

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

AUG - 4 2011

Mr. John J. Jachetta, Ph.D. Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268

Subject: Label Amendment Revising Hay and Grass Restrictions to Specify an 18-Month Interval and Making Other Minor Changes.

ForeFront® HL

EPA Reg. No. 62719-630

Your Submission, Dated June 15, 2011, as Amended by Email July 27, 2011

Dear Dr. Jachetta:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

A stamped copy of your label is enclosed for your records. This label supersedes all previously accepted labels. You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after eighteen (18) months from the date of this letter must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions:

Sincerely,

FOR

Kathryn Montague Product Manager 23

Herbicide Branch

Registration Division (7505P)

Enclosure

S5E / ForeFront HL / MSTR Amend / 07-27-11 file: ForeFront HL-630 MSTR 27Jul11d.docx

## ForeFront® HL

EPA Reg. No. 62719-630

#### **Registration Notes**:

**Source section 3 labeling** based on EPA accepted label dated March 10, 2011. Following are changes by amendment:

- 1. Revise restrictions for hay and grass to specify treatment within the preceding 18-months
- 2. Add copyright to advisory graphic
- 3. Seeding grasses replaced the preemergence section for clarification.
- 4. Restrictions in Hay or Manure Use: revised first bullet to specify 18 months, and made the restriction for use of mulch 3 days after grazing a standalone bullet
- 5. Application Methods: remove "broadcast up to" from High Volume Foliar Application
- 6. Revise Spray Drift per 2,4-D RED
- Revise supplemental label restrictions for hay and grass consistent with main label restrictions
- 8. Add Florida and New Mexico to list of states allowed on supplemental labeling
- 9. Supplemental label: add "corn" to end of fourth bullet under "Restrictions in Hay or Manure Use"

<sup>&</sup>lt;sup>®</sup>Trademark of Dow AgroSciences LLC

(Base label):

### ForeFront® HL

**Specialty Herbicide** 

# ACCEPTED

AUG - 4 2011

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under

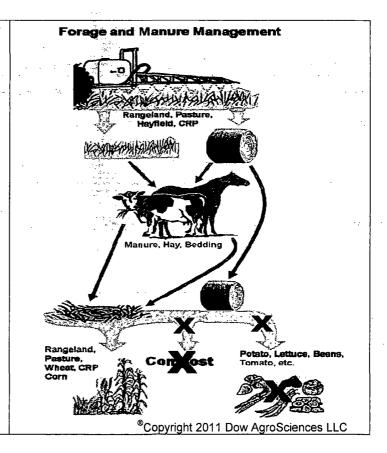
For control of susceptible weeds and certain woody plants, including invasive and noxious weeds, on rangeland, permanent grass pastures (including grasses grown for hay\*), Conservation Reserve Program (CRP) acres, non-cropland areas including industrial sites, rights-of-way, (such as roadsides, electric utility and communication transmission lines, pipelines, and railroads) and non-irrigation ditch banks, natural areas (such as wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails), and grazed areas in and around these sites

\*Hay from grass treated with ForeFront HL within the preceding 18-months can only be used on the farm or ranch where the product is applied unless allowed by supplemental labeling

# IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT

#### RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS

- Carefully read the section "Restrictions in Hay or Manure Use."
- It is mandatory to follow the "Use Precautions and Restrictions" section of this label.
- Manure and urine from animals consuming grass or hay treated with this product may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Hay can only be used on the farm or ranch where product is applied unless allowed by supplemental labeling.
- Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions". Call [1-(800) 263-1196] Customer Information Group.



Not For Sale, Distribution, or Use in New York State.

Group



HERBICIDE

Active Ingredient:

Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro- 8.24%

Dimethyl amine salt of (2,4-dichlorophenoxy) acetic acid 41.26%

Other Ingredients 50.50%

Total 100.00%

#### Acid Equivalents:

aminopyralid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) – 4.28% - 0.41 lb/gal (50 g/L) 2,4-D [(2,4-dichlorophenoxy) acetic acid] – 34.25% - 3.33 lb/gal (400 g/L)

#### Keep Out of Reach of Children

#### DANGER

#### **PELIGRO**

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

#### **Precautionary Statements**

#### Hazards to Humans and Domestic Animals

Corrosive • Causes Irreversible Eye Damage • Harmful if Swallowed

Do not get in eyes or on clothing.

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selections chart.

#### All mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long-sleeved shirt and long pants
- · Shoes plus socks
- Protective eyewear
- Chemical-resistant gloves, when applying with any handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- Chemical resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements

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

#### **Engineering Controls Statements**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)].

#### **User Safety Recommendations**

Users should:

- Wash hands 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.

#### First Aid

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. Call a poison control center or doctor for treatment advice.

If swallowed: 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

#### **Environmental Hazards**

This product is toxic to aquatic invertebrates and may be toxic to fish. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark except as permitted on this label. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

#### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to label booklet under "Agricultural Use Requirements" in the "Directions for Use" section for information about this standard.

#### Non-refillable containers 5 gallons or less:

#### **Storage and Disposal**

Do not contaminate water, food, or feed by storage and disposal.

**Pesticide Storage:** If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized material prior to use.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a 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 \$0 seconds after the flow begins to drip.

#### Refillable containers larger than 5 gallons:

#### Storage and Disposal

Do not contaminate water, food, feed or fertilizer by storage or disposal.

**Pesticide Storage:** If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized material prior to use.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mx tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### Nonrefillable containers 5 gallons or larger:

#### Storage and Disposal

Do not contaminate water, food, feed or fertilizer by storage or disposal.

**Pesticide Storage:** If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized material prior to use.

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#### Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-630

EPA Est. \_\_\_\_\_

<sup>®</sup>Trademark of Dow AgroSciences LLC Produced for Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268

Net Contents \_\_\_

(cover):

### ForeFront® HL

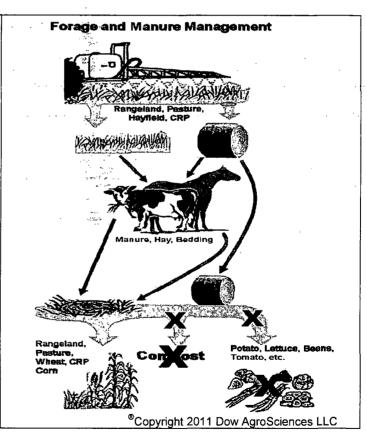
#### **Specialty Herbicide**

For control of susceptible weeds and certain woody plants, including invasive and noxious weeds, on rangeland, permanent grass pastures (including grasses grown for hay\*), Conservation Reserve Program (CRP) acres, non-cropland areas including industrial sites, rights-of-way, (such as roadsides, electric utility and communication transmission lines, pipelines, and railroads) and non-irrigation ditch banks, natural areas (such as wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails), and grazed areas in and around these sites

\*Hay from grass treated with ForeFront Higherthin the preceding 18-months can only be used on the farm or ranch where the product is applied unless allowed by supplemental labeling

# IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS

- Carefully read the section
   "Restrictions in Hay or Manure Use."
- It is mandatory to follow the "Use Precautions and Restrictions" section of this label.
- Manure and urine from animals consuming grass or hay treated with this product may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Hay can only be used on the farm or ranch where product is applied unless allowed by supplemental labeling.
- Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions". Call [1-(800) 263-1196] Customer Information Group.



Not For Sale, Distribution, or Use in New York State.

Group



HERBICIDE

Page 7

Active Ingredient:	
Triisopropanolammonium salt of 2-pyridine	
carboxylic acid, 4-amino-3,6-dichloro	8.24%
Dimethyl amine salt of	. •
(2,4-dichlorophenoxy) acetic acid	41.26%
Other Ingredients	<u>50.50%</u>
Total	. 100.00%

#### Acid Equivalents:

aminopyralid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) – 4.28% - 0.41 lb/gal (50 g/L) 2,4-D [(2,4-dichlorophenoxy) acetic acid] – 34.25% - 3.33 lb/gal (400 g/L)

#### Keep Out of Reach of Children

#### **DANGER**

#### **PELIGRO**

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

#### **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to label booklet under "Agricultural Use Requirements" in the "Directions for Use" section for information about this standard.

Refer to inside of label booklet for additional precautionary information including Directions for Use.

Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.

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EPA Reg. No. 62719-630

EPA Est.
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Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

Net Contents



(Page 1 through end):

#### **Precautionary Statements**

#### Hazard to Humans and Domestic Animals

#### DANGER

Corrosive • Causes Irreversible Eye Damage • Harmful if Swallowed

Do not get in eyes or on clothing.

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selections chart.

#### All mixers, loaders, applicators, flaggers, and other handlers must wear:

- · Long-sleeved shirt and long pants
- · Shoes plus socks
- Protective eyewear
- Chemical-resistant gloves, when applying with any handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- Chemical resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements

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

#### **Engineering Controls Statements**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)].

#### **User Safety Recommendations**

Users should:

- Wash hands 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.



#### First Aid

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. Call a poison control center or doctor for treatment advice.

**If swallowed:** 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

#### **Environmental Hazards**

This product is toxic to aquatic invertebrates and may be toxic to fish. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark except as permitted on this label. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

#### **Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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.

Not For Sale, Distribution, or Use in New York State.

#### 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:

- Coveralis
- Chemical-resistant gloves made of any waterproof material such as natural rubber.
- Protective evewear
- Shoes plus socks



#### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard 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.

**Entry Restrictions for Non-WPS Uses:** Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

#### Storage and Disposal

Do not contaminate water, food, feed or fertilizer by storage or disposal.

**Pesticide Storage:** If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized material prior to use.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

#### Non-refillable containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a 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 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.

#### Refillable containers larger than 5 gallons:

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### Nonrefillable containers 5 gallons or larger:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** 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 tan 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 a 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.

#### **Product Information**

ForeFront® HL specialty herbicide controls broadleaf weeds and certain woody plants, including invasive and noxious weeds, on rangeland, permanent grass pastures (including grasses grown for hay\*), Conservation Reserve Program (CRP) acres, non-cropland areas including industrial sites, rights-of-way, (such as roadsides, electric utility and communication transmission lines, pipelines, and railroads) and non-irrigation ditch banks, natural areas (such as wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails), and grazed areas in and around these sites.

\*Hay from grass treated with ForeFront HL within the preceding 18-months can only be used on the farm or ranch where the product is applied unless allowed by supplemental labeling

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs) and transitional areas between upland and lowland sites. ForeFront HL can be used to the waters edge. Do not apply directly to water and take precautions to minimize spray drift onto water.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in <u>Washington Toxics Coalition et al. v. EPA</u>, C0131C, (W.D. W.A.). For further information, please refer to EPA Web site: http://www.epa.gov/espp.

#### Resistance Management Guidelines

- Development of plant populations resistant to this herbicide mode of action is usually not a problem on rangeland, permanent grass pastures, or CRP, non-cropland sites since these sites receive infrequent pesticide applications.
- In croplands, use an effective integrated pest management (IPM) program, integrating tillage or other mechanical methods, crop rotation or other cultural control methods into weed control programs whenever practical.
- Similar looking biotypes of a given weed species occurring in a treated area may vary in their susceptibility to a herbicide. Application of a herbicide below its specified rate may allow more tolerant weeds to survive and a shift to more tolerant biotypes within the treated area.
- Where identified, spreading of resistant weeds to other fields may be prevented by cleaning harvesting and tillage equipment before moving to other areas and by planting weed-free seed.
- Contact your extension specialist, certified crop consultant, or Dow AgroSciences representative for the latest resistance management information.

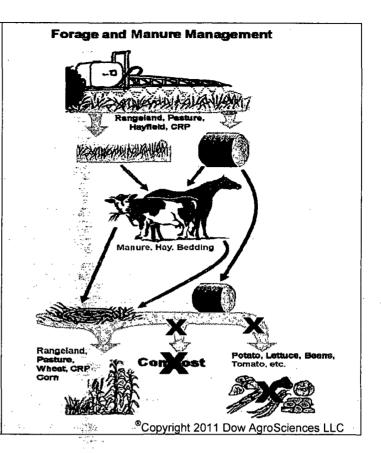
#### **Use Precautions and Restrictions**

This product is not intended for reformulation or repackaging into other end-use products.

Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions." Call (1-800-263-1196) for more information.

# IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS

- Carefully read the section
   "Restrictions in Hay or Manure
   Use."
- It is mandatory to follow the "Use Precautions and Restrictions" section of this label.
- Manure and urine from animals consuming grass or hay treated with this product may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Hay can only be used on the farm or ranch where product is applied unless allowed by supplemental labeling.
- Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions". Call [1-(800) 263-1196] Customer Information Group.



- Do not use grasses treated with ForeFront HL in the preceding 18-months for hay intended for export outside the United States.
- Hay from areas treated with ForeFront High the preceding 18-months CANNOT be distributed or made available for sale off the farm or ranch where harvested unless allowed by supplemental labeling.
- Hay from areas treated with ForeFront HL in the preceding 18-months
   CANNOT be used for silage, haylage, baylage and green chop unless allowed by supplemental labeling.
- Do not move hay made from grass treated with ForeFront HL within the preceding 18-months off farm unless allowed by supplemental labeling.
- Do not use hay or straw from areas treated with ForeFront HL within the preceding 18-months or manure from animals feeding on hay treated with ForeFront HL in compost.
- Do not use grasses treated with ForeFront HL in the preceding 18-months for seed production.

- Applications made during periods of intense rainfall, to soils saturated with water, surfaces paved
  with materials such as asphalt or concrete, or soils through which rainfall will not readily penetrate
  may result in runoff and movement of ForeFront HL. Injury to crops may result if treated soil and/or
  runoff water containing ForeFront HL is washed, or moved onto land used to produce crops.
  Exposure to ForeFront HL may injure or kill susceptible crops and other plants, such as grapes,
  soybeans, tobacco, sensitive ornamentals. Do not treat frozen soil where runoff could damage
  sensitive plants.
- **Preharvest Interval:** Do not cut forage for hay within 7 days of application. For program lands, such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.
- Maximum seasonal rate: Apply no more than 2.1 pints (34 fluid oz) (0.87 lbs ae 2,4-D) per acre per use season
- Use 2 or more gallons of spray solution per acre
- Do not make more than two applications per year 6
- Do not apply within 30 days of previous application
- If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable
- Maximum Application Rate: Do not broadcast apply more than 2.1 pints (34 fluid oz) (0.87 lbs ae 2,4-D) per acre of ForeFront HL per year. The total amount of ForeFront HL applied broadcast, as a re-treatment, and/or spot treatment per year must not exceed 2.1 pints (34 fluid oz) (0.87 lbs ae 2,4-D) per acre. Spot treatments may be applied at an equivalent broadcast rate of up to 4.2 pints (68 fluid oz) of ForeFront HL (1.74 lbs ae 2,4-D) per acre per annual growing season; however, not more than 50% of an acre may be treated at that rate.
- Grazing and Haying Restrictions: Do not harvest forage for hay within 7 days of ForeFront HL
  application. Cutting hay too soon after spraying weeds can compromise the weed control. Wait 14
  days prior to cutting grass hay to allow for maximum herbicide activity.
- Do not use this product for impregnation on dry fertilizer, unless specified in a Dow AgroSciences state specific product bulletin.
- Transfer of Animals Feeding on ForeFront HL Treated Forage: Do not transfer animals grazing or feeding on hay to areas where sensitive broadleaf crop occur without first allowing 3 days of grazing on an untreated pasture. Otherwise, urine and manure may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Do not apply this product on lawns, turf, ornamental plantings, urban walkways, driveways, tennis courts, golf courses, athletic fields, commercial sod operations, or other high-maintenance, fine turfgrass areas, or similar areas.

#### • Restrictions in Hay or Manure Use:

- Do not use treated plant residues, including hay or straw from areas treated within the preceding 18-months, in compost, mulch or mushroom spawn.
- Do not use manure from animals that have grazed forage or eaten hay harvested from treated areas within the previous 3 days, in compost, mulch or mushroom spawn.
- Do not spread manure from animals that have grazed or consumed forage or hay from treated areas within the previous 3 days on land used for growing broadleaf crops.
- Manure from animals that have grazed forage or eaten hay harvested from aminopyralid-treated areas within the previous 3 days may only be used on pasture grasses, grass grown for seed, wheat and corn.
- Do not plant a broadleaf crop (including soybeans, sunflower, tobacco, vegetables, field beans, peanuts, and potatoes) in fields treated in the previous year with manure from animals that have grazed forage or eaten hay harvested from aminopyralid-treated areas until an adequately sensitive field bioassay is conducted to determine that the aminopyralid residues in the soil is at level that is not injurious to the crop to be planted.
- To promote herbicide decomposition, plant residues should be evenly incorporated in the surface soil or burned. Breakdown of aminopyralid in plant residues or manure is more rapid under warm, moist soil conditions and may be accelerated by supplemental irrigation.



- Grazing Poisonous Plants: Herbicide application may increase palatability of certain poisonous plants. Do not graze treated areas until poisonous plants are dry and no longer palatable to livestock.
- Seeding grasses:
  - Application before seeding grasses: This product can be applied in the spring through fall as needed to control broadleaf weeds prior to grass planting. Grasses can be seeded as a dormant planting (in the late fall or early winter) in the year of application or grasses can be seeded the following spring. Grasses planted in the fall should be planted when soil temperatures are low enough to ensure that the seeds will not germinate and emerge until the following spring.
  - Postemergence: During the season of establishment, ForeFront HL should be applied only after perennial grasses are well established (have developed a good secondary root system and show good vigor). Most perennial grasses are tolerant to ForeFront HL at this stage of development. ForeFront HL may suppress certain established grasses, such as smooth bromegrass (*Bromus inermis*), especially when plants are stressed by adverse environmental conditions. Plants should recover from this transient suppression with the onset of environmental conditions favorable to grass growth and upon release from weed competition.
- Seeding Legumes: Do not plant forage legumes until a soil bioassay has been conducted to determine if aminopyralid residues remaining in the soil will adversely affect the legume establishment.
- Crop Rotation: Do not rotate non-cropland to cropland for one year following an application of
  ForeFront HL. Cereals and corn can be planted one year after treatment. Most broadleaf crops are
  more sensitive and can require at least 2 years depending on the crop and environmental conditions.
  Do not plant a broadleaf crop until an adequately sensitive field bioassay shows that the level of
  aminopyralid present in the soil will not adversely affect that broadleaf crop.
- Field Bioassay Instructions: In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample variability in field conditions such as soil texture, soil organic matter, soil pH, rainfall pattern or drainage. The field bioassay can be initiated starting a minimum of one year after herbicide application and following harvest of the treated crop. Observe the test crop for symptoms of herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the intended rotational crop; plant only to wheat, forage grasses, native grasses or grasses grown for hav
- ForeFront HL is highly active against many broadleaf plant species. Do not use this product on areas where loss of desirable broadleaf forage plants, including legumes, cannot be tolerated.
- Trees adjacent to or in a treated area can occasionally be affected by root uptake of ForeFront HL through movement into the soil. Do not apply ForeFront HL within the root zone of desirable trees unless such injury can be tolerated. Use special caution near roses, and leguminous trees such as locusts, redbud, mimosa, and caragana.
- Chemigation: Do not apply this product through any type of irrigation system.
- **Do not contaminate water intended for irrigation or domestic purposes.** Do not treat inside banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes.

#### Restrictions for Non-Irrigation Canal Ditchbank Application

#### Postemergence:

Limited to 1 application per season.

Maximum of 2.1 pints (34 fluid oz) (0.87 lbs ae 2,4-D)/acre per application.

Minimum of 30 days between applications

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Spot treatments may be applied at an equivalent broadcast rate of up to 4.2 pints (68 fluid oz) of ForeFront HL (1.74 lbs ae 2,4-D) per acre per annual growing season; however, not more than 50% of an acre may be treated at that rate.

Do not use on small canals with a flow rate less than 10 cubic feet per second (CFS) where water will be used for drinking purposes. CFS may be estimated by using the formula below. The approximate velocity needed for the calculation can be determined by observing the length of time that it takes a floating object to travel a defined distance. Divide the distance (ft.) by the time (sec.) to estimate velocity (ft. per sec.). Repeat 3 times and use the average to calculate CFS.

Average Width (ft.) x Average Depth (ft.) x Average Velocity (ft. per sec.) = CFS

#### For ditchbank weeds:

Do not allow boom spray to be directed onto water surface. Do not spray across stream to opposite bank.

#### For shoreline weeds:

Allow no more than 2 foot overspray onto water.

#### **Sprayer Clean-Out Instructions**

It is recommended that separate spray equipment be used on highly sensitive crops such as tobacco, soybeans, peanuts, and tomatoes.

Do not use spray equipment used to apply ForeFront HL for other applications to land planted to, or to be planted to, crops or desirable sensitive plants, unless it has been determined that all residues of this herbicide have been removed by thorough cleaning of equipment.

Equipment used to apply ForeFront HL should be thoroughly cleaned before reusing to apply any other chemicals as follows.

- 1. Rinse and flush application equipment thoroughly after use. Dispose of rinse water away from water supplies.
- 2. Rinse a second time, adding 1 quart of household ammonia or tank cleaning agent for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
- 3. Flush the solution out of the spray tank through the boom.
- 4. Rinse the system twice with clean water, recirculating and draining each time.
- 5. Spray nozzles and screens should be removed and cleaned separately.

#### **Application Methods**

Apply the specified rate of ForeFront HL as a coarse low-pressure spray. Do not apply this product with mist blower systems that deliver very fine spray droplets. Use of mist blower equipment can reduce weed control and increase spray drift potential.

Spray volume should be sufficient to uniformly cover foliage. Increase spray volume to ensure thorough and uniform coverage when target vegetation is tall and/or dense. To enhance foliage wetting and coverage, an approved non-ionic agricultural surfactant may be added to the spray mixture as specified by the surfactant label.

**Ground Broadcast Application:** Higher spray volumes (greater than 10 gallons per acre) generally provide better coverage and better control, particularly in dense and/or tall foliage.

**Aerial Broadcast Application:** Do not apply less than 2 gallons per acre total spray volume. Five gallons per acre or greater will generally provide better coverage and better control, particularly in dense and/or tall foliage.

High-Volume Foliar Application: High volume foliar treatments may be applied at rates equivalent to

a maximum of 2.1 pints (34 fluid oz) per acre per annual growing season. Use sufficient spray volume to thoroughly and uniformly wet foliage and stems.

**Spot Application:** Spot treatments may be applied at rates equivalent to broadcast-applied rate of up to a maximum of 4.2 pints (68 fluid oz) per acre on 50% of the treated field. Spray volume should be sufficient to thoroughly and uniformly wet weed foliage. Repeat treatments may be made, but the total amount of ForeFront HL applied must not exceed 2.1 pints (34 fluid oz) per acre per year (see comments in the Use Precautions and Restrictions section above on Maximum Application Rate).

Table 1: Amount of ForeFront HL herbicide (in fl oz) to mix in 3 gallons of water

ForeFront HL Amount (In fluid oz) To Mix In 3 Gal Of Water With Various Application Rates

GPA	19 fl oz/A	24 fl oz/A	34 fl oz/A	
20	2.9	3.6	5.1	
30	1.9	2.4	3.4	
40	1.4	1.8	2.6	
50	1.1	1.4	2.0	
60	1.0	1.2	1.7	
70	0.8	1.0	1.4	
80	0.7	0.9	1.3	
90	0.6	0.8	1.1 · *	
100	0.6	0.7	1.0	
1.0			1	

**Table 2:** Application rates in the table below are based on treating an area of 1000 sq ft. An area of 1000 sq ft is about 10.5 by 10.5 yards in size. Mix the amount of ForeFront HL (fl oz or milliliters) corresponding to the desired broadcast rate in 0.5 to 2.5 gallons of water, depending upon the spray volume required to treat 1000 sq ft. A delivery volume of 0.5 gallons per 1000 sq ft is equivalent to 22 gallons per acre and 2.5 gallons per 1000 sq ft is equivalent to 109 gallons per acre.

Amount of Fo	reFront HL per 10	000 sq ft to Equal Br	oadcast Rate
Broadcast Rate		Amount of ForeFront HL per 100 sq-ft	
(fl oz/acre)	(pints/acre)	(fluid oz)	(mL)
19	1.2	0.44	13
24	1.5	0.55	16
34	2.1	0.78	23

Note: 1 mL = 1cc and 1 fluid ounce (fl oz) = 29.6 milliliters (mL) = 2 tablespoons = 6 teaspoons

**To calculate the amount of ForeFront HL for areas larger than 1000 sq ft:** Multiply the table value (fl oz or milliliters) by the area to be treated in "thousands" of square feet. For example, if the area to be treated is 3500 sq ft, multiply the table value by 3.5 (3500 sq ft divided by 1000 sq ft = 3.5).

#### Mixing Instructions

#### Mixing with Water

To prepare the spray, add about half the required amount of water in the spray tank. Then, with agitation, add the specified amount of ForeFront HL and other registered tank mix herbicides. Finally, with continued agitation, add the rest of the water and additives such as surfactants or drift control and deposition aids.

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Addition of Surfactants or Adjuvants on All Labeled Use Sites: The addition of a high quality non-ionic surfactant (of at least 80% active ingredient) at 0.25 to 0.5 % volume per volume (1 to 2 quarts per 100 gallons of spray) is recommended to enhance herbicide activity under adverse environmental conditions (such as, high temperature, low relative humidity, drought conditions, dusty plant surfaces) or when weeds are heavily pubescent or more mature.

#### **Tank Mixing with Other Herbicides**

ForeFront HL at rates of up to 2.1 pints (34 fl oz) per acre may be mixed with labeled rates of other labeled herbicides to broaden the spectrum of weeds controlled or to improve control of certain weeds. ForeFront HL may be applied in tank mix combination with labeled rates of other herbicides provided: (1) the tank mix product is labeled for the timing and method of application for the use site to be treated and (2) mixing is not prohibited by the label of the registered tank mixed products, and (3) that the tank mix combination is physically compatible (see tank mix compatibility testing below). When tank mixing, use only in accordance with the restrictions, precautions and limitations on the respective product labels

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed specified application rates. If products containing the same active ingredient are mixed, do not exceed the maximum allowable active ingredient use rates.
- For direct injection or other spray equipment where the product formulations will be mixed in undiluted form, special care should be taken to ensure tank mix compatibility.
- Always perform a jar test to ensure the compatibility of products to be used in tank mixture.

#### **Tank Mixing Precautions:**

- For products packaged in water soluble packaging, do not tank mix with products containing boron or
  mix in equipment previously used to apply a product mixture containing boron unless the tank and
  spray equipment has been adequately cleaned. (See Sprayer Clean-Out instructions.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

Tank Mix Compatibility Testing: Perform a jar test prior to mixing in a spray tank to ensure compatibility of ForeFront HL and other pesticides or carriers. Use a clear glass jar with lid and mix ingredients in the same order and proportions as will be used in the spray tank. The mixture is compatible if the materials mix readily when the jar is inverted several times. The mixture should remain stable after standing for 1/2 hour or, if separation occurs, should readily mix if agitated. An incompatible mixture is indicated by separation into distinct layers that do not readily remix when agitated and/or the presence of flakes, precipitates, gels, or heavy oily film in the jar. Use of an appropriate compatibility agent may resolve mix incompatibility.

Mixing with Sprayable Liquid Fertilizer Solutions: ForeFront HL is usually compatible with liquid fertilizer solutions. It is anticipated that ForeFront HL will not require a compatibility agent for mixing with fertilizers; however, a compatibility test (jar test) should be made prior to large scale batch mixing. Jar tests are particularly important when a new batch of fertilizer or pesticide is used, when water sources change, or when tank mixture ingredients or concentrations are changed. Compatibility may be determined by mixing the spray components in the desired order and proportions in a clear glass jar before large scale mixing of spray components in the spray tank. When required, a compatibility agent could be used to help obtain and maintain a uniform spray solution during mixing and application. Note: The lower the temperature of the liquid fertilizer, the greater the likelihood of mixing problems. Mixing ForeFront HL in N-P or N-P-K liquid fertilizer solutions is more difficult than mixing with straight nitrogen fertilizer and should not be attempted without first conducting a successful compatibility jar test. Agitation in the spray tank must be vigorous to be comparable with jar test agitation. Apply the spray mixture the same day it is prepared while maintaining continuous agitation. Rinse the spray tank thoroughly after use.

#### **Suggested Mixing Procedure:**



- 1. With continuous vigorous agitation, dilute herbicide with water (1 part herbicide to 2 parts water) before adding to liquid nitrogen fertilizer solution.
- 2. Apply as soon as mixing is complete, maintaining continuous, vigorous agitation throughout mixing and application without interruption.
- 3. Application during very cold (near freezing) weather is not advisable. The likelihood of mixing or compatibility problems with liquid fertilizer increases under cold conditions.
- 4. Do not store the spray mixture.

**Note:** Foliar-applied liquid fertilizers themselves can cause injury (such as: yellowing and burning) to the foliage of forage grasses and other vegetation especially in the summer. The addition of a surfactant to fertilizer blends may increase the injury potential.

#### **Use Rates and Timing**

Do not use ForeFront HL if loss of legumes species or other broadleaf species cannot be tolerated.

ForeFront HL may be applied postemergence as a broadcast spray or as a spot application to control weeds listed on this label; weeds other than those listed may also be controlled by this herbicide. When a rate range is given, use a higher rate in the range to control weeds at advanced growth stages or under less-than-favorable growing conditions (e.g., drought stress) or for longer residual control. Best weed control results are obtained when spray volume is sufficient to provide uniform coverage of treated plants. For optimum uptake and translocation of the herbicide, avoid mowing, haying, shredding, burning or soil disturbance in treated areas for at least 7 days following application.

For most species, 2 hours between application and rainfall provides a sufficient amount of time to avoid loss in weed control due to herbicide wash-off of foliage.

ForeFront HL also provides preemergence control of germinating seeds or emerging seedlings of susceptible weeds and re-growth of certain perennial weeds following application. Weed establishment following ForeFront HL application will depend upon application rate, season of application, and growing condition.

ForeFront HL can provide long-term control of weeds. The length of control is dependent upon the application rate, condition and growth stage of target weeds, environmental conditions at and following application, and the density and vigor of competing designable vegetation. Long-term broadleaf weed control is most effective where forage grasses are allowed to recover from overgrazing, drought, etc., and compete with weeds.

ForeFront HL can be an important component of integrated vegetation management programs designed to renovate or restore desired non-cropland plant communities. To maximize and extend the benefits of weed control provided by ForeFront HL, it is important that vegetation management practices, including grazing management, biological control agents, replanting, fertilization, prescribed fire, reseeding with desirable plants, etc., be used to increase the competitiveness of desired forages. Used as part of an integrated management program, ForeFront HL can serve as a catalyst for rapid improvement of rangeland, permanent grass pasture, and CRP, and non-cropland sites by alleviating the adverse competitive effect of weeds on the yield and quality of forages and other desirable plant species. Agricultural and natural resources specialists with federal and state government agencies can provide guidance on best management practices and development of integrated vegetation management systems.

#### **Broadleaf Weeds Controlled**

The following weeds will be controlled at 1.2 to 2.1 pints (19 to 34 fluid oz) per acre. For best results, apply when weeds are actively growing and conditions favorable for plant growth. Use a higher rate in the rate range when growing conditions are less than favorable, when weeds are mature, or when

weed foliage is tall and dense or when residual control is important. ForeFront HL also provides preemergence control of germinating seeds or emerged seedlings of susceptible weeds following application.

**Table 3: Broadleaf Weeds Controlled** 

Table 3: Broadleaf Weeds Controlled  Weed Species			
Common Name	Scientific Name	Life Cycle***	Plant Family
Rate Ra	nge: 1.2 to 1.5 pints (19 to 2	4 fluid oz) per acr	
bedstraw	Galium spp.	perennial	Rubiaceae
bedstraw, smooth	Galium mollugo	perennial	Rubiaceae
beggerticks	Bidens spp.	annual	Asteraceae
carrot, wild*	Daucus carota	biennial	Apiaceae
chamomile, scentless	Matricaria inodora	annual	Asteraceae
Cinquefoil, hoary	Potentilla argentea	perennial	Rosaceae
cinquefoil, sulfur*,**	Potentilla recta	perennial	Rosaceae
clover, sweet	Melilotus officinalis	biennial	Fabaceae
clover, white	Trifolium repens	perennial	_ Fabaceae
crownvetch*	Securigera varia	perennial	Fabaceae
daisy, oxeye*,**	Leucanthemum vulgare	perennial	Asteraceae
falsedandelion, Carolina*	Pyrrhopappus carolinianus	annual/biennial	Asteraceae
gumweed, curlycup	Grindelia squarrosa	biennial	Asteraceae
horsenettle, Carolina*,**	Solanum carolinense	perennial	Solanaceae
jimsonweed	Datura stramonium	annual	Solanaceae
pokeweed, common	Phytolacca americana	perennial	Phytolaccaceae
ragweed, common*,**	Ambrosia artemisiifolia	annual	Asteraceae
ragweed, western	Ambrosia psilostachya	perennial	Asteraceae
ragwort, tansy*,***	Senecio jacobaea	perennial	Asteraceae
starthistle, yellow*,***	Centaurea solstitialis	annual	Asteraceae
thistie, bull*,**	Cirsium vulgare	biennial	Asteraceae
thistle, musk*,**	Carduus nutans	biennial	Asteraceae
thistle, plumeless*,**	Carduus acanthoides	biennial	Asteraceae
thistle, scotch	Onopordum acanthium	biennial	Asteraceae
tickclover	Desmodium sp.	perennial	Fabaceae
vetch, common*	Vicia sativa	annual	Fabaceae
woodsorrel, yellow*	Oxalis stricta	perennial	Oxalidaceae
wormwood, absinth*,**	Artemisia absinthium	perennial	Asteraceae
Rate Ra	nge: 1.5 to 2.1 pints (24 to 3	4 fluid oz) per acr	е
actinomeris, wingstem	Verbesina alternifolia	perennial	Asteraceae
amaranth, spiny*	Amaranthus spinosus	annual	Amaranthaceae
broomweed, annual*	Amphiachyris dracunculoides	annuai	Asteraceae
burdock, common*,**	Arctium minus	biennial	Asteraceae
buttercup, hairy*	Ranunculus sardous	perennial	Ranunculaceae
buttercup, tall*,**	Ranunculus acris	perennial	Ranunculaceae
camphorweed*	Heterotheca subaxillaris	annual	Asteraceae
cat's ear, common	Hypochaeris radicata	perennial	Asteraceae
chickweed, common*	Stellaria media	annual	Caryophyllaceae
chicory*	Cichorium intybus	perennial	Asteraceae
cocklebur*	Xanthium strumarium	annual	Asteraceae
croton, woolly*,**	Croton capitatus	annual	Euphorbiaceae
cudweed, purple	Gnaphalium purpureum	annual	Asteraceae

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dandelion, common*	Taraxacum officinale	perennial	Asteraceae
deadnettle, purple	Lamium purpureum	annual/biennial	Lamiaceae
dock, broadleaf*	Rumex obtusifolius	perennial	Polygonaceae
dock, curly*	Rumex crispus	perennial	Polygonaceae
dogfennel***	Eupatorium capillifolium	perennial	Asteraceae
evening primrose, cutleaf*	Oenothera laciniata	annual	Asteraceae
false dandelion, Carolina*	Tragopogon dubius	biennial	Asteraceae
fiddleneck, common	Amsinckia intermedia	annual	Boraginaceae
fireweed	Epilobium angustifolium	perennial	Onagracee
fleabane, annual*	Erigeron annus	annual	Asteraceae
goldenrod, Canada*	Solidago canadensis	perennial	Asteraceae
goldenrod, Missouri*	Solidago missouriensis	perennial	Asteraceae
goldenrod, rigid	Solidago rigida	perennial	Asteraceae
hawkweed, orange*,**	Hieracium aurantiacum	perennial	Asteraceae
hawkweed, yellow*,**	Hieracium pratense	perennial	Asteraceae
henbit*	Lamium amplexicaule	annual/biennial	Lamiaceae
horseweed*	Conyza canadensis	annual	Asteraceae
ironweed, tall	Vernonia gigantea	perennial	Asteraceae
ironweed, western	Vernonia gigantea	perennial	Asteraceae
knapweed	Centaurea sp.	biennial	Asteraceae
knapweed, brown	Centaurea jacea	perennial	Asteraceae
knapweed, diffuse*,**	Centaurea diffusa	biennial	Asteraceae
knapweed, Russian*,**	Acroptilon repens	perennial	Asteraceae
knapweed, rkdsslair, knapweed, spotted*,**	Centaurea stoebe	biennial	Asteraceae
kudzu*,**	Pueraria montana	perennial	Fabaceae
lambsquarters, common*	Chenopodium album	annual	Chenopodiaceae
lespedeza, annual	Lespedeza striata	annual	Fabaceae
lettuce, prickly*	Lactuca serriola	annual	Asteraceae
locust	Robinia pseudoacacia	perennial	Fabaceae
marshelder, annual*	Iva annua	annual	Asteraceae
mayweed, scentless*	Tripleurospermum	annual	Asteraceae
may weed, econtices	perforata	er annual	/ isicraccac
mayweed, stinking*,**	Anthemis cotula	annual	Asteraceae
medic, black*	Medicago lupulina	perennial	Fabaceae
mexicantea	Dysphania ambrosioides	annual/	Chenopodiaceae
	Dy opriama ambreoreide	perennial	·
mullein****	Verbascum spp.	biennial	Scrophulariaceae
mugwort	Artmeisia vulgaris	Perennial	Asteraceae
partridgepea*	Chamaecrista fasciculata	annual	Fabaceae
plantain, broadleaf*	Plantago major	perennial	Plantaginaceae
plantain, buckhorn*	Plantago lanceolata	perennial	Plantaginaceae
sicklepod*	Senna obtusifolia	annual	Fabaceae
smartweed, Pennsylvania	Polygonum pensylvanicum	annual	Polygonaceae
sneezeweed, bitter*	Helenium amarum	annual	Asteraceae
soda apple, tropical*,**	Solanum viarum	perennial	Solanaceae
sowthistle, perennial*,**	Sonchus arvensis	perennial	Asteraceae
sowthistle, prickly*	Sonchus asper	annual	Asteraceae
Spanish needles	Bidens bipinnata	annual	Asteraceae
starthistle, yellow*,**	Centaurea solstitialis	annual	Asteraceae
St. Johnswort, common	Hypericum perforatum		Clusiaceae
sunflower, common*	Helianthus annua	perennial annual	Asteraceae
Carmonor, Common	, ionantinas annua	amuai	Asteraceae

teasel*	Dipsacus spp.	biennial	Dipsacaceae
thistle, Canada*,**	Cirsium arvense	perennial	Asteraceae
vervain, blue*	Verbena hastata	perennial	Asteraceae
vervain, hoary*	Verbena stricta	perennial	Asteraceae
yarrow, common*	Achillea millefolium	perennial	Asteraceae

<sup>\*</sup>These plants are indicated to be invasive in the USDA-NRCS, PLANTS Database (http://plants.usda.gov/index.html).

#### Susceptible Brush such as Multiflora rose:

Individual Plant Treatment - Use 24 fl oz (0.25% v/v) of ForeFront HL tank-mixed with Remedy<sup>®</sup> Ultra at 2 pints (32 fluid oz) (0.25% v/v) per 100 gallons of water. Apply from full leaf through flowering. For best results, delay treatment for 9-12 months after mowing. Spot treatments may be applied at an equivalent broadcast rate of up to 4.2 pints (68 fluid oz)of ForeFront HL per acre per annual growing season; however, not more than 50% of an acre may be treated at that rate.

Broadcast - Use 1.2 to 2.1 pints (19 to 34 fluid oz) of ForeFront HL tank mixed with Remedy Ultra at 1 to 2 pints (16 to 32 fluid oz) per acre. Apply from full leaf through flowering. For best results, delay treatment for 9-12 months after mowing.

#### **Spray Drift Management**

Avoid application under conditions that may allow spray drift because very small quantities of spray, which may not be visible, may seriously injure crops. This product should be applied only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops and other plants) is minimal (e.g., when wind is blowing away from the sensitive areas. A drift control aid may be added to the spray solution to further reduce the potential for drift. If a drift control aid is used, follow the use directions and precautions on the manufacturer's label. Do not use a thickening agent with Microfoil, Thru-Valve booms, or other spray delivery systems that cannot accommodate thickened spray solutions.

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

#### **Droplet Size**

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

#### Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors ontarget deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swatch unsprayed at the downwind edge of the treated field.

<sup>\*\*</sup>Plants designated as noxious weeds in at least one state (PLANTS Database, USDA-NRCS, http://plants.usda.gov/index.html).

<sup>\*\*\*</sup>Spot treatment at rates up to 4.2 pints (68 fl oz) per acre of ForeFront HL may be particularly effective against dense patches of perennial broadleaf plants.

<sup>\*\*\*\*</sup> apply during rosette stage

#### **Temperature Inversions**

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

#### Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, fruit trees, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants.

#### Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

#### Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

#### **Aerial Application**

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

#### **Ground Boom Application**

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

#### Non-Cropland and Natural Areas

#### Restrictions:

#### Postemergence (annual and perennial weeds):

- Limited to 2 applications per year
- Maximum of 2.1 pints (34 fluid oz) (0.87 lbs ae/acre 2,4-D)/acre per application per year
- Minimum of 30 days between applications

#### Postemergence (woody plants)

- Limited to 1 application per year
- Maximum of 2.1 pints (34 fluid oz) (0.87 lbs ae/acre 2.4-D)/acre per year

Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

ForeFront HL may be applied alone or in tank mix combination to non-cropland areas, such as non-irrigation ditch banks, industrial and storage areas, airports, roadsides, railroad and utility rights-of-way, including grazed areas on these sites as an aerial or ground broadcast treatment, as a spot application,

or as a high volume foliar application (see Application Methods section). Refer to the Broadleaf Weeds Controlled section for application rates listed for specific broadleaf weeds.

#### **Terms and Conditions of Use**

If terms of the following Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent permitted by law, otherwise, use by the buyer of any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

#### **Warranty Disclaimer**

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

#### Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

#### **Limitation of Remedies**

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

...

- 1. Refund of purchase price paid by buyer or user for product bought, or
- 2. Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

Trademark of Dow AgroSciences LLC	
EPA accepted:/_/_	

# Supplemental Labeling



**Dow AgroSciences LLC** 

9330 Zionsville Road

Indianapolis, IN 46268-1054 USA

## ForeFront® HL

EPA Reg. No. 62719-630

For Distribution and Use Only in AL, AR, AZ, CO, FL, GA, ID, KS, KY, LA, MO, MS, MT, ND, NE, NV, NM, OK, SD, TN, TX, UT, WY

For Use on Grass Harvested for Hay Intended for Distribution or Sale Off the Farm or Ranch

For Use on Grass Harvested for Silage, Haylage, Baylage, or Green Chop
Intended for Use On the Farm or Ranch

#### ATTENTION

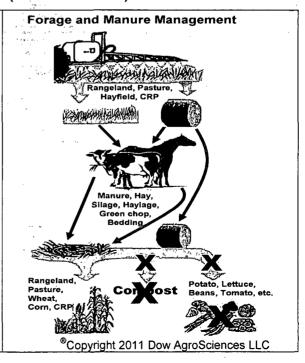
- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Read the label affixed to the container for ForeFront®HL herbicide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of ForeFront HL according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for ForeFront HL.

#### **Use Precautions and Restrictions**

Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions." Call (1-800-263-1196) for more information.

# IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS

- It is mandatory to follow the "Use Precautions and Restrictions" section of this product label.
- Manure and urine from animals consuming treated grass or forage may contain enough amnopyralid to cause injury to sensitive brodleaf plants.
- The Applicator must provide the land manager with a copy of the Dow AgroSciences Stewardship instructions regarding uses of forage from areas treated with aminopyralid.
- A printable version of the stewardship instructions can be found at www.aminopyralidstewardshipinstructions.com



- Do not use grasses treated with ForeFront HL in the preceding 18-months for hay intended for export outside the United States.
- Do not use hay or straw from areas treated with ForeFront HL within the preceding 18-months, or manure from animals feeding on hay treated with ForeFront HL, in compost.
- Do not use grasses treated within the preceeding 18-months for seed production.
- Grazing and Haying Restrictions: Do not harvest forage for hay within 7 days of ForeFront HL
  application. Cutting hay too soon after spraying weeds can compromise the weed control. Wait 14
  days prior to cutting grass hay to allow for maximum herbicide activity.
- Transfer of Animals Feeding on ForeFront HL-Treated Forage: Do not transfer animals grazing or feeding on hay from areas treated with ForeFront HL to areas where sensitive broadleaf crop occur without first allowing 3 days of grazing on an untreated pasture. Otherwise, urine and manure may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Grazing Poisonous Plants: Herbicide application may increase palatability of certain poisonous plants. Do not graze treated areas until poisonous plants are dry and no longer palatable to livestock.

#### Restrictions in Hay or Manure Use:

Do not use treated plant residues, including hay or straw from areas treated within the preceding
 18-months, in compost, mulch or mushroom spawn.

- Do not use manure from animals that have grazed forage or eaten hay harvested from treated areas within the previous 3 days, in compost, mulch or mushroom spawn.
- Do not spread manure from animals that have grazed or consumed forage or hay from treated areas within the previous 3 days on land used for growing broadleaf crops.
- Manure from animals that have grazed forage or eaten hay harvested from aminopyralid-treated areas within the previous 3 days may only be used on pasture grasses, grass grown for seed, wheat and corn.
- Do not plant a broadleaf crop in fields treated in the previous year with manure from animals that
  have grazed forage or eaten hay harvested from aminopyralid-treated areas until an adequately
  sensitive field bioassay is conducted to determine that the aminopyralid residues in the soil is at
  level that is not injurious to the crop to be planted.
- To promote herbicide decomposition, plant residues should be evenly incorporated in the surface soil or burned. Breakdown of aminopyralid in plant residues or manure is more rapid under warm, moist soil conditions and may be accelerated by supplemental irrigation.
- **Preharvest Interval:** Do not cut forage for hay within 7 days of application. For program lands, such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.
- Chemigation: Do not apply this product through any type of irrigation system.
- **Crop Rotation:** Do not rotate non-cropland to cropland for one year following an application of ForeFront HL. Do not plant a broadleaf crop until an adequately sensitive field bioassay shows that the level of aminopyralid present in the soil will not adversely affect that broadleaf crop.

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- Field Bioassay Instructions: In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample variability in field conditions such as soil texture, soil organic matter, soil pH, rainfall pattern or drainage. The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the intended rotational crop. Observe the test crop for symptoms of herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the intended rotational crop; plant only to wheat, forage grasses, native grasses or grasses grown for hay.
- ForeFront HL is highly active against many broadleaf plant species. Do not use this product on areas where loss of desirable broadleaf forage plants, including legumes, cannot be tolerated.
- Trees adjacent to or in a treated area can occasionally be affected by root uptake of ForeFront HL
  through movement into the soil. Do not apply ForeFront HL within the root zone of desirable trees
  unless such injury can be tolerated. Use special caution near roses, and leguminous trees such as
  locusts, redbud, mimosa, and caragana.

Expiration Date: March 10, 2014

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R393-002

EPA Accepted: \_\_/\_/\_ Replaces: R393-001