



"GLEAN" HERBICIDE
EPA REG. NO. 352-404

SUPPLEMENTAL LABELING

"GLEAN" HERBICIDE
SELECTIVE WEEDING TO AID IN THE
ESTABLISHMENT AND MAINTENANCE OF GRASSES
IN THE CONSERVATION RESERVE PROGRAM
IN THE STATES OF CO, IA, ID, KS, MN, MT, NE
NM, ND, OK, OR, SD, TX, UT, WA and WY

DIRECTIONS FOR USE

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

Du Pont "Glean" Herbicide is recommended for the control or suppression
of certain broadleaf weeds in the following native or improved perennial
grasses grown on land enrolled in the Conservation Reserve Program (CRP):

Bentgrasses	Orchardgrass (<u>excluding</u> Piaute)
Blue Grama	Prairie sandreed
Bluestems - Big, Little, Plains, Sand, WW Spar	Sand dropseed
Buffalograss	Sheep fescue
Galleta	Sideoats Grama
Green needlegrass	Switchgrass
Green sprangletop	Wheatgrasses - Crested, Intermediate, Pubescent, Slender,
Indiangrass	Streambank, Tall,
Indian ricegrass	Thickspike, Western
Kleingrass	Wildrye grasses - Beardless, Russian
Lovegrass - Sand, Weeping	

GENERAL INFORMATION

"Glean" provides both preemergence and postemergence control or
suppression of labeled weeds. Degree of control and duration of effect
depends on weed spectrum and density; weed size and variability; amount
of cover canopy; growing conditions before, at and following application;
rate and timing of application and spray coverage.

Maximize potential for grass establishment by consulting with the Soil
Conservation Service or other local experts concerning planting
techniques and other cultural practices.

a broadleaf herbicide having a different mode of action, such as 1,1-D or Banvel[2].

*Biotypes are naturally-occurring individuals of the species which have a slightly different genetic makeup. Resistant biotypes may look exactly the same as susceptible biotypes. Herbicide-resistant biotypes are able to survive a use rate several times higher than needed to control susceptible biotypes.

USE RATES

In the Northern Plains (MN, MT, ND, SD, N. WY), the maximum use rate for "Glean" is 1/6 oz/A. This rate should be used in a tank mix with another broadleaf herbicide (unless treating legume/grass mixtures) having a different mode of action postemergence to weeds. See "Tank Mixtures" section of label.

In all other areas, "Glean" may be used at 1/6 to 1/3 oz/A. The 1/3 oz rate should be used for preemergence applications where residual weed control is important.

APPLICATION TIMING

Preplant (prior to planting)

In all areas except the Northern Plains, "Glean" may be applied at 1/3 oz/A to all labeled grasses except bentgrasses, kleingrass, orchardgrass, and sheep fescue. For plantings of Plains and WW Spar bluestems, time application not less than 90 days prior to planting.

Preemergence (after planting but before grass emergence)

In all areas except the Northern Plains, "Glean" may be applied at 1/3 oz/A to all labeled grasses except bentgrasses, kleingrass, orchardgrass, Plains and WW Spar bluestems and sheep fescue.

Early postemergence to new plantings

"Glean" may be used in all areas on all labeled grasses except bentgrasses, orchardgrass, Plains and WW Spar bluestems. Because grass species differ in time of emergence, apply only after the majority of grasses are in the 3 to 4 leaf stage.

If weeds are present at time of application, apply "Glean" with another broadleaf herbicide having a different mode of action. See "Tank Mixtures" section of label.

Postemergence applications to stands planted the previous season

"Glean" may be applied when the majority of the grasses have one or more leaves. This application may be used in all areas on all labeled grasses except bentgrasses, kleingrass, orchardgrass, Plains and WW Spar bluestems and sheep fescue.

If weeds are present at time of application, apply "Glean" with another broadleaf herbicide having a different mode of action. See "Tank Mixtures" section of label.

DO NOT TREAT STANDS SHOWING WINTER STRESS OR LACK OF VIGOR SYMPTOMS AS GRASS INJURY MAY OCCUR.

Late postemergence (tillered stands)

"Glean" may be used in all areas on all labeled grasses.

If weeds are present at time of application, apply "Glean" with another broadleaf herbicide having a different mode of action. See "Tank Mixtures" section of label.

Note: Applications to Beardless wildrye grass can be made only after tillering and only in the spring.

Postemergence applications to established mixed stands of grass/alfalfa (MN, MT, ND, SD only)

"Glean" may be used on one year old stands of grass/alfalfa mixtures. Temporary yellowing and/or stunting of the alfalfa may occur. This application may be made to all labeled grasses.

DO NOT TREAT STANDS SHOWING WINTER STRESS OR LACK OF VIGOR SYMPTOMS AS GRASS/ALFALFA INJURY MAY OCCUR.

WEED CONTROL

Apply "Glean" preemergence to weeds or postemergence to small actively growing weeds before they are larger than 2" tall or 2" in diameter.

One to two inches of rainfall (enough to wet the top 2-3 inches of soil profile) may be needed to move the herbicide into the weed root zone before the next flush of weeds emerge. The amount of moisture required for sufficient activation increases with crop or weed residue and for finer textured soils. Without sufficient rainfall to move "Glean" into the weed root zone, weeds that germinate after treatment will not be controlled.

For best results postemergence to weeds, use "Glean" in a tank mix with 2,4-D (ester formulations perform best). This tank mix works best where weed biotypes resistant to "Glean", Du Pont ALLY[1] Herbicide, Du Pont HARMONY[1] Extra Herbicide or Du Pont EXPRESS[1] Herbicide are not suspected or known to occur.

Where resistant weed biotypes, such as kochia and Russian thistle, are suspected (land which has had 2 or more previous applications of "Glean" or is immediately adjacent to land where "Glean" has been used 2 or more times) or known to be present, select the most effective tank mix partner labeled for the control of kochia and/or Russian thistle and adjust the rate so that it alone will control the resistant biotype(s).

Note: If resistant biotypes are present, degree of control will depend solely on the effectiveness of the tank mix partner.

For all postemergence applications add a surfactant of at least 80% active ingredient at the rate of 1 to 2 qt/100 gallons of spray solution. The use of surfactants having less than 80% active ingredient may reduce weed control.

Avoid postemergence applications to weeds which are not actively growing due to adverse weather conditions. Weeds hardened off by cold weather or drought stress may not be adequately controlled.

Performance: Because newly planted CRP grass stands do not sufficiently compete with weeds and because weed pressure in CRP fields is often severe, performance from "Glean" may not always be satisfactory. An additional herbicide application or mowing may be needed.

Use Rate Table

The 1/6 oz/A use rate is recommended only for short term control or suppression. Use 1/3 oz/A where soil residual weed control is important.

Weeds Controlled or Suppressed* at 1/6 through 1/3 Ounce Per Acre

Blue mustard	Miners lettuce	Conical catchfly
Pineappleweed	Field pennycress	Prostrate pigweed
Flixweed	Redroot pigweed	Hempnettle
Shepherdspurse	Henbit	Smooth pigweed
Lambsquarters	Tansymustard	Mayweed
Treacle mustard	Tumble mustard (Jim Hill)	Wild mustard

Weeds Controlled or Suppressed* at 1/3 Ounce Per Acre

Above list plus:

Canada thistle	Redstem filaree
Coast fiddleneck (tarweed)	Russian thistle (Central KS, Central NE, Central OK, and North Central TX only)
Common chickweed	Speedwell
Flixweed	Sunflower - In MT, ND, SD and TX Kochia partial control only
Kochia (Central KS, Central OK and North Central TX only)	Tansymustard
Lambsquarters	Wild buckwheat
Prickly lettuce	Wild carrot
Prostrate knotweed	Wild radish
Purslane (common)	Wild turnip

*Weed suppression is a visual reduction in weed competition (reduced population or vigor) as compared to untreated area. Degree of suppression will vary with size of weed and environmental conditions following treatment.

It is recommended that a .25 acre area be left untreated in each tract of land entering the Conservation Reserve Program to confirm efficacy and grass selectivity of the treatment.

TANK MIXTURES

Preplant

"Glean" can be tank mixed with Roundup[3] or Landmaster[3] II as a preplant treatment to control broadleaf and grassy weeds. When using "Landmaster" II tank mix, allow at least 7 days after application before planting grasses. Refer to "Roundup" and "Landmaster" II fact sheets and labels for all use instructions, label rates, weed control claims, warnings and precautions.

Postemergence

2,4-D can be tank mixed with "Glean" at 1/4 lb AI/A for all labeled grasses larger than the 5-leaf stage. For fully tillered stands up to 1/2 lb AI/A of 2,4-D may be used. Surfactant may be added at 1 to 2 pts per 100 gallons of spray. However, the addition of surfactant may increase the chance of grass injury.

"Glean" can also be tank mixed with "Banvel". Use not more than 1/8 to 1/4 AI/A "Banvel" plus "Glean" after majority of grasses are in the 3-leaf stage. In established grasses (2nd year stands), use not more than 1/4 to 1/2 lb AI "Banvel" plus "Glean".

Read and follow all use instructions, label rates, weed control claims, warnings and precautions for the companion herbicides.

SPRAY PREPARATION, EQUIPMENT, SPRAY VOLUMES AND APPLICATION

Mix the proper amount of "Glean" into the necessary volume of water in the spray tank with the agitator running. Agitation is required for uniform mixing and application. If spray preparation is left standing, thoroughly reagitrate before using. "Glean" must be added to the spray tank first, followed by other tank mix chemicals and surfactant. If tank contains part of previous mix, slurry "Glean" in a bucket of water before adding to spray tank.

"Glean" should be applied in sufficient spray volume to obtain thorough coverage of the target area and existing weed foliage. Include one quart of an 80% (minimum concentration) active ingredient surfactant for every 100 gallons of spray mix when weeds are present at application.

For ground applications minimum spray volume is 3 GPA (gallon per acre). Flat fan nozzles are recommended. Volumes exceeding the minimum should be used as weed populations or canopy cover increases.

For aerial applications use nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage at 1 to 5 GPA.

Note: When applying "Glean" in areas where crops other than wheat, barley, oats or CRP grasses are grown, take extra precautions to minimize drift by following these instructions:

- o Stop spraying if wind speed become excessive. DO NOT SPRAY IF WIND SPEED IS 10 MPH OR GREATER. Spray drift can occur at wind speeds less than 10 MPH. If sensitive crops or plants are downwind, extreme caution must be used even in relatively low wind conditions! DO NOT SPRAY IF WINDS ARE GUSTY.
- o High temperatures, drought and low relative humidity increase the possibility of harmful spray drift. EXTREME CAUTION MUST BE USED WHEN THESE CONDITIONS ARE PRESENT AND SENSITIVE CROPS OR PLANTS ARE NEARBY, REGARDLESS OF WIND SPEED.
- o Do not apply when a temperature inversion exists. An inversion is characterized by low air movement and an increase in air temperature with an increase in altitude. In humid regions, a fog or mist may form. An inversion may be detected by producing a smoke column and checking for a layering effect. Smoke-producing devices on aircraft are recommended. If not sure whether inversion conditions are present, consult with local weather services before making an application.

- o Drift from aerial or ground equipment may be further reduced by:
1. Using large droplet size sprays to minimize drift. DO NOT APPLY WITH HOLLOW-CONE INSECTICIDE NOZZLES ON GROUND EQUIPMENT. Do not use nozzles that produce small droplets, such as Sprayfoil[4] or airblast-type nozzles. Nozzles should be oriented at an angle between straight down and straight back for ground applications.

For aerial applications, orient nozzles straight back along the windstream using straight stream orifices (such as disk with no swirl plate). If using flood-type nozzles on aircraft, orient them so spray is produced in direction of the airstream. Use the lowest number of nozzles practical with the largest orifice size per nozzle to obtain minimum of 1 GPA. Application height should not exceed 1/2 length of wind span to minimize drift potential. Boom length must not exceed 2/3 the wind span.

2. Increasing volume of spray mix per acre (for example, minimum 5 GPA by air, 10 GPA by ground) by using higher flow rate nozzles.
3. Reducing pressure (PSI). - DO NOT EXCEED 40 PSI when applying "Glean" (Vehicle speed must also be reduced to maintain spray mix volume per acre). Consult manufacturers' catalogs for details on correct calibration.
4. Apply as close to target plants as possible, while still maintaining a good spray pattern.

NOTE: Do not allow spray to drift onto adjacent crops or onto agricultural land scheduled to be planted to crops other than wheat or grasslands for the CRP program, as injury to the crop may occur. Extreme care must be taken to prevent drift onto susceptible plants or nontarget land.

PRECAUTIONS

Grass grown on Conservation Reserve Acres cannot be grazed or used for hay.

Under certain conditions such as high soil pH, heavy rainfall, prolonged cool weather or frost conditions just prior to or soon after application, temporary discoloration or stunting may occur.

Legumes in a seeding mixture may be severely injured or killed following an application of "Glean".

Do not apply to frozen ground where surface runoff may occur. Do not apply when snow covers the ground.

Because cultivars of perennial grasses differ in their tolerance to herbicides, limit first use of "Glean" to a small area prior to adoption as a field practice. Likewise, components in a seed mixture will vary in tolerance to "Glean" so that the final stand may not reflect seed ratio.

Rotational guidelines should be referred to on the current "Glean" product label before land treated with "Glean" in the Conservation Reserve Program is taken out and planted to other crops as certain crops may be injured by herbicide residue in the soil.

IMPORTANT

BEFORE USING "GLEAN", READ AND CAREFULLY OBSERVE THE CAUTIONARY STATEMENTS AND ALL OTHER INFORMATION APPEARING ON THE PRODUCT LABEL.

This bulletin contains new or supplemental instructions for use of this product which may not appear on the package label. Follow the instructions carefully.

This labeling must be in the possession of the user at the time of pesticide application.

- [1]Registered trademark of E.I. du Pont and Company.
- [2]Registered trademark of Sandoz Crop Protection Corporation.
- [3]Registered trademark of Monsanto Company.
- [4]Registered trademark of D. and W. Corporation.

E. I. du Pont de Nemours and Company
Agricultural Products
Wilmington, Delaware 19880

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