Insecticide, Fungicide and Rodenticide Act, as amended. With this accepted labeling, all requirements set forth in the Reregistration Eligibility Decision (RED) for **Imazapyr** have been satisfied. Therefore, EPA reregisters the product listed above. This action is taken under the authority of section 4(g)(2)(c) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain the registration of your product.

Submit one (1) copy of final printed labeling. Amended labeling will supersede all previously accepted labels. A copy of your label stamped "Accepted" is enclosed for your records. Products shipped after twelve (12) months from the date of this Notice or the next printing of your label, whichever occurs first, must bear the new revised label.

If you have any questions regarding this Notice, please contact Mindy Ondish at (703)605-0723 or at ondish.mindy@epa.gov.

Signature of Approving Official:

Kable Bo Davis
Product Manager 25
Herbicide Branch
Registration Division (7505P)

Date:

JUL 7 2011

Habitat®

Release herbicide

Active Ingredient:

isopropylamine salt of imazapyr: (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)* 53.1%

Other Ingredients: 46.9%

Total: 100.0%

*Equivalent to 43.3% 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid or 4 pounds acid per gallon.

EPA Reg. No. 241-401

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

ACCEPTED
JUL 7 2011
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 241-401

FIRST AID

| | |
|-------------------------------|--|
| If swallowed | <ul style="list-style-type: none"> • Call a poison control center 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 center or doctor. • DO NOT give anything by mouth to an unconscious person. |
| If on skin or clothing | <ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice. |
| If inhaled | <ul style="list-style-type: none"> • 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 center or doctor for further treatment advice. |
| If in eyes | <ul style="list-style-type: none"> • Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes. • Call a poison control center or doctor for treatment advice. |

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

Precautionary Statements

Hazards To Humans and Domestic Animals

CAUTION. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemically resistant to this product are barrier laminate, butyl rubber, or polyethylene. If you want more options, follow the instructions for **Category A** on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves (except for pilots)

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands with plenty of soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to plants. Drift and runoff may be hazardous to plants in water adjacent to treated areas. **DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. See **DIRECTIONS FOR USE** for additional precautions and requirements.

PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of **Habitat® Release herbicide** should be mixed, stored, and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers.

DO NOT mix, store, or apply **Habitat Release** or spray solutions of **Habitat Release** in unlined steel (except stainless steel) containers or spray tanks.

Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Habitat® Release herbicide must be used only in accordance with directions on the label. Keep containers closed to avoid spills and contamination.

Habitat Release may be applied using helicopters, ground operated sprayers such as all terrain vehicles, low-volume hand-operated spray equipment such as backpack and pump-up sprayers, and tree injection equipment.

Observe all cautions and limitations in the package labels of products used in combination with **Habitat Release**.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **48 hours**.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material
- Protective eyewear

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

DO NOT enter or allow others to enter treated areas until sprays have dried.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage

DO NOT store below 10° F.

Pesticide Disposal

Wastes resulting from the use of this product must be disposed of on-site or at an approved waste disposal facility.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake

(capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake

(capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

IN CASE OF SPILL

In case of large-scale spillage regarding this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

RESTRICTIONS

DO NOT use on food or feed crops. **DO NOT** use on Christmas trees. **DO NOT** treat irrigation ditches, or water used for crop irrigation or for domestic uses. For terrestrial uses, **DO NOT** apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Keep from contact with fertilizers, insecticides, fungicides, and seeds to prevent unintentional exposure of desirable vegetation to **Habitat® Release herbicide**. **DO NOT** apply or drain or flush equipment on or near desirable non-conifer trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. **DO NOT** side trim desirable vegetation with this product. Prevent drift of spray to desirable plants.

Clean application equipment after using this product by thoroughly flushing with water.

Product Information

Habitat Release is a surfactant-free aqueous solution to be mixed in water and generally applied as a postemergence spray for control of most annual and perennial grasses, broadleaf weeds, vines, brambles, and hardwood brush and trees for the establishment and maintenance of wildlife openings and wildlife habitat management in forestry and terrestrial noncrop sites, such as railroad, utility, pipeline and highway rights-of-way, utility plant sites, petroleum tank farms, pumping installations, fence rows, storage areas, nonirrigation ditchbanks and other similar areas. **Habitat Release** may also be mixed in water and used for stump and cut-stem treatment for control of unwanted woody vegetation.

Habitat Release may be applied in forestry sites (land managed for timber production) on areas defined as puddles, potholes, berms of ditches, drainage ditches, intermittent drainage, intermittently flooded low-lying sites, seasonally dry flood plains, and transitional areas between upland and lowland sites except in the states of California and New York. It is permissible to treat marshes, swamps, and bogs after water has receded, as well as seasonally dry flood deltas except in the states of California and New York.

Habitat Release is also applied to control of undesirable vegetation along forest roads, nonirrigation ditchbanks, and the establishment and maintenance of wildlife openings except in the state of California.

SYMPTOMOLOGY

Habitat Release is readily absorbed through foliage and roots and is translocated rapidly throughout the plant, with accumulation in the meristematic regions. Treated plants stop growing soon after spray application. Chlorosis first appears in the youngest leaf tissue. In perennials, the herbicide is translocated into the roots, thus preventing most resprouting. Chlorosis and tissue necrosis may not be apparent in some plant species for several weeks after application. Woody plants, brush, and trees normally do

not display the full extent of herbicide control until several months following application.

Spray Drift Requirements

Aerial Applications

- Applicators are required to use a coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet. Applicators are required to use a very coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use a VMD of 475 microns or greater for release heights above 10 feet. Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size.
- Applicators are required to use upwind swath displacement.
- The boom length must not exceed 60% of the wingspan or 90% of the rotor blade diameter to reduce spray drift.
- Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited.
- Applications into temperature inversions are prohibited.

Ground Boom Applications

- Applicators are required to use a nozzle height below 4 feet above the ground or plant canopy and coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater.
- Applications with wind speeds greater than 10 mph are prohibited.
- Applications into temperature inversions are prohibited.

WILDLIFE HABITAT MANAGEMENT

Habitat Release may be used to control exotic and other undesirable vegetation for purposes of wildlife habitat enhancement, within forestry as well as terrestrial noncrop sites. Applications can be made to control undesirable vegetation (see **WEEDS CONTROLLED** section) prior to planting desirable species and to release desirable plant species (see **TOLERANT PLANT SPECIES** section). Spot, directed foliar and cut stump and stem treatments can be made to selectively control unwanted plants for wildlife habitat management and enhancement. See below for specific application directions.

APPLICATION RATES

Habitat® Release herbicide must be applied at the following use rates depending upon the vegetation to be controlled and the type of application being made.

| Target Vegetation | Application Type | Use Rate |
|--------------------------|-------------------------------|---|
| Hardwood trees and brush | Directed foliar or spot spray | 1 to 2% by volume |
| | Stump or cut stem | <u>Dilute</u> – 6 fl ozs/gallon of water |
| | | <u>Concentrate</u> – undiluted to 32 fl ozs/gallon of water |
| | Broadcast | 24 to 40 fl ozs/acre |
| Herbaceous weeds | Broadcast | 4 to 10 fl ozs/acre |
| | Directed | 0.4 to 0.6 fl oz/gallon of water |

See specific use directions in appropriate section.

MIXING AND APPLICATION INSTRUCTIONS

Helicopter Spray Equipment: Thoroughly mix the specified amount of **Habitat Release** in 5 to 30 gallons of water per acre and uniformly apply with properly calibrated aerial equipment. A suitable nonionic surfactant may be added to the spray solution to enhance control of undesirable vegetation. All precautions must be taken to minimize or eliminate spray drift. A drift control agent may be added at the recommended label rate except when applying with a **Microfoil® boom**, **Thru-Valve® boom** or other similar equipment. A foam-reducing agent may be added at the specified label rate, if needed.

IMPORTANT: DO NOT make applications by fixed-wing aircraft. Maintain adequate buffer zones. Thoroughly clean application and mixing 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.

Broadcast Application with Ground Operated Spray Equipment: Thoroughly mix and apply the specified amount of **Habitat Release** in 5 to 60 gallons of water per acre. A suitable nonionic surfactant may be added to the spray solution to enhance control of undesirable vegetation. A drift control agent and a foam reducing agent may be added at the recommended label rates, if needed. If desired, a spray pattern indicator may be added at the recommended label rate.

For best results, uniformly cover the foliage of the vegetation to be controlled with the spray solution.

IMPORTANT: DO NOT spray under windy or gusty conditions. Maintain adequate buffer zones. Clean application and mixing equipment after using this product by thoroughly flushing with water.

Side Trimming: DO NOT side trim with **Habitat Release** unless severe injury or death of the treated tree can be tolerated. **Habitat Release** is readily translocated and can result in death of the entire tree.

UNDESIRABLE HARDWOOD VEGETATION CONTROL

Directed Foliar or Spot Spray Applications

When making directed or spot spray applications with ground spray equipment, or low-volume hand-operated spray equipment, thoroughly mix a solution of 1 to 2 percent by volume of **Habitat Release** and a minimum of 1/4 percent by volume nonionic surfactant in water.

To mix the spray solution, add the volume of **Habitat Release** and nonionic surfactant indicated in the table below to the desired amount of water.

| SPRAY SOLUTION VOLUME | Habitat Release | | SURFACTANT 0.25% |
|-----------------------|------------------------|----------------------|------------------------|
| | 1.0 % | 2.0% | |
| 1 gallon | 1.3 fl ozs (2.5 Tblsp) | 2.6 fl ozs (5 Tblsp) | 0.3 fl oz (2 tsp) |
| 5 gallons | 6.4 fl ozs (13 Tblsp) | 13 fl ozs (26 Tblsp) | 1.6 fl ozs (3.5 Tblsp) |
| 10 gallons | 13 fl ozs | 26 fl ozs | 3.2 fl ozs (7 Tblsp) |
| 25 gallons | 2 pints | 4 pints | 8 fl ozs |
| 100 gallons | 1 gallon | 2 gallons | 2 pints |

Tblsp = tablespoon tsp = teaspoon
2 tablespoons = 1 fluid ounce

IMPORTANT: DO NOT overapply causing runoff from the treated foliage. Avoid direct application to desired plant species as injury may occur. DO NOT apply on or near desirable non-conifer trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. DO NOT exceed 40 fl ozs of Habitat Release per acre.

Application Tips: For low volume, select proper nozzles to avoid overapplication. Proper application is critical to ensure desirable results. Best results are achieved when the spray covers the crown and approximately 70 percent of the plant. The use of an even flat fan tip with a spray angle of 40 degrees or less will aid in proper deposition.

Recommended tip sizes include 4004E or 1504E. For a straight stream and cone pattern, adjustable cone nozzles such as 5500 X3 or 5500 X4 may be used. Attaching a rollover valve onto a Spraying Systems Model 30 gunjet or other similar spray guns allows for the use of both a flat fan and cone tips on the same gun.

Proper Spray Pattern: Moisten, but do not drench target vegetation causing spray solution to run off.

Low Volume with Backpacks: For brush up to 4 feet tall, spray down on the crown, covering crown and penetrating approximately 70% of the plant.

For brush 4 to 8 feet tall, swipe the sides of target vegetation by directing spray to at least two sides of the plant in smooth vertical motions from the crown to the bottom. Make sure to cover the crown whenever possible.

For brush over 8 feet tall, lace sides of the brush by directing spray to at least two sides of the target in smooth zigzag motions from crown to bottom.

Low Volume with Hydraulic Handgun Application

Equipment: Use same technique as described above for individual stem treatments.

Broadcast Applications

For broadcast applications, simulate a gentle rain near the top of target vegetation, allowing spray to contact the crown and penetrate the target foliage without falling to the understory. Herbicide spray solution which contacts the understory may result in severe injury or death of plants in the understory. **DO NOT** exceed 40 fl ozs of **Habitat® Release herbicide** per acre.

Stump and Cut Stem Treatments

Habitat Release may be used to control undesirable woody vegetation by applying a solution of the herbicide in water to the cambium area of freshly-cut stump surfaces or to cuts on the stem of the target woody vegetation. Applications can be made at any time of the year except during periods of heavy sap flow in the spring. Tree injection and cut stem treatments are most effective in late summer and early fall.

Mixing: Habitat Release may be mixed as either a concentrated or dilute solution for stump and cut stem treatments. The dilute solution may be used for applications to the surface of the stump or to cuts on the stem of the target woody vegetation. Concentrated solutions may be used for applications to cuts on the stem. Use of the concentrated solution permits application to fewer cuts on the stem, especially for large diameter trees. Follow the application instructions to determine proper application techniques for each type of solution.

Applications with Dilute Solutions: To prepare a dilute solution, mix 6 fl ozs of **Habitat Release** with one gallon of water.

For cut stump treatments: Spray or brush the solution onto the cambium area of the freshly cut stump surface. Ensure that the solution thoroughly wets the entire cambium area (the wood next to the bark of the stump).

For tree injection treatments: Using standard injection equipment, apply 1 milliliter of solution at each injection site around the tree with no more than one-inch intervals between cut edges. Ensure that the injector completely penetrates the bark at each injection site.

For frill or girdle treatments: Using a hatchet, machete, or similar device, make cuts through the bark at intervals around the tree with no more than two-inch intervals between cut edges. Spray or brush the solution into each cut until thoroughly wet.

Applications with Concentrate Solutions: To prepare a concentrated solution, use undiluted product or mix with up to 75% water, by volume.

For tree injection treatments: Using standard injection equipment, apply 1 milliliter of solution at each injection site. Make at least one injection cut for every three inches of diameter at breast height (dbh) on the target tree. For example, a three-inch-dbh tree will receive 1 injection cut and a six-inch-dbh tree will receive 2 injection cuts. On trees requiring more than one injection site, place the injection cuts at approximately equal intervals around the tree.

For frill or girdle treatments: Using a hatchet, machete, or similar device, make cuts through the bark at approximately equal intervals around the tree. Make at least one cut for every three inches of diameter at breast height (dbh) on the target tree. For example, a three-inch-dbh tree will receive 1 cut and a six-inch-dbh tree will receive 2 cuts. Spray or brush the solution into each cut until thoroughly wet.

NOTE: Injury may occur to non-target or desirable woody plants if they extend from the same root system or their root systems are grafted to those of the treated tree.

HERBACEOUS WEED CONTROL

Habitat Release may be applied as a broadcast treatment using ground sprayers or as a directed treatment using backpack or handheld sprayers for the control of herbaceous weeds. For broadcast treatments apply **Habitat Release** at rates of 4 to 10 fl ozs per acre and include a minimum of 1/4 percent by volume nonionic surfactant. For directed applications mix 0.4 to 0.6 fl oz **Habitat Release** and 0.2 fl oz nonionic surfactant per gallon of water. For best results, applications should be made to newly emerged weeds. For difficult to control weeds, use the higher labeled rates.

TOLERANT PLANT SPECIES

The following plant species are tolerant to **Habitat Release**. Many of these species are preferred food; browse and cover plants for wildlife. These species may be released from herbaceous weed and brush competition with an application of **Habitat Release**. **Habitat Release** must be used only in accordance with directions on the label.

- Beggarweeds
 - Beggarweed (*Desmodium nudiflorum*)
 - Beggarweed (*Desmodium rotundifolium*)
 - Florida beggarweed (*Desmodium tortuosum*)
- Black locust (*Robinia pseudo-acacia*)
- Blackberry (*Rubus argutus*)
- Butterfly pea (*Centrosema virginianum*)
- Butterfly pea (*Clitoria mariana*)
- Dewberry (*Rubus trivialis*)
- Dollar weed (*Rhynchosia reniformis*)
- Erect milk pea (*Galactia volubilis*)
- Goats rue (*Tephrosia virginiana*)
- Ground nut (*Apios americana*)
- Hairy rhynchosia (*Rhynchosia tomentosa*)
- Hog peanut (*Amphicarpa bracteata*)

TOLERANT PLANT SPECIES (continued)

- Indigo bush (*Amorpha fruticosa*)
- Lespedeza
 - Bicolor lespedeza (*Lespedeza bicolor*)
 - Common lespedeza (*Lespedeza striata*)
 - Hairy lespedeza (*Lespedeza hirta*)
 - Japonica lespedeza (*Lespedeza japonica*)
 - Prostrate lespedeza (*Lespedeza procumbens*)
 - Roundhead lespedeza (*Lespedeza capitata*)
 - Thunburg lespedeza (*Lespedeza thunburgii*)
 - Wand lespedeza (*Lespedeza intermedia*)
- Milk pea (*Strophostyles helvola*)
- Narrowleaf vetch (*Vicia dasycarpa*)
- Partridge pea (*Cassia fasciculata*)
- Pencil flower (*Stylosanthes biflora*)
- Redbud (*Cercis canadensis*)
- Samson snakeroot (*Psoralea psoralioides*)
- Sensitive briar (*Schrankia microphylla*)
- Sesbania (*Sesbania macrocarpa*)
- Small partridge pea (*Cassia nictitans*)
- Spike tephrosia (*Tephrosia spicata*)
- Trailing wild bean (*Strophostyles umbellata*)
- Wild indigo (*Indigofera caroliniana*)
- Wild pea (*Vigna suteola*)

The following plant species commonly colonize a site after treatment with **Habitat® Release herbicide**. Seed of these species may be present in the soil or may be dispersed within the area by wind and animals.

- Beautyberry (*Callicarpa americana*)
- Beggar ticks (*Bidens* spp.)
- Blue curls (*Trichostema dichotomum*)
- Broomsedges (*Andropogon* spp.)
- Carpetweed (*Mollugo verticillata*)
- Common ragweed (*Ambrosia artemisiifolia*)
- Dove weed (*Croton glandulosus*)
- Evening primrose (*Oenothera biennis*)
- Fireweed (*Epilobium angustifolium*)
- Florida purslane (*Richardia scabra*)
- Flowering spurge (*Euphorbia corollata*)
- Giant ragweed (*Ambrosia trifida*)
- Greenbrier (*Smilax bona-nox*)
- Ground cherry (*Physalis virginiana*)
- Lambsquarters (*Chenopodium album*)
- Lovevine (*Cuscuta gronovii*)
- Maypop (*Passiflora incarnata*)
- Morningglory (*Ipomoea purpurea*)
- Muscadine grape (*Vitis rotundifolia*)
- New Jersey tea (*Ceanothus americanus*)
- Panic grasses (*Panicum* spp.)
- Pennsylvania smartweed (*Polygonum pennsylvanicum*)
- Pigweed (*Amaranthus hybridus*)
- Poison ivy (*Rhus radicans*)
- Pokeweed (*Phytolacca americana*)
- Poor-joe (*Diodia teres*)
- Sheep-sorrel (*Rumex hastatulus*)
- Smooth sumac (*Rhus glabra*)
- Trumpet vine (*Campsis radicans*)
- Violets (*Violet* spp.)

TOLERANT PLANT SPECIES (continued)

- Virginia creeper (*Parthenocissus quinquefolia*)
- Wild geranium (*Geranium carolinianum*)
- Winged sumac (*Rhus copallina*)
- Woolly croton (*Croton capitatus*)
- Yellow wood sorrel (*Oxalis stricta*)

WEEDS CONTROLLED

Habitat Release will provide postemergence control and some residual control of the following target vegetation species. Degree of control is both species and rate dependent. **Habitat Release** must be used only in accordance with directions on the label.

Grasses

The species of annual and perennial grasses controlled by **Habitat Release** include the following:

- Annual bluegrass (*Poa annua*)
- Bahiagrass (*Paspalum notatum*)
- Barnyardgrass (*Echinochloa crus-galli*)
- Beardgrass (*Andropogon* spp.)
- Bermudagrass (*Cynodon dactylon*)¹
- Big bluestem (*Andropogon gerardii*)
- Broadleaf signalgrass (*Brachiaria platyphylla*)
- Canada bluegrass (*Poa compressa*)
- Cattail (*Typha* spp.)
- Cheat (*Bromus secalinus*)
- Cogongrass (*Imperata cylindrica*)²
- Crabgrass (*Digitaria* spp.)
- Crowfootgrass (*Dactyloctenium aegyptium*)
- Dallisgrass (*Paspalum dilatatum*)
- Downy brome (*Bromus tectorum*)
- Fall panicum (*Panicum dichotomiflorum*)
- Feathertop (*Pennisetum villosum*)
- Fescue (*Festuca* spp.)
- Foxtail (*Setaria* spp.)
- Giant reed (*Arundo donax*)
- Goosegrass (*Eleusine indica*)
- Guineagrass (*Panicum maximum*)
- Italian ryegrass (*Lolium multiflorum*)
- Itchgrass (*Rottboellia exaltata*)
- Johnsongrass (*Sorghum halepense*)¹
- Junglerice (*Echinochloa colonum*)
- Kentucky bluegrass (*Poa pratensis*)
- Lovegrass (*Eragrostis* spp.)¹
- Orchardgrass (*Dactylis glomerata*)
- Panicum* spp.
- Paragrass (*Brachiaria mutica*)
- Phragmites (*Phragmites australis*)
- Prairie cordgrass (*Spartina pectinata*)
- Prairie threeawn (*Aristida oligantha*)
- Quackgrass (*Agropyron repens*)
- Reed canary grass (*Phalaris arundinacea*)
- Saltgrass (*Distichlis stricta*)
- Sand dropseed (*Sporobolus cryptandrus*)
- Sandbur (*Cenchrus* spp.)
- Signalgrass (*Brachiaria platyphylla*)
- Smooth brome (*Bromus inermis*)
- Sprangletop (*Leptochloa* spp.)
- Timothy (*Phleum pratense*)

WEEDS CONTROLLED (continued)

Grasses (continued)

Torpedograss (*Panicum repens*)
Vaseygrass (*Paspalum urvillei*)
Wild barley (*Hordeum* spp.)
Wild oats (*Avena fatua*)
Wirestem muhly (*Muhlenbergia frondosa*)
Witchgrass (*Panicum capillare*)
Woolly cupgrass (*Eriochloa villosa*)

¹Use higher labeled rates.

²Use minimum of 24 fl ozs per acre.

Broadleaf Weeds

The species of annual and perennial broadleaf weeds controlled by **Habitat® Release herbicide** include the following:

Arrowwood (*Pluchea sericea*)
Broom snakeweed (*Gutierrezia sarothrae*)
Bull thistle (*Cirsium vulgare*)
Burclover (*Medicago* spp.)
Burdock (*Arctium* spp.)
Camphorweed (*Heterotheca subaxillaris*)
Canada thistle (*Cirsium arvense*)
Carolina geranium (*Geranium carolinianum*)
Carpetweed (*Mollugo verticillata*)
Chickweed, mouseear (*Cerastium vulgatum*)
Clover (*Trifolium* spp.)
Cocklebur (*Xanthium strumarium*)
Common chickweed (*Stellaria media*)
Common ragweed (*Ambrosia artemisiifolia*)
Cudweed (*Gnaphalium* spp.)
Dandelion (*Taraxacum officinale*)
Desert camelthorn (*Alhagi pseudalhagi*)
Diffuse knapweed (*Centaurea diffusa*)
Dock (*Rumex* spp.)
Dogfennel (*Eupatorium capillifolium*)
Fiddleneck (*Amsinckia intermedia*)
Filaree (*Erodium* spp.)
Fleabane (*Erigeron* spp.)
Giant ragweed (*Ambrosia trifida*)
Goldenrod (*Solidago* spp.)
Gray rabbitbrush (*Chrysothamnus nauseosus*)
Henbit (*Lamium amplexicaule*)
Hoary vervain (*Verbena stricta*)
Horseweed (*Conyza canadensis*)
Indian mustard (*Brassica juncea*)
Japanese bamboo/knotweed (*Polygonum cuspidatum*)
Knotweed, prostrate (*Polygonum aviculare*)
Kochia (*Kochia scoparia*)
Lambsquarters (*Chenopodium album*)
Little mallow (*Malva parviflora*)
Milkweed (*Asclepias* spp.)
Miners lettuce (*Montia perfoliata*)
Mullein (*Verbascum* spp.)
Nettleleaf goosefoot (*Chenopodium murale*)
Oxeye daisy (*Chrysanthemum leucanthemum*)
Pepperweed (*Lepidium* spp.)
Pigweed (*Amaranthus* spp.)

WEEDS CONTROLLED (continued)

Broadleaf Weeds (continued)

Plantain (*Plantago* spp.)
Pokeweed (*Phytolacca americana*)
Primrose (*Oenothera kunthiana*)
Puncturevine (*Tribulus terrestris*)
Purple loosestrife (*Lythrum salicaria*)
Purslane (*Portulaca* spp.)
Pusley, Florida (*Richardia scabra*)
Rocket, London (*Sisymbrium irio*)
Rush skeletonweed (*Chondrilla juncea*)
Russian knapweed (*Centaurea repens*)
Russian thistle (*Salsola kali*)
Saltbush (*Atriplex* spp.)
Shepherdspurse (*Capsella bursa-pastoris*)
Silverleaf nightshade (*Solanum elaeagnifolium*)
Smartweed (*Polygonum* spp.)
Sorrell (*Rumex* spp.)
Sowthistle (*Sonchus* spp.)
Spurge, annual (*Euphorbia* spp.)
Stinging nettle (*Urtica dioica*)
Sunflower (*Helianthus* spp.)
Sweet clover (*Mellilotus* spp.)
Tansymustard (*Descurainia pinnata*)
Texas thistle (*Cirsium texanum*)
Velvetleaf (*Abutilon theophrasti*)
Western ragweed (*Ambrosia psilostachya*)
Wild carrot (*Daucus carota*)
Wild lettuce (*Lactuca* spp.)
Wild parsnip (*Pastinaca sativa*)
Wild turnip (*Brassica campestris*)
Woollyleaf bursage (*Ambrosia grayi*)
Yellow starthistle (*Centaurea solstitialis*)
Yellow woodsorrel (*Oxalis stricta*)

Vines and Brambles

The species of vines and brambles controlled by **Habitat Release** include the following:

Field bindweed (*Convolvulus arvensis*)
Greenbriar (*Smilax* spp.)
Hedge bindweed (*Calystegia sepium*)
Honeysuckle (*Lonicera* spp.)
Kudzu (*Pueraria lobata*)^{1,2}
Morningglory (*Ipomoea* spp.)
Poison ivy (*Rhus radicans*)
Redvine (*Brunnichia cirrhosa*)
Trumpet creeper (*Campsis radicans*)
Virginia creeper (*Parthenocissus quinquefolia*)
Wild buckwheat (*Polygonum convolvulus*)
Wild grape (*Vitis* spp.)
Wild rose (*Rosa* spp.)¹
 Including: Multiflora rose (*Rosa multiflora*)
 Macartney rose (*Rosa bracteata*)

¹Use higher labeled rates.

²Use a minimum of 75 GPA. Control of established stands may require multiple applications.

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WEEDS CONTROLLED (continued)

Woody Brush and Trees

The species of woody brush and trees controlled by **Habitat® Release herbicide** include the following:

- Alder (*Alnus* spp.)
- American beech (*Fagus grandifolia*)
- Ash (*Fraxinus* spp.)¹
- Aspen (*Populus* spp.)
- Autumn olive (*Elaeagnus umbellata*)
- Bald cypress (*Taxodium distichum*)
- Bigleaf maple (*Acer macrophyllum*)
- Birch (*Betula* spp.)¹
- Black oak (*Quercus kelloggii*)
- Blackgum (*Nyssa sylvatica*)²
- Boxelder (*Acer negundo*)
- Brazilian peppertree (*Schinus terebinthifolius*)
- Ceanothis (*Ceanothis* spp.)
- Cherry (*Prunus* spp.)^{1,2}
- Chinaberry (*Melia azedarach*)
- Chinese tallow-tree (*Sapium sebiferum*)
- Chinquapin (*Castanopsis chrysophylla*)
- Cottonwood (*Populus trichocarpa* and *Populus deltoides*)
- Cypress (*Taxodium* spp.)
- Dogwood (*Cornus* spp.)¹
- Eucalyptus (*Eucalyptus* spp.)
- Hawthorn (*Crataegus* spp.)
- Hickory (*Carya* spp.)¹
- Huckleberry (*Gaylussacia* spp.)
- Lyonia* spp.
 - Including: Fetterbush (*Lyonia lucida*)
 - Staggerbush (*Lyonia mariana*)
- Madrone (*Arbutus menziesii*)
- Maple (*Acer* spp.)
- Melaleuca (*Melaleuca quinquenervia*)
- Mulberry (*Morus* spp.)^{1,3}
- Oak (*Quercus* spp.)⁴
- Persimmon (*Diospyros virginiana*)²
- Poison oak (*Rhus diversiloba*)
- Popcorn-tree (*Sapium sebiferum*)
- Poplar (*Populus* spp.)
- Privet (*Ligustrum vulgare*)
- Red alder (*Alnus rubra*)
- Red maple (*Acer rubrum*)
- Saltcedar (*Tamarix pentandra*)
- Sassafras (*Sassafras albidum*)
- Sourwood (*Oxydendrum arboreum*)²
- Sumac (*Rhus* spp.)
- Sweetgum (*Liquidambar styraciflua*)
- Sycamore (*Platanus occidentalis*)
- Tanoak (*Lithocarpus densiflorus*)¹
- Titi (*Cyrilla racemiflora*)¹
- Tree of heaven (*Ailanthus altissima*)
- Vaccinium* spp.
 - Including: Blueberry (*Vaccinium* spp.)
 - Sparkleberry (*Vaccinium arboreum*)
- Willow (*Salix* spp.)
- Yellow poplar (*Liriodendron tulipifera*)¹

¹Use higher labeled rates.

²Best control with applications prior to formation of fall leaf color.

³The degree of control may be species dependent.

⁴For Water oak (*Quercus nigra*), Laurel oak (*Q. lauriflora*), Willow oak (*Q. phellos*) and Live oak (*Q. virginiana*), use higher labeled rates.

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000241-00401.20081113b.NVA 2008-04-117-0302
Supersedes: American Cyanamid 5/00

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