

## **BROADLEAF WEED CONTROL (MULLEIN)**

### General Information

Opensight specialty herbicide may be applied by aerial or ground equipment to control susceptible broadleaf weeds and certain woody plants, including invasive and noxious weeds on rangeland, permanent grass pastures, CRP acres, non-cropland areas including industrial sites, rights-of-way (such as roadsides, electric utility and communication transmission lines, pipelines, and railroads), non-irrigation ditch banks, natural areas (such as wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails), and grazed areas in and around these sites without injury to most grasses.

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 only when dry. Opensight can be used to the waters edge. Do not apply directly to water and take precautions to minimize overspray to open water when treating target vegetation in and around non-flowing, quiescent or transient water. When making applications to control unwanted plants on banks or shorelines of flowing water, minimize overspray to open water. Note: Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat such areas.

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

### Resistance Management Guidelines

- This product contains two herbicides with different modes of action. Development of plant populations resistant to the mode of action of aminopyralid 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. There may be resistant weed biotypes to metsulfuron and adequate control of these species cannot be expected.

- 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.

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

**Maximum Application Rate:** On all labeled use sites do not broadcast apply more than 3.3 ounce/acre of Opensight per year. The total amount of Opensight applied broadcast, as a re-treatment, and/or spot treatment cannot exceed 3.3 oz of product per acre per year. Spot treatments may be applied at an equivalent

broadcast rate of up to 6.6 oz product of Opensight per acre per annual growing season; however, not more than 50% of an acre may be treated at that rate. Do not apply more than a total of 3.3 ounce/acre of Opensight per annual growing season as a result of broadcast, spot or repeat applications.

- Do not use on Timothy hay or other cool-season grasses grown for hay.
- Do not apply this product on lawns, turf, ornamental plantings, urban walkways, driveways, tennis courts, golf courses, athletic fields, commercial sod operations, or other high-maintenance, fine turfgrass areas, or similar areas.
- Do not overseed ryegrass for 4 months after treatment.
- Opensight is highly active against many 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 to irrigated land where the tailwater will be used to irrigate crops.
- Do not use this product for impregnation on dry fertilizer, unless specified in Dow AgroSciences state-specific product bulletin.
- Do not use Opensight in the following counties of Colorado: Alamosa, Conejos, Costilla, Rio Grande, and Saquache.
- Trees adjacent to or in a treated site can occasionally be affected by root uptake of Opensight. Do not apply Opensight 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.

-Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots extend, or in locations where the product may be washed or moved into contact with their roots, as injury or loss of desirable trees or other plants may result.

- 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 Opensight. Injury to crops may result if treated soil and/or runoff water containing Opensight is washed, or moved onto land used to produce crops. Exposure to Opensight 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.

- Seeding Legumes: Do not plant forage legumes until a soil bioassay has been conducted to determine if aminopyralid or metsulfuron concentration remaining in the soil will adversely affect the legume establishment.

- Under certain conditions such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after Opensight application, temporary discoloration and/or grass injury may occur. Opensight should not be applied to grass that is stressed by severe weather conditions, drought, low fertility, water-saturated soil, disease, or insect damage, as grass injury may result. Severe winter stress, drought, disease, or insect damage before or following application also may result in grass injury.

- Do not apply to frozen ground as surface runoff may occur.

- Do not apply to snow-covered ground.

- Grazing and Haying Restrictions: There are no restrictions on grazing or grass hay harvest intervals following application of Opensight at labeled rates. However, 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 Opensight 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: Application of this product may increase palatability of certain poisonous plants. Do not graze areas treated with Opensight until poisonous plants are dry and no longer palatable to livestock.

- Restrictions in Hay or Manure Use:

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

-Do not use manure from animals that have grazed forage or eaten hay harvested from treated areas within the previous 3 days, in compost, mulch or mushroom spawn.

-Do not spread manure from animals that have grazed or consumed forage or eaten hay from treated areas within the previous 3 days on land used for growing susceptible broadleaf crops.

-Manure from animals that have grazed forage or eaten hay harvested from treated areas within the previous 3 days may only be used on pasture grasses, grass grown for seed, wheat and corn.

-Do not plant a broadleaf crop (including soybeans, sunflower, tobacco, vegetables, field beans, peanuts, and potatoes) in fields treated 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 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 treated in the previous year with manure from animals that have grazed forage or eaten hay harvested from 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.

-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. Do not plant a broadleaf crop until an adequately sensitive field bioassay shows that the level of aminopyralid or metsulfuron 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 that field. 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, perennial forage grasses, native grasses or grasses grown for hay.

- Avoiding Injury to Non-Target Plants: Do not aerially apply Opensight 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.

- To reduce the potential for movement of treated soil due to wind erosion, do not apply to powdery dry or light sandy soils until they have been stabilized by rainfall, plant residue mulch, reduced tillage, or other cultural practices. Injury to immediately adjacent crops may occur when treated soil is blown onto land used to

produce crops other than pasture, rangeland or CRP.

### Sprayer Clean-Out Instructions

It is recommended to use separate spray equipment on highly sensitive crops such as tobacco, soybeans, peanuts and tomatoes. Do not use spray equipment used to apply Opensight 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 has been removed by thorough cleaning of equipment.

Equipment used to apply Opensight 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.

### Application Methods

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

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

and/or tall foliage.

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

**High-Volume Foliar Application:** High volume foliar treatments may be applied at rates equivalent to a maximum of 3.3 ounces per acre 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 6.6 oz of product per acre per annual growing season; however, not more than 50% of an acre may be treated at that rate. Do not apply more than a total of 3.3 ounce/acre of Opensight 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 Opensight applied must not exceed 3.3 ounce/acre per year. To prevent misapplication, spot treatments should be applied with a calibrated sprayer. In general for spot treatments, mix 2.5 oz for weeds and 3.3 oz for brush of Opensight per 100 g

#### Guidelines for Grass Management

Opensight may be applied to established native grasses such as wheatgrasses, bluestems and grama, and on other established pasture grasses such as bermudagrass, bluegrass, orchardgrass, brome grass, and tall fescue that were planted the previous growing season (or earlier) and are fully tillered, unless otherwise directed on this label. Specific application timing information on several of these grass species follows:

- Opensight 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.



- Varieties and species of forage grasses differ in their tolerance to herbicides.

When using Opensight on a particular grass for the first time, limit use to a small area. If no injury occurs throughout the season, larger acreage may be treated.

- Application of Opensight to Pensacola bahiagrass, ryegrass (Italian or perennial) and Garrison's creeping foxtail may cause severe injury to and/or loss of pastures.

Seeding grasses:

Preemergence: In general, Opensight may be applied in the spring or early summer, depending on the target weed species, as a broadcast application over grass that was planted at least 4 months prior to the application and that has been growing under favorable conditions for grass establishment. With fall applications, do not plant grasses the following spring. Do not overseed ryegrass for 4 months after treatment.

Tall Fescue:

Opensight may stunt tall fescue, cause it to turn yellow, or cause seed head suppression. To minimize these symptoms, take the following precautions:

- do not use on tall fescue grown for seed

- do not use more than 2 ounce/acre of Opensight

- tank-mix Opensight with 2,4-D

- use a reduced rate of non-ionic surfactant at 1/2 to 1 pint per 100 gallons of spray solution (1/16 to 1/8% v/v)

- make application later in the spring after the new growth is 5 to 6 inches tall (until after reproductive culm has started to elongate), or in the fall

- do not use surfactant when liquid nitrogen is used as a carrier

- do not use a spray adjuvant other than non-ionic surfactant Initial grass yields may be reduced due to fescue seed head suppression resulting from treatment with Opensight at labeled rates.

However, this could be beneficial because in tall fescue infected with the fungal endophyte (*Neotyphodium* spp.), the endophyte is concentrated in the seed and

cattle grazing plants with the seed head will get the maximum exposure to the endophyte. Increased levels of ingestions of the fungal endophyte can reduce weight gain and conception rates in cattle. Since the first grazing is often delayed in the spring until long after seed head development, Opensight could potentially be used to reduce development of the seed head, thereby reducing the amount of the endophyte that would be consumed by livestock when grazing.

**Seed Head Suppression:** If the intent is to control weeds and reduce tall fescue seed heads, apply Opensight at 2.0 to 2.5 ounce/acre early to fescue that is less than 6 inches tall.

**Pensacola bahiagrass control in established Bermudagrass pasture:** Apply Opensight at 2-2.5 ounce/acre after green-up in the spring, but before bahiagrass seedhead formation. Application should be made when environmental conditions favor grass growth.

Bahiagrass suppression could take up to 30 days before the desired level of control is achieved. Application of 2,4-D mixed with Opensight could decrease bahiagrass control. In pastures severely infested with bahiagrass, a positive response in forage yield may be slowed until desired forage grasses, like bermudagrass, grow into areas previously infested with bahiagrass. To reduce this effect consider treating different portions of heavily infested pastures with Opensight over a period of several years. Do not apply Opensight to an entire farm or ranch in one year. Fertilization and/or replanting may accelerate bermudagrass recovery following bahiagrass control with Opensight. Bahiagrass regrowth may occur in pastures heavily infested with bahiagrass, intense grazing pressure, or when adverse environmental conditions (heat and drought), slows the recovery of desired grass forages. Opensight will not control common or Argentine bahiagrass. Pensacola bahiagrass control can be reduced when Opensight is applied in liquid fertilizer solutions.

### Use Rates and Timing

Opensight may be applied post emergence as a broadcast spray or as a spot application to control weeds and brush including, but not limited to, those listed on the 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 Opensight, avoid mowing, haying, shredding, burning or soil disturbance in treated areas for at least 14 days following application.

Opensight also provides 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.

Opensight 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.

Opensight 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 Opensight, 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.

### Limitations, Restrictions, and Exceptions

#### General Mix of Broadleaf Weeds:

Opensight at 2.0 ounce/acre is the standard rate to provide control of many problem weeds when applied early in the season. If a certain weeds are key targets, use the rate in Table 1 for that species. The addition of Garlon herbicides, DMA 4 IVM, or other herbicides allowed for use on the site to be sprayed can be tank mixed to broaden the weed spectrum.

Opensight controls weeds and woody plants primarily by postemergent activity. Although Opensight has Preemergence acitivity, best results are generally obtained

when Opensight is applied to foliage after emergence or dormancy break. Generally, for the control of annual weeds, Opensight provides the best results when applied to young, actively growing weeds. For the control of perennial weeds, applications made at the bud/bloom stage or while the target weeds are in the fall rosette stage typically provide the best results. The use rate depends upon the weed species and size of the weed at the time of application.

The degree and duration of control depends on weed spectrum and infestation intensity, weed size at application, environmental conditions at and following treatment, soil pH, soil moisture, and soil organic matter, and other factors.

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 indicated when growing conditions are less than favorable (drought conditions), weeds are large and mature, weed density and foliage cover is high and canopy height is tall, or when residual control is desired. Opensight also provides preemergence control of germinating seeds or seedlings of susceptible weeds following application.

For rates for specific weeds, see Table 1. The life cycle is included for each weed species. The general timing of application for each life cycle is as follows:

**Annuals:** Use lower rates when weeds are less than 6 inches and actively growing. Increase rate as season progresses and plants become more mature.

**Biennials:** Apply in the spring and early summer to rosette or bolting plants or in the fall to seedlings and rosettes before ground is frozen. Use higher rates after bolting through early flower.

**Perennials:** Apply to vegetative stage prior to bloom. Use higher rate when weeds are larger.

**Mullein:**

Apply 2.0 ounce/acre in the rosette stage in spring or fall. Use rates from 2.5 to 3.3 ounce/acre for bolting plants less than 12 inches tall.

**Method**

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Spot treatment](#)

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

48 hours

Timings

[In the rosette stage in spring or fall.](#)