

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 9, 2014

David Barnekow, Ph.D.
Regulatory Leader- Regulatory Affairs
Dow AgroScience LLC
9330 Zionsville Road
Indianapolis, IN 46268

Subject: Label Amendment to match other end-use aminopyralid product labeling
Product Name: Sendero
EPA Registration Number: 62719-645
Application Date: August 19, 2014
Decision Number: 494631

Dear Dr. Barnekow:

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

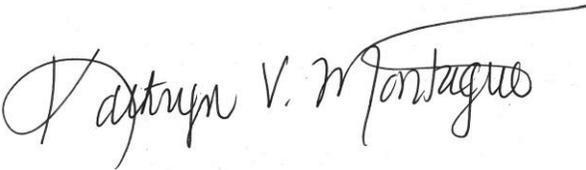
A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Continued on page 2 of 2

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Beth Benbow by phone at (703) 347-8072, or via email at Benbow.bethany@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Kathryn V. Montague". The signature is written in a cursive style with a long, sweeping horizontal line extending from the end of the name.

Kathryn V. Montague, Product Manager 23
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Attachment

Sendero[®]

EPA Reg. No. 62719-645

Registration Notes:

Note: This version contains additional revision per EPA email from Bethany Benbow dated November 17, 2014 and November 25, 2014 and discussed with D. Barnekow and Vanelle Peterson. The following changes were made:

1. Changed “for example” to “including” under use sites.
2. Deleted the statement “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. Sendero can be used to the waters edge. Do not apply directly to water and take precautions to minimize spray drift onto water.” per the following EPA recommendation (This language triggers an aquatic use assessment for clopyralid. Although this product was initially registered with this paragraph on the label, it should not have been accepted. If DAS would like the Agency to consider this language for clopyralid end-use products, a new use PRIA action must be initiated with submission of applicable aquatic use data and registration fees. Until that occurs, this paragraph must be removed.)
3. Added “exist” after washables under PPE.
4. Added “/PPE” after clothing under User Safety Recommendations.
5. Added statement and graphic for Northeastern states.
6. Updated the statement “The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the intended rotational crop” to “The field bioassay can be initiated one year after the last application of aminopyralid in that field/area to be planted with rotational crop” throughout the label and supplemental label.
7. Deleted “General” from General Use Information.
8. Deleted 0.61 lb acid equivalent and parenthesis and add (0.11 lb ae aminopyralid and 0.5 lb ae clopyralid) under Spot Application section.
9. Added “registered for use in the application site” after mix herbicide under Mixing Instructions – Mixing with Water.
10. Added “other” and change “...including, but not limited to, those listed...” for “...present in the application sites listed...” under Use Rates and Timing section.
11. Changed “ground” to “air” under Table 5.

Supplemental label:

12. Add the sentence “See the full label on the container for additional information on rotational crops.” under Crop Rotation section.
13. Updated the statement “The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the intended rotational crop” to “The field bioassay can be initiated one year after the last application of aminopyralid in that field/area to be planted with rotational crop” throughout the label and supplemental label.

Source section 3 labeling based on EPA accepted label (NOR) dated February 15, 2012. Following are changes by amendment:

1. Updated trademark symbols and footnotes throughout
2. Revised list of use sites to reformat into 3 sections and add specific sites as follows:
 - CRP section: moved CRP to beginning; added forest sites and conifer plantations
 - non-crop section: added the specific sites airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water

- retention areas, substations, unimproved rough turf grasses, vacant lots and other non-crop residential areas
- natural areas section: added “open space”, changed “such as” to “for example”, included specific sites, changed “in and around these sites” to “on all of these listed sites”
2. Added the statement “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. Sendero can be used to the waters edge. Do not apply directly to water and take precautions to minimize spray drift onto water”
 3. Added the statement “This product is not intended for reformulation or repackaging into other end-use products” under Directions for Use section.
 4. Deleted the paragraph between Resistance Management Guidelines and Use Precautions and Restrictions.
 5. Deleted the line” where desirable rangeland or reclamation grass species are being established in rangeland, permanent grass pastures, CRP, non-cropland, or other areas” under Grass Revegetation.
 6. Updated language under Application before seeding grasses section. Moved statement “Grass seed germination and seedling...” from third bullet to first.
 7. Updated language under Restriction in Hay or Manure Use to match Milestone label language. Added the statement “Livestock must have 3 days of eating non-treated materials in order to clear their system of herbicides. Do not use treated plants in areas where commercially grown mushrooms or susceptible broadleaf plants may be grown.”
 8. Updated language under Crop Rotation section.
 - a. Added language:
 - i. “to aminopyralid residues in the soil and prediction of crop safety by field bioassay (see instructions below) is the BEST way to determine planting options. Broadleaf crops such as canola, flax, and alfalfa”
 - ii. “to 3” to **at least** 2 to 3 years
 - iii. “More sensitive crops such as soybeans, tobacco, peanuts, potatoes, and peas may require a longer plant back interval and should not be planted until a field bioassay shows that the level of aminopyralid present in the soil will not adversely affect that broadleaf crop.”
 - b. Deleted language:
 - i. “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.”
 9. Added “epinasty” and “corn” under Field Bioassay Instructions section.
 10. Added potatoes under Sprayer Clean-Out Instructions section.
 11. Renamed Application Method to General Use Information
 12. Updated the following under General Use Information section:
 - a. Added:
 - i. ...or intended application site”
 - ii. “...or other adjuvant”
 - iii. “...adjuvant...”
 - iv. “Sendero may be applied by ground or aerial application equipment on any registered use site specified on this label.”
 - b. Deleted:
 - i. “approved” before non-ionic agricultural surfactant.
 13. Changed 2 gallons per acre to 4 gallons per acre in Aerial Broadcast Application section.
 14. Table 1: Changed Amount to Volume; revised from mL to fl oz and from gallons per acre to gallons spray solution in spray tank. Updated values.
 15. Under mixing Instructions, deleted the word “registered” prior to tank mix herbicide; added “adjuvants”
 16. Changed “ingredient” to “principal under Addition of Surfactants... sections.
 17. Revised the language under Tank Mixing with Other Herbicides section.
 18. Added the phrases “by ground or aerial equipment” and “post emergence control and” under Use Rates and Timing section to update language.
 19. Corrected grammar in Table 5.

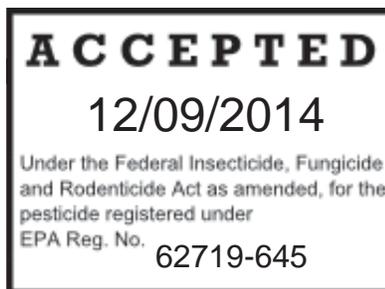
Q2K / Sendero / MSTR Amend / 11-25-14
file: Sendero-645 MSTR 25Nov14d.doc

20. Individual Plant Treatment: revised section to clarify treatments for Northern Texas species and Western Texas species.

Supplemental Label:

1. Removed metsulfuron from Seeding Legumes
2. As previously accorded by Dave Barnekow and the Agency and to maintain the enclosed supplemental as standalone, we added new expiration date.

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow



(Base label):

Sendero[®]
SPECIALTY HERBICIDE

For control of mesquite, associated brush species, and susceptible weeds including invasive and noxious weeds on

- **Conservation Reserve Program (CRP), rangeland and permanent grass pastures (including grasses grown for hay*); forest sites, conifer plantations;**
- **non cropland areas including, airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turf grasses, vacant lots and other non-crop residential areas; and**
- **natural areas (open space) including, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas; including grazed areas on all of these listed sites.**

***Hay from grass treated with Sendero 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 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.

Forage and Manure Management

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

GROUP	4	HERBICIDE
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Active Ingredient:

Potassium salt of 2-pyridine	
carboxylic acid, 4-amino-3,6-dichloro-	6.02%
Monoethanolamine salt of 3,6-dichloro-2-	
pyridinecarboxylic acid	30.82%
Other Ingredients	63.16%
Total	100.00%

Acid Equivalent:

clopyralid (3,6-dichloro-2-pyridinecarboxylic acid) – 23.4% - 2.3 lb/gal
 aminopyralid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) – 5.08% - 0.5 lb/gal

Keep Out of Reach of Children

CAUTION

Precautionary Statements

Hazard to Humans and Domestic Animals

Causes Moderate Eye Irritation • Harmful If Inhaled Or Absorbed Through Skin

Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- Protective eyewear

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.

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.

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

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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.

Environmental Hazards

Do not apply directly to water, 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.

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.

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of 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.

Nonrefillable containers 5 gallons or less:

Storage and Disposal

Do not contaminate water, food, feed or fertilizer by storage or disposal. Open dumping is prohibited.

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 active ingredient prior to use.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

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:**Storage and Disposal**

Do not contaminate water, food, feed or fertilizer by storage or disposal. Open dumping is prohibited.

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 active ingredient prior to use.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

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 a 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 larger than 5 gallons:**Storage and Disposal**

Do not contaminate water, food, feed or fertilizer by storage or disposal. Open dumping is prohibited.

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 active ingredient prior to use.

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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 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 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.

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. 62719-645

EPA Est. _____

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**Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268**

NET CONTENTS ____

(cover/shipping container):

Sendero[®] **SPECIALTY HERBICIDE**

For control of mesquite, associated brush species, and susceptible weeds including invasive and noxious weeds on

- **Conservation Reserve Program (CRP), rangeland and permanent grass pastures (including grasses grown for hay*); forest sites, conifer plantations;**
- **non cropland areas including, airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turf grasses, vacant lots and other non-crop residential areas; and**
- **natural areas (open space) including, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas; including grazed areas on all of these listed sites.**

***Hay from grass treated with Sendero 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 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.**

Forage and Manure Management

© Copyright 2011 Dow AgroSciences LLC

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

GROUP	4	HERBICIDE
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Active Ingredient:

Potassium salt of 2-pyridine	
carboxylic acid, 4-amino-3,6-dichloro-	6.02%
Monoethanolamine salt of 3,6-dichloro-2-	
pyridinecarboxylic acid	30.82%
Other Ingredients	63.16%
Total	100.00%

Acid Equivalent:

clopyralid (3,6-dichloro-2-pyridinecarboxylic acid) – 23.4% - 2.3 lb/gal
 aminopyralid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) – 5.08% - 0.5 lb/gal

Keep Out of Reach of Children

CAUTION

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 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. 62719-645

EPA Est. _____

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

**Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268**

NET CONTENTS ____

(Page 1 through end):

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes Moderate Eye Irritation • Harmful If Inhaled Or Absorbed Through Skin

Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- Protective eyewear

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.

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.

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

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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.

Environmental Hazards

Do not apply directly to water, 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.

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.

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy

sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

Directions for Use

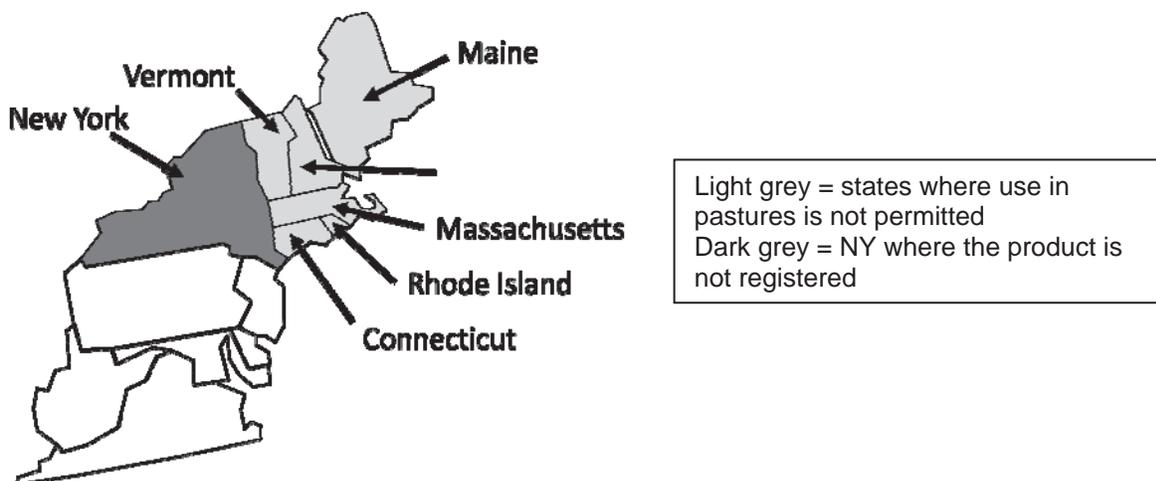
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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

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.

Not for use on pastures in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. All other labeled uses are permitted in these states including grazed areas in and around these sites.



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
- Chemical-resistant gloves made of any waterproof material as polyethylene or polyvinyl chloride
- Shoes plus socks

- Protective eyewear

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 does not pertain to non-agricultural use on sites, such as, rangeland, permanent grass pastures, or non-cropland. See the Agricultural Use Requirements section below for information where the WPS applies.

Entry Restrictions for Non-WPS Uses: For applications on rangeland and permanent grass pastures (not harvested for hay) and non-cropland areas, do not enter or allow worker entry into treated areas until sprays have dried.

Storage and Disposal

Do not contaminate water, food, feed or fertilizer by storage or disposal. Open dumping is prohibited.

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 active ingredient prior to use.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Nonrefillable 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 a 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 larger than 5 gallons:

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 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 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.

Resistance Management Guidelines

- Development of plant populations resistant to this herbicide mode of action is usually not a problem on rangeland, permanent grass pastures, Conservation Reserve Program (CRP), or 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 labeled 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

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

<p>IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS</p> <ul style="list-style-type: none"> • Carefully read the section “<i>Restrictions in Hay or Manure Use</i>.” • It is mandatory to follow the “<i>Use Precautions and Restrictions</i>” 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. 	<p>Forage and Manure Management</p> <p>© Copyright 2011 Dow AgroSciences LLC</p>
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Pasture and Rangeland Restrictions

- **Do not use grasses treated with Sendero in the preceding 18-months for hay intended for export outside the United States.**
- **Hay from areas treated with Sendero in 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 Sendero 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 Sendero within the preceding 18-months off farm unless allowed by supplemental labeling.**
- **Do not use hay or straw from areas treated with Sendero within the preceding 18-months or manure from animals feeding on hay treated with Sendero in compost.**
- **Do not use grasses treated with Sendero in the preceding 18-months for seed production.**

Maximum Application Rate: On all labeled use sites do not broadcast apply more than 1.75 pints per acre of Sendero per year. The total amount of Sendero applied broadcast, as a re-treatment, and/or spot treatment cannot exceed 1.75 pints per acre per year.

- **Avoiding Injury to Non-Target Plants:** Do not aerially apply Sendero within 50 feet of a border downwind (in the direction of wind movement), or allow spray drift to come in contact with, any broadleaf crop or other desirable broadleaf plants, including, but not limited to, alfalfa, cotton, dry beans, flowers, grapes, lettuce, potatoes, radishes, soybeans, sugar beets, sunflowers, tobacco, tomatoes or other broadleaf or vegetable crop, fruit trees, ornamental plants, or soil where sensitive crops are growing or will be planted. Avoid application under conditions that may allow spray drift because very small quantities of spray may seriously injure susceptible crops. Read and consider the "Precautions for Avoiding Spray Drift and Spray Drift Advisory" at the end of this label to help minimize the potential for spray drift.
- **Sendero is highly active against certain broadleaf plant species.** Do not use this product on areas where loss of broadleaf plants, including legumes, cannot be tolerated.
- **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.
- Do not apply this product to 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.
- Trees adjacent to or in a treated area can occasionally be affected by root uptake of Sendero. Do not apply Sendero 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.
- 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 Sendero. Injury to crops may result if treated soil and/or runoff water

containing Sendero is washed, or moved onto land used to produce crops. Exposure to Sendero 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.

- **Grass revegetation:**
 - Sendero can be used to control broadleaf plants in grass revegetation programs. Consult Dow AgroSciences' literature for more details about Sendero applications and grass stand establishment.
- **Application before seeding grasses**
 - Sendero can be applied to control broadleaf weeds prior to grass planting. Grass seed germination and seedling development can be adversely effected by many factors such as seed viability and seedling vigor, soil condition (sub-optimal soil temperatures or soil water content), weather after planting, seedbed preparation and seed placement, disease, insects, or animals. Sendero applications will help to reduce competition from weeds and improve the chance for successful grass stand establishment. Some grass species are more sensitive to Sendero; consult Dow AgroSciences' literature for more details.
 - **Postemergence applications on grass:** During the season of establishment, Sendero 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 Sendero at this stage of development. Sendero may suppress certain established grasses, such as smooth brome grass (*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 concentration remaining in the soil will adversely affect the legume establishment.
- **Grazing and Haying Restrictions:** There are no restrictions on grazing or grass hay harvest following application of Sendero at labeled rates. Cutting hay too soon after spraying weeds will reduce weed control. Wait 14 days after herbicide application to cut grass hay to allow herbicide to work. Do not transfer grazing animals from areas treated with Sendero to areas where sensitive broadleaf crops 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 grass, woody plants, trees, hay or straw from areas treated within the preceding 18-months, in compost, mulch, wood chips, or mushroom spawn.
 - ◆ Do not use manure from animals that have eaten treated forage or hay within the previous 3 days, in compost, mulch or mushroom spawn. Livestock must have 3 days of eating non-treated materials in order to clear their system of herbicides. Do not use treated plants in areas where commercially grown mushrooms or susceptible broadleaf plants may be grown.
 - ◆ Do not spread manure from animals that have consumed treated forage or eaten hay within the previous 3 days on land used for growing susceptible broadleaf crops.
 - ◆ Manure from animals that have consumed treated forage or hay within the previous 3 days may only be used on areas used for pasture, 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 or areas treated with aminopyralid or 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 concentration in the soil is at level that is not injurious to the crop to be planted.
 - ◆ Do not plant a broadleaf crop in fields or areas treated in the previous year with manure from animals that have consumed treated forage or hay until an adequately sensitive field bioassay is

conducted to determine that the aminopyralid concentration 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 enhanced by supplemental irrigation.

Crop Rotation: Do not rotate to any crop from rangeland, permanent pasture or CRP acres within one year following treatment. Cereals and corn can be planted one year after treatment. Most broadleaf crops are sensitive to aminopyralid residues in the soil and prediction of crop safety by field bioassay (see instructions below) is the BEST way to determine planting options. Broadleaf crops such as canola, flax, and alfalfa can require **at least 2 to 3 years** depending on the crop and environmental conditions. More sensitive crops such as soybeans, tobacco, peanuts, potatoes, and peas may require a longer plant back interval and should not be planted until a 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 one year after the last application of aminopyralid in the field/area to be planted with the rotational crop. Observe the test crop for symptoms of herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), epinasty, 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, corn, forage grasses, native grasses or grasses grown for hay.

Sprayer Clean-Out Instructions

It is recommended to use separate spray equipment on highly sensitive crops such as tobacco, soybeans, potatoes, peanuts and tomatoes.

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

Equipment used to apply Sendero 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 in non-cropland area 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.
- Do not apply this product with mist blower systems that deliver very fine spray droplets. Use of mist blower equipment can reduce control achieved with the herbicide and increase spray drift potential.

Use Information

Apply the specified rate of Sendero as a coarse low-pressure spray. Do not apply this product with mist blower systems that deliver very fine spray droplets. Spray volume should be sufficient to uniformly cover foliage or intended application site. Increase spray volume to ensure thorough and uniform coverage when target vegetation is tall and/or dense. To enhance foliage wetting and coverage, a non-ionic agricultural surfactant or other adjuvant may be added to the spray mixture as specified by the adjuvant label.

Sendero may be applied by ground or aerial application equipment on any registered use site specified on this 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 4 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 1.75 pints 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 an equivalent broadcast rate of up to 1.75 pints of Sendero (0.11 lb ae aminopyralid and 0.5 lb ae clopyralid) per acre per annual growing season. Do not apply more than a total of 0.61 lb acid equivalent (1.75 pints) per acre of Sendero per annual growing season as a result of broadcast, spot or repeat applications. Spray volume should be sufficient to thoroughly and uniformly wet weed foliage, but not to the point of runoff. Repeat treatments may be made, but the total amount of Sendero applied must not exceed 1.75 pints per acre per year. To prevent misapplication, spot treatments should be applied with a calibrated sprayer.

Note: Table 1 below shows mixes for various sprayer sizes in gallons.

Table 1: Volume of Sendero (in fluid ounces) to mix in different spray tank sizes.

Gallons spray solution in spray tank	Sendero amount (fl oz) to mix with various application rates
1	1.28
3	3.84
25	32

Use a syringe to measure fl oz

Conversions:

1 tsp = 5 mL 30 ml = 1 fluid ounce 1 cc = 1 mL
 3 tsp = 1 Tbsp 2 Tbsp = 1 fluid ounce

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 Sendero (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 to 2.5 gallons per 1000 sq ft is equivalent to 22 to 109 gallons per acre.

Table 2: Amount of Sendero per 1000 sq ft to Equal Broadcast Rate

Amount of Sendero per 1000 sq ft to Equal Broadcast Rate		
Broadcast Rate (pints/acre)	Amount of Sendero per 1000 sq ft	
	(fl oz)	(Milliliters)

0.75	0.27	8
1	0.36	10.7
1.75	0.63	18.7

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

To calculate the amount of Sendero 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 Sendero and other tank mix herbicides registered for use on the application site. Finally, with continued agitation, add the rest of the water and additives such as adjuvants, surfactants or drift control and deposition aids.

Addition of Surfactants or Adjuvants on All Labeled Use Sites (Excluding Mesquite and Associated Woody Plants): The addition of a high quality non-ionic surfactant (of at least 80% active principal) 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.

Addition of Surfactants or Adjuvants on Mesquite and Associated Woody Plants: Suggested surfactants for ground or aerial applications of Sendero for the control of mesquite and associated woody plants include water plus non-ionic surfactant with at least 80% active principal, crop oil concentrate, or methylated seed oil at the manufacturers specified rates.

Tank Mixing with Other Herbicides: Sendero 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 tank mix product(s), 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 Mix Compatibility Testing: Perform a jar test prior to mixing in a spray tank to ensure compatibility of Sendero 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 remix 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 aid may resolve mix incompatibility. If the mixture is incompatible do not use that tank mix partner in tank mixtures.

Mixing with Sprayable Liquid Fertilizer Solutions: Sendero is usually compatible with liquid fertilizer solutions. It is anticipated that Sendero will not require a compatibility agent for mixing with fertilizers; however, a compatibility test (jar test) should be made prior to 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.

Note: The lower the temperature of the liquid fertilizer, the greater the likelihood of mixing problems. Use of a compatibility aid may be required if Sendero is mixed with a 2,4-D-containing product and liquid fertilizer. **Mixing Sendero and 2,4-D 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.

Note: Foliar-applied liquid fertilizers themselves can cause yellowing of the foliage of forage grasses and other vegetation.

Use Rates and Timing

Sendero may be applied post emergence as a broadcast spray by ground or aerial equipment or as a spot application to control mesquite, associated brush species, and other weeds present in the application sites listed on this label. When a rate range is given use the higher rate to control weeds at advanced growth stages, or under less than favorable growing conditions, or for longer residual control. Best results are obtained when spray volume is sufficient to provide uniform coverage of treated weeds. For optimum uptake and translocation of Sendero, avoid mowing, haying, shredding, burning or soil disturbance in treated areas for at least 14 days following application.

Sendero provides post emergence control and preemergence control of emerging seedlings of susceptible weeds, and re-growth of certain perennial weeds following application. Preventing establishment of weeds will depend upon application rate, season of application, and environmental conditions after application.

Sendero can provide long-term control of susceptible 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 desirable vegetation. Long-term weed control is most effective where grass vegetation is allowed to recover from overgrazing, drought, etc., and compete with weeds.

Sendero can be an important component of integrated vegetation management programs designed to renovate or restore desired plant communities. To maximize and extend the benefits of weed control provided by Sendero, it is important that other vegetation management practices, including proper grazing management, biological control agents, replanting, fertilization, prescribed fire, etc., be used in appropriate sequences and combinations to further alleviate the adverse effects of weeds on desirable plant species and to promote development of desired plant communities. Agricultural and natural resources specialists with federal and state government agencies can provide guidance on best management practices and development of integrated vegetation management programs.

Weeds, Woody Plants, and Mesquite Controlled

The following weed species will be controlled with the rates of Sendero indicated below (table 3). Woody plants that will be controlled with the rates of Sendero are indicated below (table 4). Mesquite control rates and tank mixes for Sendero are located in table 5. For best results, most weeds should be treated when they are actively growing and under conditions favorable for growth. Use a higher rate in the rate range when growing conditions are less than favorable or when weed foliage is tall and dense, or when residual control is desired. Sendero also provides preemergence control of germinating seeds or seedlings of susceptible weeds following application.

Table 3: Weeds Controlled**Note:** Numbers in parentheses (-) refer to specific use directions for a particular weeds species.

Common Name	Scientific Name	Rate Range (pint/acre)	Life Cycle	Plant Family
amaranth, spiny	<i>Amaranthus spinosus</i>	1 to 1.25	annual	Amaranthaceae
artichoke, Jerusalem	<i>Helianthus tuberosus</i>	0.75 to 1.25	perennial	Asteraceae
bedstraw	<i>Galium spp.</i>	1 to 1.25	perennial	Rubiaceae
beggarticks	<i>Bidens spp.</i>	1 to 1.25	annual	Asteracea
blessed milk thistle	<i>Silybum marianum</i>	1 to 1.25	annual/biennial	Asteracea
broomweed, annual	<i>Amphiachyris dracunculoides</i>	0.75 to 1.25	annual	Asteraceae
buffalobur	<i>Solanum rostratum</i>	0.75 to 1.25	annual	Solanaceae
burdock, common*, **	<i>Arctium minus</i>	0.75 to 1.25	biennial	Asteraceae
buttercup, hairy*	<i>Ranunculus sardous</i>	1 to 1.25	annual	Ranunculaceae
buttercup, tall*, **	<i>Ranunculus acris</i>	1 to 1.25	perennial	Ranunculaceae
camelthorn	<i>Alhagi pseudalhagi</i>	1 to 1.25	perennial	Fabaceae
chamomile, scentless	<i>Matricaria inodora</i>	0.75 to 1.25	annual	Asteraceae
chicory*	<i>Cichorium intybus</i>	0.75 to 1.25	perennial	Asteraceae
chickweed	<i>Stellaria media</i>	1.25 to 1.5	annual	Caryophyllacea e
cinquefoil, sulfur (1)*, **	<i>Potentilla recta</i>	1 to 1.25	perennial	Rosaceae
cocklebur	<i>Xanthium strumarium</i>	0.75 to 1.25	annual	Asteraceae
coffeeweed	<i>Daubentonia texana</i>	0.75 to 1.25	annual	Asteraceae
clover	<i>Trifolium spp.</i>	0.75 to 1.25	perennial	Fabaceae
croton, tropic	<i>Croton glandulosus</i>	0.75 to 1.25	annual	Euphorbiaceae
crownvetch	<i>Securigera varia</i>	1 to 1.25	perennial	Fabaceae
cutweed, purple	<i>Gamochaeta purpurea</i>	1 to 1.25	annual	Asteraceae
daisy, oxeye (1)*, **	<i>Leucanthemum vulgare</i>	1 to 1.25	perennial	Asteraceae
dock, curly*	<i>Rumex crispus</i>	1 to 1.25	perennial	Polygonaceae
groundsel, common	<i>Senecio vulgaris</i>	0.75 to 1.25	annual/biennial	Asteraceae
hawksbeard, narrowleaf	<i>Crepis tectorum</i>	0.75 to 1.25	annual	Asteraceae
hawkweed, orange (2)*, **	<i>Hieracium aurantiacum</i>	0.75 to 1.25	perennial	Asteraceae
hawkweed, yellow (2)*, **	<i>Hieracium caespitosum</i>	0.75 to 1.25	perennial	Asteraceae
horsenettle, Carolina**	<i>Solanum carolinense</i>	1 to 1.5	perennial	Solanaceae
horseweed (marestail)	<i>Conyza canadensis</i>	0.75 to 1.25	annual	Asteraceae
jimsonweed	<i>Datura stramonium</i>	1 to 1.5	perennial	Solanaceae
knapweed, diffuse	<i>Centaurea diffusa</i>	0.75 to 1.25	biennial/	Asteraceae

		Rate Range		
Common Name	Scientific Name	(pint/acre)	Life Cycle	Plant Family
(3)*, **			perennial	
knapweed, Russian (4)*, **	<i>Acrotilon repens</i>	1 to 1.5	perennial	Asteraceae
knapweed, spotted (3)*, **	<i>Centaurea stoebe</i>	0.75 to 1.25	biennial/ perennial	Asteraceae
lady's thumb*	<i>Polygonum persicaria</i>	0.5 to 1	annual	Polygonaceae
locoweed, woolly	<i>Astragalus mollissimus</i>	1 to 1.5	perennial	Fabaceae
locoweed, lambert	<i>Oxtropis lambertii</i>	1 to 1.5	perennial	Fabaceae
marshelder	<i>Iva annua</i>	1 to 1.5	annual	Asteraceae
mayweed, scentless*	<i>Tripleurospermum perforata</i>	1 to 1.5	annual	Asteraceae
mayweed, stinking*, **	<i>Anthemis cotula</i>	1.5	annual	Asteraceae
medic, black*	<i>Medicago lupulina</i>	1 to 1.5	perennial	Fabaceae
nightshade, hairy	<i>Solanum chenopodioides</i>	0.75 to 1.25	annual/biennial	Solanaceae
nightshade, silverleaf	<i>Solanum elaeagnifolium</i>	0.75 to 1.25	perennial	Solanaceae
oxtongue, bristly	<i>Picris echioides</i>	1 to 1.5	biennial	Asteraceae
povertyweed	<i>Iva axillaris</i>	1 to 1.5	perennial	Asteracea
ragweed, common**	<i>Ambrosia artemisiifolia</i>	0.75 to 1.25	annual	Asteraceae
ragweed, western	<i>Ambrosia psilostachya</i>	0.75 to 1.25	perennial	Asteraceae
ragwort, tansy*, **	<i>Senecio jacobaea</i>	1 to 1.5	perennial	Asteraceae
rush skeletonweed	<i>Chondrilla juncea</i>	1 to 1.5	perennial	Asteraceae
smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	0.75 to 1.25	annual	Polygonaceae
sneezeweed, bitter	<i>Helenium amarum</i>	0.5 to 1	annual	Asteraceae
sowthistle, perennial*, **	<i>Sonchus arvensis</i>	1 to 1.5	perennial	Asteraceae
spanishneedles	<i>Bidens bipinnata</i>	1 to 1.5	annual	Asteraceae
star-thistle, Malta (5) *, **	<i>Centaurea melitensis</i>	0.5 to 1	annual	Asteraceae
starthistle, purple (5)*, **	<i>Centaurea calcitrapa</i>	0.5 to 1	biennial	Asteraceae
star thistle, yellow (5)*, **	<i>Centaurea solstitialis</i>	0.5 to 1	annual	Asteraceae
St. Johnswort, common	<i>Hypericum perforatum</i>	1.25 to 1.5	perennial	Clusiaceae
sunflower, common	<i>Helianthus annuus</i>	0.75 to 1	annual	Asteraceae
sweetclover	<i>Melilotus spp</i>	1 to 1.5	perennial	Asteraceae
teasel	<i>Dipsacus spp.</i>	1 to 1.5	biennial	Dipsacaceae
thistle, artichoke	<i>Cynara cardunculus</i>	1 to 1.5	perennial	Asteracea
thistle, bull (1)*, **	<i>Cirsium vulgare</i>	0.75 to 1.25	biennial	Asteraceae
thistle, Canada (2)*, **	<i>Cirsium arvense</i>	0.75 to 1.25	perennial	Asteraceae
thistle, woolly distaff	<i>Carthamus lanatus</i>	1 to 1.5	annual	Asteraceae
thistle, Italian	<i>Carduus pycnocephalus</i>	1 to 1.5	annual	Asteraceae

Common Name	Scientific Name	Rate Range (pint/acre)	Life Cycle	Plant Family
thistle, musk (1)*, **	<i>Carduus nutans</i>	0.5 to 1	biennial	Asteraceae
thistle, plumeless (1)*, **	<i>Carduus acanthoides</i>	0.5 to 1	biennial	Asteraceae
thistle, Scotch*, **	<i>Onopordum acanthium</i>	0.75 to 1.25	biennial	Asteracea
vetch	<i>Vicia spp.</i>	0.5 to 1	perennial	Fabaceae
wormwood, absinth(8)*, **	<i>Artemisia absinthium</i>	1.25 to 1.5	perennial	Asteraceae
yarrow, common	<i>Achillea millefolium</i>	1 to 1.5	perennial	Asteraceae

(1) **Sulfur cinquefoil or oxeye daisy:** Apply Sendero at 1 to 1.25 pints per acre to plants in the prebud stage of development.

(2) **Orange or yellow hawkweeds:** Apply Sendero at 0.75 to 1.25 pints per acre to plants in the bolting stage of development.

(3) **Diffuse and spotted knapweeds:** Apply Sendero at 0.75 to 1.25 pints per acre when plants are actively growing with the optimum time of application occurring from rosette to the bolting stages of development or in the fall. Plants will be controlled by mid-summer and fall applications even though plants may not show any changes in form or stature the year of application.

(4) **Russian knapweed:** Apply Sendero at 1 to 1.5 pints per acre to plants in the spring and summer to plants from early bud to flowering stage and to dormant plants in the fall.

(5) **Malta, purple, and Yellow starthistle:** Apply Sendero at 0.5 to 1 pints per acre to plants at the rosette through bolting growth stages.

(1) **Bull, musk, and plumeless thistles:** Apply Sendero at 0.5 to 1 pints per acre in the spring and early summer to rosette or bolting plants or in the fall to seedlings and rosettes. Apply at 1 to 1.25 pints when plants are at the late bolt through early flowering growth stages. 2,4-D at 1 lb ae/acre should be tank-mixed with Sendero starting at the late bud stages

(2) **Canada thistle:** Apply Sendero at 0.75 to 1.25 pints per acre either in the spring after all plants have fully emerged (some may be budding) until the oldest plants are in full flower stage. Use the higher rate when applying to the flower stage. Applications are also effective in the fall before a killing frost.

(8) **Absinth wormwood:** Apply Sendero at 1.25 to 1.5 pints per acre before wormwood is 12 inches tall. When applying by air on CRP, coverage is important and a minimum of 3 GPA is specified. Remove old duff and litter by fire or mowing for best results

*Invasive plants are introduced species that are indicated to be invasive in the USDA-NRCS, PLANTS Database (<http://plants.usda.gov/index.html>).

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

Table 4: Woody Plants Controlled (Excluding Mesquite)

Common Name	Scientific Name	Rate (pt/acre)	Life Cycle	Plant Family
acacias (see huisache below)	<i>Acacia spp.</i>	1.75	woody perennial	Fabaceae
mimosa	<i>Albizia julibrissin</i>	1.75	woody perennial	Fabaceae

redbud	<i>Cercis Canadensis</i>	1.75	woody perennial	Fabaceae
wisteria	<i>Wisteria brachybotris</i>	1.75	woody perennial	Fabaceae
locust, black	<i>Robinia pseudoacacia</i>	1.75	woody perennial	Fabaceae
locust, honey	<i>Gleditsia triacanthos</i>	1.75	woody perennial	Fabaceae
kudzu*, **	<i>Pueraria montana</i>	1.75	perennial	Fabaceae

*Invasive plants are introduced species that are indicated to be invasive in the USDA-NRCS, PLANTS Database (<http://plants.usda.gov/index.html>).

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

Mesquite Control

Timing and Factors in Control: The herbicidal response of mesquite is strongly influenced by foliage condition, stage of growth and environmental conditions. For best results, apply when new growth foliage has turned from light to dark green, when the soil temperature is above 75°F at a depth of 12 to 18 inches, and soil moisture is adequate for plant growth. Application should be made within 60 days after the 75°F minimum soil temperature at the 12 to 18 inch depth has been reached. Product performance may be adversely affected if application is made before mesquite foliage has turned from light to dark green or if foliage has been injured or removed by late frost, insects, hail or plant diseases. Do not treat if mesquite exhibits new (light green) terminal growth in response to recent heavy rainfall during the growing season. Rate of soil warm-up at the 12 to 18 inch depth may vary with soil texture and drainage. Coarse-textured (sandy) soils warm up sooner than fine-textured (clay) soils and dry soils warm up more quickly than wet soils.

The herbicidal symptoms of mesquite treated with Sendero are often different from those resulting from application of other herbicides. In some years, complete brownout and leaf drop of treated mesquite may be delayed and not occur before the first frost. Other herbicidal symptoms often observed could include discoloration and rupture and/or "bleeding" of bark on branches and trunks.

Reapplication during the same growing season is not recommended. Re-treatment will not be effective until woody plants have developed sufficient new foliage to intercept the spray and provide uptake adequate to control the plant when translocated to the root system. Following mechanical removal, regrowth mesquite should be at least 4 feet tall before application of this product.

Control of rangeland brush or weeds may be unsatisfactory under adverse growing conditions such as severe drought stress.

Mesquite control rates for Sendero and associated tank mixes follow in Table 5.

Table 5: Mesquite and Associated Woody Plant Control

Note: Numbers in parentheses (-) refer to specific use directions for a particular weeds species.

Common Name	Scientific Name	Rates (pt/acre)	Life Cycle	Plant Family
mesquite ¹	<i>Prosopis glandulosa</i>	1.75 pt Sendero	woody perennial	Fabaceae
Texas mixed brush, including ² :		1.75 pt Sendero + 2 pt of Tordon 22K or		
mesquite	<i>Prosopis glandulosa</i>		woody perennial	Fabaceae
pricklypear	<i>Opuntia</i> spp.		woody perennial	Cactaceae
blackbrush	<i>Acacia rigidula</i>		woody perennial	Fabaceae

twisted acacia	<i>Acacia tortuosa</i>	1.75 pt Sendero + 0.5 to 1 pt of Remedy Ultra	woody perennial	Fabaceae
catclaw acacia	<i>Acacia greggii</i>		woody perennial	Fabaceae
granjeno (spiny hackberry)	<i>Celtis ehrenbergiana</i>		woody perennial	Ulmaceae
guajillo	<i>Acacia berlandieri</i>		woody perennial	Fabaceae
huisache (S) ³ Supression only	<i>Acacia farnesiana</i>	1.75 pt	woody perennial	Fabaceae
¹ See Timing and Factors in Control section for information on treatment of mesquite. Apply as a water spray or oil-water emulsion (see Mixing Instructions) in a total spray volume of 4 gallons or more per acre by air or 10 gallons or more per acre by ground application using higher spray volumes with increasing brush density and height. Note: Where control of pricklypear cactus is desired, the tank mixture of Sendero and Tordon 22K should be used.				
² See Timing and Factors in Control section of the label for information on treatment of mesquite. Apply in a spray volume of 4 gallons or more per acre by air or 20 gallons or more per acre by ground application using higher spray volumes with increasing brush density and height. For best results, apply as an oil-water emulsion. Note: Where non-legume species such as granjeno, oaks and hackberry predominate, Remedy Ultra at 1 to 2 pt/acre may be substituted for Sendero in the tank mixture with Tordon 22K to improve control (see label for Remedy Ultra.)				
³ Huisache can be suppressed with the maximum rate of Sendero applied aurally or by ground in at least 4 GPA application spray volume by air or 10 GPA by ground. Results may vary due to environmental conditions. See timing and factors in control section of the label for information on mesquite and associated woody plants.				

Mesquite Control in Stands of Live Oak: For the control of mesquite growing within stands of live oak, apply Sendero at 1.75 pints per acre. Apply only as a water dilution containing surfactant (0.25% v/v) at a total spray volume of 4 gallons or more per acre aurally. Live oak over-sprayed with Sendero may show a minor to moderate canopy reduction the year of treatment but will recover. Application of Sendero in tank mix combination with other herbicides may result in increased injury to live oak.

Individual Plant Treatment - Leaf Spray Method (single stemmed or multi-stemmed honey mesquite var. *glandulosa*): This species is most common throughout central, southern, and northern TX. For control of mesquite infestations of low to moderate density, Sendero may be applied to individual plants with backpack or hand-held sprayers or a vehicle-mounted sprayer with hand-held spray wand or spray gun. For individual plant treatment, use Sendero alone at 4 quarts per 100 gallons of total spray solution (1% v/v Sendero). Apply in water or as an oil-water emulsion as described in Mixing Instructions. If using an oil-water emulsion, add the oil at a rate of 5% of the total spray volume. Apply as a complete spray-to-wet foliar application, including all leaves. Thorough coverage is necessary for good results, but it is not necessary to spray to the point of runoff. The total amount of Sendero applied should not exceed 1.75 pints per acre. For best results, follow information given in Timing and Factors in Control section and do not spray when mesquite foliage is wet. This application method works best for brush less than 8 feet tall since efficient treatment and thorough coverage of taller brush is difficult to achieve with this method. To minimize drift, select a spray nozzle and pressure that will provide good coverage while forming a coarse spray. Additionally, drift may be reduced by using the minimum pressure necessary to obtain plant coverage without forming a mist and by directing sprays no higher than tops of target plants. If desired, a spray dye may be added to the spray mixture to mark the treated plants. Suggested surfactants for ground applications of Sendero for the control of mesquite and associated woody plants include non-ionic surfactant with at least 80% active ingredient, crop oil concentrate, or methylated seed oil at the manufacturers' specified rates.

Individual Plant Treatment - Leaf Spray Method (multi-stemmed, western honey mesquite var. *torreyana*): This species is most common in western TX, and much of NM For control of mesquite infestations of low to moderate density, Sendero may be applied to individual plants with backpack or

hand-held sprayers or a vehicle-mounted sprayer with hand-held spray wand or spray gun. For individual plant treatment, use 6 quarts of Sendero in combination with 1-2 quarts of Remedy Ultra per 100 gallons of total spray solution (1.5%v/v Sendero + 0.25 to 0.5%v/v Remedy Ultra). Apply in water or as an oil-water emulsion as described in Mixing Instructions. If using an oil-water emulsion, add the oil at a rate of 5% of the total spray volume. Apply as a complete spray-to-wet foliar application, including all leaves. Thorough coverage is necessary for good results, but it is not necessary to spray to the point of runoff. The total amount of Sendero applied should not exceed 1.75 pints per acre. For best results, follow information given in Timing and Factors in Control section and do not spray when mesquite foliage is wet. This application method works best for brush less than 8 feet tall since efficient treatment and thorough coverage of taller brush is difficult to achieve with this method. To minimize drift, select a spray nozzle and pressure that will provide good coverage while forming a coarse spray. Additionally, drift may be reduced by using the minimum pressure necessary to obtain plant coverage without forming a mist and by directing sprays no higher than tops of target plants. If desired, a spray dye may be added to the spray mixture to mark the treated plants. Suggested surfactants for ground applications of Sendero for the control of mesquite and associated woody plants include non-ionic surfactant with at least 80% active ingredient, crop oil concentrate, or methylated seed oil at the manufacturers' specified rates.

(S) Indicates suppression of the woody plant species with Sendero.

Woody Plant Control

Sendero may be applied alone or in tank-mix combinations 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. Use as directed in the Directions of Use section of the tank-mix partner. Follow Mixing Instructions under the General Mixing and Application Instructions section.

Add Sendero to tank mixes for improved brush control on species such as aspen, conifers (pine), elm, maple, cherry, poplar, oak, Scotch broom, boxelder, hackberry, and blackberry.

FOLIAR APPLICATIONS:

For broad spectrum brush control using a foliar application, Sendero may be added to tank mixes with Accord Concentrate or Accord XRT II, Arsenal Powerline, Garlon 4 Ultra, Forestry Garlon XRT, or Garlon 3A, Rodeo, Tordon K, or other products labeled for use in industrial vegetation management programs.

LOW VOLUME BASAL BARK APPLICATIONS:

To control susceptible woody plants with stems less than 6 inches in basal diameter, apply herbicide mix (see below for rates) with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground in a manner that thoroughly wets the lower stems but not to the point of runoff. The use of a Spraying Systems Y2 nozzle or similar nozzle is recommended, which will narrow the spray pattern to target individual stems. Herbicide concentration should vary with tree diameter, bark thickness, volume used per acre, and susceptibility of species treated. Apply anytime, including the winter months, except when snow or water prevent spraying to the ground line or when stem surfaces are saturated with water.

Sendero may be used as a low volume basal treatment alone, for sensitive woody species in the Fabaceae family (legumes), or in combination with Garlon 4 Ultra or Forestry Garlon XRT, for broader control of other sensitive woody species. Applications should not exceed the maximum use rate per acre.

Mix Sendero at 0.3 to 0.6% v/v alone, or with Garlon 4 Ultra or Forestry Garlon XRT in a commercially available basal diluent (or other oils or basal diluents as recommended by the manufacturer); the basal oil should be compatible with a water soluble herbicide such as Sendero. Make a stable tank mixture for basal bark application by first combining each product with a compatibility agent prior to final mixing in the desired ratio. Mix Sendero and Garlon 4 Ultra or Forestry Garlon XRT (if using a tank mix) thoroughly with

basal oil; if the mixture stands for more than 30 minutes, reagitiation may be required. Do not store the final mixture.

Cut surface

Apply Sendero in the cut surface applications listed below for control of susceptible tree species such as legumes like Albezia, mimosa, locust, etc. Mixtures of Sendero and Garlon 3A or Garlon 4 may be effective on species other than legumes such as elm, maple, oak and conifers..

Cut surface applications may be used successfully at any season except during periods of heavy sap flow of certain species - for example, maples.

Cut-Stump Treatment

Apply Sendero as a 10% dilution v/v in water, by spraying or painting the cut surfaces of freshly cut stumps and stubs as soon as possible after cutting with undiluted Sendero. The cambium area next to the bark is the most vital area to wet.

With Tree Injector Method

Apply by injecting 1 milliliter of 10% v/v Sendero in water through the bark at intervals of 3 to 4 inches between centers of the injector wound. The injections should completely surround the tree at any convenient height. Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is injected directly into plants.

With Hack and Squirt Method

Make cuts around the tree trunk at a convenient height with a hatchet or similar equipment so that the cuts overlap slightly and make a continuous circle around the trunk. Spray 1 milliliter of 10% v/v Sendero in water into the pocket created between the bark and the inner stem/trunk by each cut.

With Frill or Girdle Method

Make a single girdle through the bark completely around the tree at a convenient height. The frill should allow for the herbicide to remain next to the inner stem and absorb into the plant. Wet the cut surface with 10% v/v Sendero in water.

Precautions for Avoiding Spray Drift

Avoid application under conditions that may allow spray drift because very small quantities of spray, which may not be visible, may injure susceptible crops. This product should be applied only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, 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.

Ground Equipment: With ground equipment spray drift can be lessened by keeping the spray boom as low as possible; by applying 10 gallons or more of spray per acre; by keeping the operating spray pressures at the manufacturer's specified minimum pressures for the specific nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when the wind velocity is low (follow state regulations). Avoid calm conditions which may be conducive to thermal inversions. Direct sprays no higher than the tops of target vegetation and keep spray pressures low enough to provide coarse spray droplets to minimize drift.

Aerial Application: Avoid spray drift at the application site. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance of the outer most operating nozzles on the boom must not exceed 75% of wingspan or 85% of rotor diameter.
2. Nozzles should be pointed backward parallel with the air stream or not pointed downwards more than 45 degrees.

State regulations must be followed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory**. This information is advisory in nature and does not supersede mandatory label requirements.

Aerial Drift Reduction Advisory

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that will provide uniform coverage.
- **Nozzle Orientation** - Orient nozzles so that the spray is released parallel to the airstream to produce larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: The distance of the outer most operating nozzles on the boom must not exceed 75% of wingspan or 85% of rotor diameter.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain such as valleys and ravines can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

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 or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

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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.

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Supplemental Labeling



Dow AgroSciences

Sendero[®]

EPA Reg. No. 62719-645

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 Sendero herbicide before applying. Carefully follow all precautionary statements and applicable use directions.
- Use of Sendero according to this supplemental labeling is subject to all use precautions and limitations imposed by the label affixed to the container for Sendero.

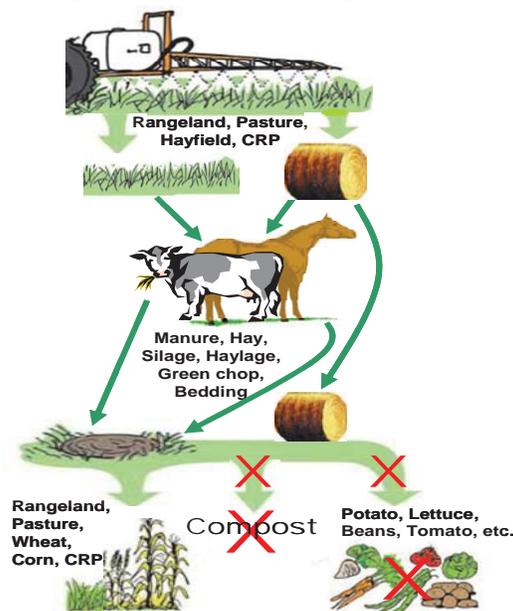
Use Precautions and Restrictions

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 aminopyralid to cause injury to sensitive broadleaf 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

Forage and Manure Management



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- **Do not use grasses treated with Sendero in the preceeding 18-months for hay intended for export outside the United States.**
- **Do not use hay or straw from areas treated with Sendero within the preceeding 18-months, or manure from animals feeding on hay treated with Sendero, in compost.**
- **Do not use grasses treated within the preceeding 18-months for seed production.**
- **Sendero 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.
- **Seeding Legumes:** Do not plant forage legumes until a soil bioassay has been conducted to determine if aminopyralid concentration remaining in the soil will adversely affect the legume establishment
- **Grazing and Haying Restrictions:** There are no restrictions on grazing or grass hay harvest following application of Sendero at labeled rates. Cutting hay too soon after spraying weeds will reduce weed control. Wait 14 days after herbicide application to cut grass hay to allow herbicide to work. Do not transfer grazing animals from areas treated with Sendero to areas where sensitive broadleaf crops 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.
- **Transfer of Animals Feeding on Sendero-Treated Forage:** Do not transfer animals grazing or feeding on hay from areas treated with Sendero 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.
- **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.
- **Crop Rotation:** Do not rotate to cropland for one year following an application of Sendero. 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. See the full label on the container for additional information on rotational crops.

- **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 one year after the last application of aminopyralid in the field/area to be planted with a 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.
- Trees adjacent to or in a treated area can occasionally be affected by root uptake of Sendero through movement into the soil. Do not apply Sendero 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.

This supplemental label expires on December 1, 2017 and must not be used or distributed after this date.

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R890-003

EPA accepted __/__/__

Replaces: R890-001