Reg # 352-522 PM-25

1 of 17

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

JUN 24 1993

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Dear Registrant:

Subject: Label Amendment Submission of 5/12/93 in Compliance with the PR Notice 93-7
Du Pont Glean FC Herbicide, EPA Reg. No. 352-522

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is accepted subject to the comments listed below. Five copies of the finished labeling must be submitted prior to releasing the product for shipment.

Based on your certification, the Agency has accepted only those changes to your labeling which are necessary to comply with PR Notice 93-7, which reflects the WPS labeling requirements of 40 CFR part 156, subpart K. Any changes to the labeling submitted in connection with this amendment application not directly related to compliance with PR Notice 93-7 were not reviewed and have not been accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, acceptance of this labeling amendment does not affect the suspension in any way.

You must delete the phrase "in general, only agricultural-plant uses are covered by the WPS" from the front panel of your label. You must make this change before printing the final label, which you will submit to the Agency.

We wish to remind you that on your final printed label the "User Safety Recommendations" text must be shown in a box on the label. This text must be shown in a clearly separate box on the product label. The box will be delineated with lines or other graphic indicators, or possibly with background shading or coloring to readily distinguish it from other text on the label.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Sincerely,

T. E. adamczyk

Thomas Adamczyk, Deputy Chief
Fungicide-Herbicide Branch
Registration Divsion (H7505W)

Enclosure

3917

ACCEPTED
with COMMENTS
In EPA Letter Dated
6/24/93
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.
352-522

DUPONT GLEAN®

FERTILIZER COMPATIBLE HERBICIDE

DRY FLOWABLE

ACTIVE INGREDIENT:	**BY WEIGHT**
Chlorsulfuron	
2-Chloro-N-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)aminocarbonyl]benzenesulfonamide	75%
INERT INGREDIENTS	25%
TOTAL	100%

EPA Reg. No. 352-522

U.S. Pat. 4,127,405

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! MAY IRRITATE EYES, NOSE, THROAT OR SKIN. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT

WPS USES: Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard[(40 CFR Part 170) - in general, only agricultural-plant uses are covered by the WPS] must wear:

Long-sleeve shirt and long pants.

Waterproof gloves.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, 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.

STATEMENT OF PRACTICAL TREATMENT

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

If on skin: Wash with plenty of soap and water. Call a physician if irritation persists.

For medical emergencies involving this product, call toll-free 1-800-441-3637.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

IMPORTANT INFORMATION

—(READ BEFORE USING)

Du Pont "Glean" Fertilizer Compatible Herbicide ("Glean" FC) is recommended for use on land primarily dedicated to the long-term production of wheat, barley or oats. "Glean" FC should not be used in any area where annual crop rotation is frequently practiced except as indicated for the states of AR, KS, LA, OK and TX. See "Cereal Recropping Intervals" and "Crop Rotation Recommendations (Noncereal Crops)" sections for details.

Before using "Glean" FC, carefully consider your crop rotation plans and options. For rotational flexibility, do not treat all your wheat, barley, oats or fallow acres.

Injury to or loss of desirable trees or vegetation may result from failure to observe the following: Do not apply, drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water, including irrigation water that may be used on other crops.

Carefully observe sprayer cleanup instructions, both prior to and after using this product, as spray tank residue may damage crops other than wheat, oats or barley.

PESTICIDE HANDLING

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand.
- Avoid over-filling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field/grove or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates/uses.
- Avoid storage of pesticides near well sites.
- When triple rinsing the pesticide container, be sure to add the rinsate to the spray mix.

GENERAL INFORMATION

"Glean" FC Herbicide is a dry flowable granule containing 75% active ingredient, to be mixed in water or directly into liquid nitrogen fertilizer solutions and applied as a uniform broadcast spray for selective weed control in wheat (including durum), barley and spring oats. In TX, Western OR and Western WA, "Glean" FC may also be used on winter oats. It is noncorrosive, nonflammable, nonvolatile and does not freeze.

Prior to using "Glean" FC, careful consideration should be given to crop rotation plans. Crops other than wheat, barley and oats can be extremely sensitive to low concentrations of "Glean" FC in the soil.

READ AND FOLLOW ALL APPROPRIATE SECTIONS OF LABEL INCLUDING PRECAUTIONS BEFORE USING THIS PRODUCT.

INFORMATION ON RESISTANT WEEDS

Following the use of "Glean" FC in monoculture cereals production (continuous cereals or cereal-fallow-cereal), some naturally-occurring biotypes* of certain weeds listed on this label may not be effectively controlled by this product.

If weeds listed on this label are not satisfactorily controlled, respray problem areas in a timely and effective manner using a broadleaf herbicide having a different mode of action**, such as: 2,4-D, Banvel1/"Banvel" SGF, Buctril2, Bronate2, Curtail3, Curtail M3, MCPA, Du Pont "Karmex" DF Herbicide or Du Pont "Lexone" DF Herbicide.

To delay the occurrence of resistant biotypes, use "Glean" FC in tank mixes and/or sequential treatments with other herbicides having different modes of action effective on the same broadleaf weed species. Do not let weed escapes go to seed.

Consult your Ag chemical dealer, applicator, consultant, appropriate state agricultural extension service representative or your local Du Pont representatives for specific recommendations.

* 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. These resistant biotypes will not be controlled by "Glean" FC or other herbicides having the same mode of action such as Amber4, Du Pont "Ally" Herbicide, "Express" Herbicide and "Harmony" Extra Herbicide .

** Mode of action is the chemical interaction that interrupts a biological process necessary for plant growth and development.

GRAZING

"Glean" FC has no grazing restrictions.

SOIL RESIDUAL ACTIVITY

In CA, Northern ID, OR and WA, "Glean" FC is recommended for use on land having a soil pH of 7.9 or lower and dedicated to the long-term production of cereal grains. The soil residual activity of "Glean" FC can injure crops other than wheat, barley or oats for 2 to 3 years or more. "Glean" FC should not be used on soils above pH 7.9, as extended soil residual activity could adversely affect crop rotation options beyond normal intervals.

In Southern ID and UT, "Glean" FC is recommended for use on land having a soil pH of 7.9 or lower and dedicated to the long-term production of cereal grains. The soil residual activity of "Glean" FC can injure crops other than wheat, barley or oats for 3 to 4 years or more. "Glean" FC should not be used on soils above pH 7.9, as the extended soil residual activity could adversely affect crop rotation options beyond normal intervals and under certain conditions cause injury to wheat, barley, or oats

In AR, KS, LA, NE (except the Panhandle), NM, OK and TX, "Glean" FC is recommended for use on land having a soil pH of 7.9 or lower. Unless otherwise specified in the "Crop Rotation Recommendations (Noncereal Crops)" section of this label, in the low rainfall areas of KS, NE,

NM, OK and TX, "Glean" FC should only be used on land dedicated to the long-term production of wheat, barley or oats. The soil residual activity of "Glean" FC can injure crops other than wheat, barley or oats for 2 to 4 years or more. "Glean" FC should not be used on soils higher than pH 7.9, as extended soil residual activity could adversely affect crop rotation options beyond normal intervals.

Rainfall, soil temperature and soil pH are important factors affecting "Glean" FC breakdown in soil. "Glean" FC breakdown is more rapid under conditions of low soil pH, high soil temperature and moist soil. The breakdown process is slow under conditions of high soil pH, low soil temperature and dry soil.

IMPORTANT: UNLESS OTHERWISE SPECIFIED IN THE "CROP ROTATION RECOMMENDATIONS (NONCEREAL CROPS)" SECTION OF THIS LABEL, land previously treated with "Glean" FC cannot be rotated to crops other than wheat, barley, oats, rye or triticale until a bioassay confirms that residues of "Glean" FC that could cause crop injury are not present. See "Bioassay" section of this label for details. Failure to follow these instructions could result in injury to subsequent crops.

For crop rotation flexibility do not use "Glean" FC on all your wheat, barley, oats or fallow acreage.

HOW APPLICATION TIMING AND ENVIRONMENTAL CONDITIONS AFFECT WEED CONTROL AND CROP SAFETY

How Growing Conditions and Crop Density Affect Weed Control

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

A vigorously growing crop will aid weed control by shading and providing competition for weeds. However, a dense crop canopy at time of application can intercept spray and result in reduced weed control. Weeds may not be adequately controlled in areas of thin crop stand or seeding skips.

How Rainfall After Treatment Affects Weed Control

Postemergence treatments control or suppress weeds through both foliar and root uptake.

Rainfall after treatment will affect "Glean" FC performance when applied postemergence or preemergence to weeds. Without sufficient rainfall to move "Glean" FC into the weed root zone, weeds that germinate after treatment will not be controlled.

For best preemergence results, it is important to apply "Glean" FC when you can expect rain or sprinkler irrigation to move "Glean" FC 2 to 3" deep into the soil profile before weed seeds germinate and develop an established root system. Weeds that germinate after treatment and develop an established root system before rainfall moves "Glean" FC into the soil profile may not be controlled.

Avoid making postemergence applications to weeds when rainfall is threatening. Rainfall immediately after treatment can wash "Glean" FC off weed foliage and result in reduced weed control effectiveness. Several hours of dry weather are needed to allow "Glean" FC to be absorbed by weed foliage.

When weed emergence is uneven, control of weeds that germinate after treatment will be dependent on the timing and amount of rainfall following application. Sufficient rainfall is needed to move "Glean" FC 2 to 3" deep into the weed root zone before weeds that germinate after treatment can develop an established root system. When favorable growing conditions exist, rainfall may be needed within a few days after treatment.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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 12 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.
Waterproof gloves.
Shoes plus socks.

Do not apply this product through any type of irrigation system.

"Glean" FC Herbicide should be used only in accordance with recommendations on this label or in separate published Du Pont recommendations available through local dealers.

Du Pont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by Du Pont. User assumes all risks associated with such nonrecommended use.

MAXIMUM USE RATES, AND SOIL pH LIMITATIONS

In CA, Northern ID, OR and WA, the maximum use rate is 1/3 oz/A per crop on soils having a pH of 7.9 or lower. Do not apply more than 1/3 oz/A in an 18-month period. Do not use on soils having a pH greater than 7.9.

In Southern ID and UT, the maximum use rate is 1/6 oz/A in a 48-month period on soils having a pH of 7.9 or lower. Do not use on soils having a pH greater than 7.9.

In Western KS, Eastern NM, OK Panhandle and TX Panhandle, the maximum use rate is 1/3 oz/A in a 36-month period on soils having a pH of 7.9 or lower. Do not use on soils having a pH greater than 7.9.

In Central KS, Central NE and Central OK, the maximum use rate is 1/3 oz/A per crop period on soils having a pH of 7.9 or lower. Do not use on soils with a pH greater than 7.9.

In AR, LA, Central and North Central TX and Southern OK, the maximum use rate is 1/2 oz/A per crop period on soils having a pH of 7.9 or lower. Do not use on soils with a pH greater than 7.9.

NOTE: Prior to using "Glean" FC, take soil samples at 0-4" depth and determine soil pH. Soil pH is to be determined by laboratory analysis using the 1:1, soil to water suspension method on representative soil samples taken at 0-4" depth. Representative soil sampling requires the collection of soil samples from each distinct topographical area in a field, for example, hilltops, hillsides, low areas. This means that several soil samples must be taken and analyzed separately in order to obtain a correct assessment of the soil pH variation in a given field. Consult local extension publications for additional information on recommended soil sampling procedures.

APPLICATION TECHNIQUES, TIMING AND APPLICATION INTERVALS

Preemergence (After Planting) To Winter Wheat

Preemergence applications of "Glean" FC are recommended only where annual ryegrass is the target weed.

Apply "Glean" FC after planting, but before crop emergence, at 1/2 oz/A for the suppression of annual ryegrass. Rainfall or sprinkler irrigation following treatment is necessary to activate "Glean" FC before weed seeds germinate and develop an established root system. Wheat must be planted at least 1" deep. For best results apply "Glean" FC uniformly to a smooth seedbed.

Do not apply preemergence to late fall seedlings when cold and/or dry weather can delay seedling emergence and reduce seedling vigor. If these conditions exist, delay treatment until crop has emerged and weather conditions allow active wheat growth and wheat is showing good vigor.

Preemergence applications of "Glean" FC are not recommended where organophosphate insecticides (such as Di-Syston5, etc.) have been used as an in-furrow treatment, as crop injury may occur.

When environmental conditions cause delayed seedling emergence and/or poor seedling vigor, delay posttreatment irrigation until after the wheat is actively growing and is showing good vigor.

Postemergence to Winter/Spring Wheat, Durum, Winter/Spring Barley and Spring Oats in Cereal/Fallow/Cereal and Continuous Cereal Production

If broadleaf weeds are up at time of application, "Glean" FC is recommended to be applied as a tank mix treatment. The tank mix partner must be a broadleaf herbicide having a different mode of action than "Glean" FC. For best results, apply to actively growing weeds and add a surfactant.

If weeds are not up at the time of application, a tank mix treatment is optional. However, if weeds escape this application, then a sequential broadleaf herbicide having a different mode of action than "Glean" FC must be applied to control these weeds. DO NOT ALLOW WEED ESCAPES TO GO TO SEED.

Follow the application intervals and maximum use rates specified for each geographical area:

Area	Max. Use Rate	"Glean" FC Minimum Application Interval
AR, Central KS (east of Hwy. 183), LA, South Central NE, Central OK and North Central TX	1/3 oz/A	Once per crop period
CA, Northern ID, OR, and WA	1/3 oz/A	Once every 18 months
CO, Western KS (west of Hwy. 183), MN, MT, ND, Western NE (west of Hwy. 183), NM OK Panhandle, SD, TX Panhandle and WY		Do not use for broadleaf weed control. "Ally", "Harmony" Extra or "Express" herbicides are recommended.
Southern ID and UT	1/6 oz/A	Once every 48 months

- *WINTER WHEAT/WINTER BARLEY*

Use "Glean" FC at 1/6 to 1/3 oz/A in all areas. Apply in the fall or spring anytime after the crop is in the 2-leaf stage, but before boot stage.

Do not make an early postemergence treatment to late seeded wheat or barley as the combined effect of herbicide stress plus cold weather and/or moisture stress could cause crop injury. Delay making a postemergence treatment to late seeded wheat or barley until crop has started to tiller.

In areas where cold weather conditions can be severe (ID, OR, UT, WA), do not make a late fall, winter or early spring application to wheat or barley until crop is well established and has started to tiller.

Do not apply "Glean" FC within 60 days of crop emergence where organophosphate insecticides (such as "Di-Syston", etc.) have been used as an in-furrow treatment, as crop injury may result.

DO NOT apply during boot stage or early heading as crop injury may occur.

- *SPRING WHEAT, DURUM, SPRING BARLEY AND SPRING OATS*

In the Pacific Northwest, apply "Glean" FC at 1/6 to 1/3 oz/A anytime after crop is in the 2-leaf stage through the 2nd joint stage. DO NOT apply once the flag leaf is visible as crop injury may occur.

In all other areas, apply "Glean" FC at 1/6 to 1/3 oz/A anytime after crop is in the 2-leaf stage, but before boot stage. Do not apply during boot stage as crop injury may occur.

For irrigated cereal crops, delay first posttreatment irrigation for at least 3 days after application.

To avoid the risk of cold weather-related crop injury, apply "Glean" FC when good growing conditions (adequate soil moisture, daily high temperature of 50 Deg. F or more) are expected to continue until crop has started to tiller.

Do not apply prior to tillering when cold and/or dry weather can reduce seedling vigor, making crop more vulnerable to the combination of herbicide and weather stress. The combined effect of herbicide and stress from cold and/or dry weather can result in temporary yellowing or crop injury (yield reduction).

*NOTE: APPLY TO VIC DURUM AFTER EARLY TILLERING, BUT BEFORE BOOT STAGE.

Postemergence To Crop For Use In Wheat/Sorghum and Wheat/Soybean Annual Rotations

In areas where the interval between an application of "Glean" FC and the planting of sorghum or soybeans is 14 months (see "Crop Rotation Recommendations (Noncereal crops)" section of label), "Glean" FC may be used at 1/6 to 1/3 oz/A alone or in a tank mix in planned crop rotation programs where other residual broadleaf herbicides having different modes of action are used. Follow the application intervals specified for each geographical area:

Area	Max. Use Rate	"Glean" FC Minimum Application Interval
West Central and Western KS, (west of Hwy. 183)	1/3 oz/A	Once every 36 months
AR, Central KS (east of Hwy. 183), LA, South Central NE, OK (east of the Panhandle), and TX (east of the Panhandle)	1/3 oz/A	Once per crop period

Preemergence Or Postemergence Application To Winter Oats - TX, Western OR And Western WA Only.

Preemergence to Oats: Apply "Glean" FC at 1/3 oz/A as a postplanting preemergence treatment to early seeded winter oats. Use 1/2 oz/A (Central and Northeast TX) rate where annual ryegrass is the primary weed problem.

Do not make a preemergence treatment to late fall plantings (after November 1) as herbicide stress plus cold weather stress can cause crop injury.

Remove grazing cattle during wet (muddy) field conditions to avoid disturbing the herbicide barrier.

Heavy rainfall between the time of treatment and the 2-leaf crop stage can result in temporary yellowing and stunting and may result in crop injury.

Postemergence to Oats (broadleaf control only): Apply "Glean" FC at 1/6 to 1/3 oz/A when crop is in 2-leaf to boot stage. When weeds are present at the time of application, add a surfactant (80% active ingredient or more) at the rate of 1 to 2 quarts per 100 gallons of spray solution. Fall applications of less than 1/3 oz/A may not provide adequate control of spring germinating broadleaf weeds.

NOTE: Under abnormally wet conditions, especially on coarse textured soils, fall applications may not provide adequate control of ryegrass and/or spring germinating broadleaf weeds.

Remove grazing cattle during wet (muddy) field conditions to avoid disturbing the herbicide barrier.

Postemergence applications generally do not provide adequate suppression of annual ryegrass.

Weed Control In Corn Or Sorghum Stubble (Preceding Wheat)

In Western KS, Western NE, Eastern NM, OK Panhandle, and TX Panhandle where the interval between an application of "Glean" FC and the planting of corn or sorghum is at least 24 months (see "Crop Rotation Recommendations (Noncereal Crops)" section of label), "Glean" FC may be used as a fallow treatment preceding the planting of wheat.

Use "Glean" FC at 1/6 to 1/3 oz/A in a tank mix in planned rotation programs where other residual broadleaf herbicides having different modes of action are used. "Glean" FC may not be used on a given field more often than once in a 36-month period.

- o DO NOT USE "GLEAN" FC AS A FALLOW HERBICIDE IN CEREAL/FALLOW/CEREAL ROTATIONS.

WEED CONTROL

GENERAL INFORMATION

"Glean" FC rapidly inhibits growth of susceptible weeds. However, typical symptoms of dying weeds (discoloration) may not be noticeable for 1 to 3 weeks after application depending on growing conditions and weed susceptibility.

Degree of control and duration of effect depend on: a) rate used, b) weed spectrum, c) weed size, d) degree of weed infestation, e) growing conditions at and following time of treatment, f) length of growing season, g) soil pH, h) soil organic matter and i) precipitation.

For maximum weed control or suppression, always use the highest recommended rate for your area. soil pH and weed problem. Do not use less than 1/6 oz/A.

Because of rapid breakdown in soil, "Glean" FC may not provide season-long weed control on soils below pH 6.5.

Add a surfactant of at least 80% active ingredient at the rate of 1-2 quarts/100 gallons of spray solution. The higher rate of surfactant is particularly useful with spray volumes of 5 GPA or less and when using low rates of "Glean" FC The use of surfactants having less than 80% active ingredient may reduce weed control.

Sufficient rainfall after preemergence treatment is necessary to move "Glean" FC 2-3" into the weed root zone before weed seeds germinate and develop an established root system or existing weeds grow beyond the seedling stage. In most areas, fall treatments provide the best opportunity for rainfall activation and most consistent residual weed control. Late spring applications may not receive enough rainfall after treatment, resulting in poor weed control. Without sufficient rainfall to move "Glean" FC into the weed root zone, weeds that germinate after treatment will not be controlled.

WEED CONTROL/USE RATE TABLE

NOTE: Read and follow all instructions under "Specific Weed Problems" for all weeds marked with "*".

For broadleaf weed control, the maximum use rate is 1/3 oz/A in all areas except Southern ID and UT where the maximum use rate is 1/6 oz/A.

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.

Where soil pH is 6.5 or lower, use the 1/3 oz/A rate where maximum soil residual weed control is important.

The 1/2 oz/A use rate is recommended only for the control/suppression of annual ryegrass in AR, LA, OK and TX.

Weeds Controlled at 1/6 thru 1/4 Ounce Per Acre

Blue mustard	Pineappleweed
Conical catchfly	Prostrate pigweed
Curly dock	Redroot pigweed
Cutleaf eveningprimrose	Shepherd's purse
Field pennycress	Smooth pigweed
Flixweed*	Tansymustard*
(except ID, OR, UT, WA)	(except ID, OR, UT, WA)
Hempnettle	Treacle mustard
Henbit	Tumble mustard (Jim Hill)
Mayweed	Waterpod
Miners lettuce	Wild mustard

Weeds Controlled at 1/3 Ounce Per Acre

Bur beakchervil	Falseflax
Buttercup	Ladysthumb
Coast fiddleneck	Lambsquarters*
(tarweed)	Mouseear chickweed
Common chickweed	Purslane (common)
Common groundsel	Redstem filaree
Corn spurry	White cockle
Cow cockle	Wild carrot
False chamomile	Wild turnip

Weeds Suppressed1 at 1/3 Ounce Per Acre

Annual ryegrass*	+Russian thistle
Bedstraw	(Central KS, Central NE,
Canada thistle*	Central OK and North
Corn gromwell	Central TX only)
Flixweed*	Sunflower*
(ID, OR, UT, WA only)	(in TX partial control only)
+Kochia	Speedwell
(Central KS, Central NE,	Tansymustard*
Central OK and North	(ID, OR, UT, WA only)
Central TX only)	Wild buckwheat
Pennsylvania smartweed	Wild garlic/Wild onion*
+Prickly lettuce	Wild radish*
Prostrate knotweed*	

* See "Specific Weed Problems".

\+ Naturally-occurring resistant biotypes of these weeds are known to occur in the Central Plains and the Pacific Northwest. See "Tank Mixtures and Guidelines for Resistant Weed Management In Specific Areas" section of label for additional information.

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

SPECIFIC WEED PROBLEMS

Canada Thistle: Apply "Glean" FC plus surfactant after majority of thistles have emerged and while they are small (rosette stage to 4"-6" tall), but actively growing. A single application will effectively inhibit the ability of Canada thistle to compete with the crop. For maximum long-term effect, yearly treatment may be required.

Annual Ryegrass: (Southwest AR/Northwest LA): Apply "Glean" FC at 1/2 oz/A preemergence to ryegrass. 1/2 to 1" of rainfall is needed to move "Glean" FC into the weed root zone prior to ryegrass emergence. Remove grazing cattle during wet (muddy) field conditions to avoid disturbing the herbicide barrier. Under abnormally wet conditions, especially on coarse textured soils, fall applications may not adequately control ryegrass and/or spring germinating broadleaf weeds.

Annual Ryegrass: (Southeast OK, Central and North Central TX): Apply "Glean" FC at 1/2 oz/A preemergence to ryegrass. 1/2 to 1" of rainfall is needed to move "Glean" FC into the weed root zone prior to ryegrass emergence. Remove grazing cattle during wet (muddy) field conditions to avoid disturbing the herbicide barrier. Under abnormally wet conditions, especially on coarse textured soils, fall applications may not adequately control ryegrass and/or spring germinating broadleaf weeds.

For best results, a sequential treatment of "Glean" FC followed by "Lexone" DF is recommended. Refer to the "Directions For Use" of this product for instructions.

Wild Buckwheat: For best results, apply "Glean" FC preemergence to wild buckwheat. Postemergence tank mixes with 2,4-D, MCPA, "Banvel"/"Banvel" SGF, "Buctril" or "Bronate" should be made with surfactant after majority of seedlings have emerged and are actively growing.

Lambsquarters: For best results, use not less than 1/3 oz/A applied in the fall. For spring postemergence application, apply when lambsquarters are less than 2" tall or 2" across and are actively growing. Use not less than the 1/3 oz/A rate of "Glean" FC plus 2 qt surfactant/100 gal of spray solution.

Postemergence Suppression: Apply "Glean" FC plus either 2,4-D (ester or amine) or MCPA (ester or amine) after majority of weeds have emerged. For best results, weeds must be actively growing at time of application (adequate soil moisture and daily temperatures above 60 Deg. F). Add surfactant at 1/2 but not more than 1 qt/100 gal of spray solution. Thorough coverage is important. See "Tank Mixtures and Guide ines for Resistant Weed Management In Specific Areas" section of label.

Sunflower: For best results in NM, OK (Panhandle) and TX, apply "Glean" FC after majority of sunflowers have emerged and are small (not more than 2" tall) and actively

growing. Add surfactant at 2 qt/100 gal of water. If "Glean" FC is applied preemergence, make application in early spring to allow for timely and adequate rainfall to move "Glean" FC into the weed root zone before weeds germinate or develop an established root system.

Flixweed, Tansymustard:

IN NORTHERN ID, OR, WA

- POSTEMERGENCE TREATMENTS

For best results, tank mix "Glean" FC at 1/3 oz/A with another herbicide effective on flixweed and tansymustard such as 2,4-D (ester or amine). See "Tank Mixtures and Guidelines for Resistant Weed Management In Specific Areas" section of label.

ALL OTHER AREAS

Rates of 1/6 to 1/3 oz/A applied when weeds are small and actively growing will provide control. If weeds are inactive due to adverse weather conditions (cold, dry weather before and/or after treatment), delay application until moisture and temperature conditions are favorable for active weed growth, or use a tank mix treatment with 2,4-D or MCPA.

Wild Garlic/Wild Onion: "Glean" FC will provide aerial bulblet control only.

Wild Radish: Postemergence application will provide best results.

Prostrate Knotweed: For best results apply in the fall.

TANK MIXTURES AND GUIDELINES FOR RESISTANT WEED MANAGEMENT IN SPECIFIC AREAS

"Glean" FC may be tank mixed with the following herbicides; 2,4-D, "Banvel"/"Banvel" SGF, "Bronate", "Buctril", "Curtail", "Curtail M", "Karmex" DF, Diuron DF, "Lexone" DF and MCPA. Before using, read and follow all use instructions, warnings and precautions on companion herbicide label.

AR, Central KS, LA, South Central NE, Central OK and North Central TX:

If resistant weed biotypes are suspected or known to be present, consider using another herbicide treatment or adjust the use rate of the "Glean" FC tank mix partner so that it alone will control the resistant biotypes.

"GLEAN" FC + 2,4-D OR MCPA

- "Glean" FC may be used annually as a tank mix treatment with 2,4-D or MCPA after weeds have emerged. Use 1/6 to 1/3 oz/A of "Glean" FC plus 1/4 to 1/2 lb active ingredient 2,4-D or MCPA (ester formulations of 2,4-D or MCPA have provided best results). Surfactant may be added at 1/2, but not more than 1 qt/100 gal of spray solution; however, the addition of surfactant may increase the chance of crop injury. Do not add a surfactant when "Glean" FC plus 2,4-D or MCPA are applied with liquid fertilizer. Apply "Glean" FC plus MCPA from 3-5 leaf stage, but prior to boot stage. Apply "Glean" FC plus 2,4-D after tillering (refer to appropriate 2,4-D's manufacturer's label), but prior to boot stage. Apply "Glean" FC plus 2,4-D or MCPA with liquid fertilizer only when temperatures are above freezing. Applications of "Glean" FC + MCPA + liquid fertilizer made when crop is under cold weather stress just prior to winter dormancy can result in severe foliar burn and/or crop injury. Do not apply "Glean" FC plus 2,4-D or MCPA in combination with organophosphate insecticides.
- Make only one application per crop.
- In wheat/sorghum and wheat/soybean annual rotations, control winter annual broadleaf weeds either by tillage or by using a different mode of action herbicide before planting sorghum or soybeans.

"GLEAN" FC + "LEXONE" DF

- "Lexone" DF at 1/3 to 2/3 lb/A is recommended for downy brome and cheatgrass suppression in winter wheat in KS, OK and TX and may be mixed with "Glean" FC at 1/6 to 1/3 oz/A to broaden the spectrum of weeds controlled. Apply after winter wheat is well tillered (at least 3 tillers) and has a 2" secondary root system throughout the field. 1/2 to 1" of rainfall is needed within 1 to 2 weeks of application.
- See the "Lexone" DF Winter Wheat, Barley, and Fallow supplemental label for additional information.
- Do not use "Lexone" DF plus "Glean" FC on barley in the states of KS, OK and TX.

Read and follow all use instructions, label rates, weed control claims, warnings and precautions for the companion herbicide(s).

West Central and Western KS (generally west of Hwy. 183 to the western edge of these counties - Grant, Kearny, Logan, Rawlings, Stevens, Thomas and Wichita):

If resistant weed biotypes are suspected or known to be present, consider using another herbicide treatment or adjust the use rate of the "Glean" FC tank mix partner so that it alone will control the resistant biotypes.

- In areas where the interval between an application of "Glean" FC and the planting of sorghum is 14 months, "Glean" FC may be used at 1/6 to 1/3 oz/A alone or in a tank mix in a planned crop rotation program where other residual broadleaf herbicides having different modes of action are used.
- In wheat/sorghum rotations, control winter annual weeds either by tillage or by using a different mode of action herbicide before planting sorghum.
- Do not use "Glean" FC for the control of kochia or Russian thistle.
- Do not apply "Glean" FC more often than once every 36 months.
- Do not use an "Ally" tank mix within 22 months of a "Glean" FC application.
- Do not use "Glean" FC in continuous cereals or cereal/fallow/cereal rotations.

Read and follow all use instructions, label rates, weed control claims, warnings and precautions for the companion herbicide(s).

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Far Western KS (last tier of counties along the CO/KS border), Western NE, Eastern NM, OK Panhandle and TX Panhandle:

If resistant weed biotypes are suspected or known to be present, consider using another herbicide treatment or adjust the use rate of the "Glean" FC tank mix partner so that it alone will control the resistant biotypes.

- "Glean" FC may be used in a tank mix at 1/6 to 1/3 oz/A only as a fallow treatment in corn or sorghum stubble in wheat/sorghum/fallow and wheat/corn/fallow rotations where other residual broadleaf herbicides having different modes of action are used.
- Do not use "Glean" FC for the control of kochia or Russian thistle.
- Do not apply "Glean" FC more often than once every 36 months.
- Do not use an "Ally" tank mix within 22 months of a "Glean" FC application.
- Do not use "Glean" FC in continuous cereals or cereal/fallow/cereal rotations.

Read and follow all use instructions, label rates, weed control claims, warnings and precautions for the companion herbicide(s).

Southern ID and UT:

If resistant weed biotypes are suspected or known to be present, consider using another herbicide treatment or adjust the use rate of the "Glean" FC tank mix partner so that it alone will control the resistant biotypes.

- Only use "Glean" FC at 1/6 oz/A postemergence to weeds in a tank mix with another broadleaf herbicide having a different mode of action.
- Do not use "Glean" FC for the control of kochia or Russian thistle.
- Do not apply "Glean" FC more than once every 48 months.
- Do not apply "Glean" FC during fallow.

Read and follow all use instructions, label rates, weed control claims, warnings and precautions for the companion herbicide(s).

CA, Northern ID, OR and WA:

If resistant weed biotypes are suspected or known to be present, consider using another herbicide treatment or adjust the use rate of the "Glean" FC tank mix partner so that it alone will control the resistant biotypes.

- Do not use more than 1/3 oz/A in an 18-month period.
- Do not make an early season treatment where a tank mix cannot be made.
- Do not use "Glean" FC for the control of kochia or Russian thistle.
- Do not apply "Glean" FC during fallow.
- Use 1/6 to 1/3 oz/A of "Glean" FC plus one of the products listed below:

2,4-D (amine or ester)	4 to 8 oz active ingredient/acre
MCPA (amine or ester)	4 to 8 oz active ingredient/acre
"Buctril" 4EC	1/4 pt to 1 pt/acre
"Bronate"	1/2 pt to 2 pt/acre
"Karmex" DF or Diuron DF	1/2 lb to 1-1/2 lb/acre
"Lexone" DF	1/8 to 2/3 lb/acre
"Banvel"	1/8 to 1/4 pt/acre
"Banvel" SGF	1/4 to 1/2 pt/acre
"Curtail"	1 to 2 pt/acre

"GLEAN" FC + "LEXONE" DF

- "Lexone" DF at 1/3 to 2/3 lb/A is recommended for downy brome and cheatgrass suppression in winter wheat and barley in ID, OR and WA and may be mixed with "Glean" FC at 1/6 to 1/3 oz/A to broaden the spectrum of weeds controlled. Apply after winter wheat is well tillered (at least 3 tillers) and has a 2" secondary root system throughout the field. 1/2 to 1" of rainfall is needed within 1 to 2 weeks of application.
- For additional information, see the "Lexone" DF supplemental label for Winter Wheat, Barley and Fallow.
- Do not use "Lexone" DF plus "Glean" FC in California.

"GLEAN" FC + "KARMEX" DF or Diuron DF

- Where prickly lettuce, corn gromwell, annual ryegrass and annual bluegrass are the main weed problems, apply "Karmex" DF or Diuron DF, at 1 to 1 1/2 lb/A with "Glean" FC at 1/6 to 1/3 oz/A to improve weed control. Apply preemergence or postemergence to actively growing weeds less than 2" tall or across. 1/2 to 1" rainfall is needed within 1 to 2 weeks after application. Follow all restrictions on the "Karmex" DF or Diuron DF, labels.

Read and follow all use instructions, label rates, weed control claims, warnings and precautions for the companion herbicide(s).

SPRAY PREPARATION, ADDITIVES, PRODUCT MEASUREMENT, SURFACTANT AND LIQUID FERTILIZER

Spray Preparation: Mix the proper amount of "Glean" FC 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 reagitate before using.

Additives: Do not use with spray tank additives that lower the pH of the spray solution below pH 3.0, as rapid product degradation can occur.

Product Measurement: The "Glean" FC volumetric measuring cylinder is to be used as a guide as the degree of accuracy is plus or minus 10%. For more precise measurement, use scales calibrated in ounces.

Surfactant: Use a surfactant of at least 80% active ingredient in postemergence applications to weeds to improve wetting and/or foliar activity of "Glean" FC. Add surfactant at 1 to 2 qt/100 gal of spray as the last ingredient. The higher rate of surfactant is particularly useful with spray volumes of 5 GPA or less and when using low rates of "Glean" FC. Antifoaming agents may be needed.

Do not use liquid fertilizer as a substitute for surfactant.

Liquid fertilizer: To apply "Glean" FC with liquid fertilizer, simply add the "Glean" FC directly to the liquid fertilizer with the agitator running. The addition of surfactant to tank mixtures of "Glean" FC plus liquid fertilizer increases the risk of crop injury.

Run a tank mix compatibility test before mixing "Glean" FC in fertilizer.

Do not use with liquid fertilizers having a pH of 3.0 or less as rapid product degradation can occur.

Do not use liquid fertilizer as a substitute for surfactant.

TANK MIXTURES WITH OTHER HERBICIDES, INSECTICIDES AND FUNGICIDES

When using a tank mixture for the first time, run a standard compatibility test and use on a small portion of the field to be sure there is adequate crop safety and satisfactory performance before adopting large scale use. "Glean" FC must be in suspension before adding companion pesticides. Follow all instructions, warnings and precautions on the companion product label.

Other Herbicides: Use a suitable registered companion herbicide if weeds and grasses other than those listed on this label are present. When tank mixing "Glean" FC and Assert6, ALWAYS include another broadleaf herbicide with a different mode of action, for example: MCPA ester, 2,4-D ester, "Bronate" or "Buctril". "Glean" FC must be in suspension in the spray tank before adding the companion herbicide. Follow the surfactant recommendation on the companion herbicide label.

Insecticides: "Glean" FC may be tank mixed with insecticides registered for use on cereal grains. However, under certain conditions, (drought or cold stress, while crop is in 2-4 leaf stage) tank mixtures or sequential treatments of "Glean" FC and organophosphate insecticides (such as methyl or ethyl parathion, "Di-Syston", etc.) may produce temporary crop yellowing or, in severe cases, crop injury. Limit first use to a small area. If no symptoms of crop injury occur 14 days after treatment, balance of acreage can be treated.

DO NOT USE "GLEAN" FC AND MALATHION, AS CROP INJURY MAY RESULT.

Do not apply "Glean" FC within 60 days of crop emergence where an organophosphate insecticide (such as "Di-Syston") has been applied as an in-furrow treatment, as crop injury may occur.

Fungicides: "Glean" FC may be tank mixed with Du Pont "Benlate" Fungicide or Du Pont "Manzate" 200 DF Fungicide or other fungicides whenever the proper timing for herbicide and fungicide treatments coincide.

EQUIPMENT—SPRAY VOLUMES

It is important that spray equipment is cleaned and free of existing pesticide deposits before using "Glean" FC. Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanout is provided, follow this cleanout procedure for all application equipment.

1. Thoroughly rinse sprayer, tanks, boom, and hoses with clean water.
2. Partially fill the tank with water and add ammonia (1 gallon of 3% [household] ammonia per 100-gallons of tank volume) or a tank cleaner (follow individual label instructions for amount of tank cleaner to use). Complete filling the tank and flush the cleaning solution through the boom and hoses. Let stand for 15 minutes with agitation/recirculation and then drain the tank after flushing the hoses, boom and nozzles.
3. Thoroughly rinse sprayer, tanks, boom, and hoses with clean water.
4. Follow label directions of the product previously sprayed for rinsate disposal.

NOTE: A steam cleaning of aerial spray tanks is recommended to dislodge any visible pesticide deposits.

Apply using properly calibrated air or ground equipment. Select a spray volume and delivery system that will insure thorough coverage and a uniform spray pattern. For ground application, flat fan nozzles are recommended (minimum 3 GPA). When using flood jet or "Raindrop" 7 nozzles, use higher spray volume (minimum 20 GPA) to ensure thorough coverage. However, "Glean" FC may be applied at not less than 10 GPA when using small orifice flooding nozzles such as flood jet TK 5 to TK 7.5 or equivalent, providing these nozzles are on a 30-inch spacing or not less than 13 GPA when these flooding nozzles are on a 40-inch spacing.

Do not use equipment and/or spray volumes that will cause spray to drift onto nontarget sites. Do not make applications during weather conditions which cause spray to drift onto nontarget sites. For additional information, refer to "Caution - Avoid Spray Drift" section of label.

Do not apply this product through any type of irrigation system.

Use 50-mesh screens or larger.

Unless otherwise stated, use at least 1 gallon spray volume (GPA) per acre by air. Use higher spray volumes to obtain better coverage when either the crop canopy or stubble is dense. Do not apply during inversion conditions, when winds are gusty or when other conditions will favor poor coverage and/or off-target spray movement.

For aerial application in the state of Washington, refer to and follow the directions on the Washington special local need label, "Glean" FC Herbicide Aerial Application to Wheat, Barley and Spring Oats In the State of Washington.

Continuous agitation is required to keep "Glean" FC in suspension. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

CAUTION-AVOID SPRAY DRIFT

THE MINIMIZATION OF PESTICIDE DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR. Interactions between weather conditions and land configurations may contribute to unpredictable drift patterns of all crop protection products. Responsibility for plant injury caused by spray drift lies with the applicator. As an aid for applying any crop protection product, follow these practices to minimize drift.

Do not allow spray from either ground or aerial equipment to drift onto neighboring crops or land, as even small amounts may injure susceptible plants. When spraying near adjacent sensitive crops or plants, do everything possible to reduce spray drift. This includes:

- Stop spraying if wind speed becomes 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

- High temperature, drought, and low relative humidity increase the possibility of spray drift. EXTREME CAUTION MUST BE USED WHEN THESE CONDITIONS ARE PRESENT AND SENSITIVE CROPS ARE NEARBY, REGARDLESS OF WIND SPEED.
- 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.
- 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 Sprayfoil8 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 wing span to minimize drift potential. Boom length must not exceed 2/3 the wing 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" FC. (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, as injury to the crop may occur. Extreme care must be taken to prevent drift onto susceptible plants or nontarget land.

CEREAL RECROPPING INTERVALS

RECROPPING TO WHEAT, OATS, BARLEY, RYE AND TRITICALE IN AR, KS, LA, NE, OK and TX : Recropping plans are determined by soil pH, rate of "Glean" FC applied and a minimum recropping interval. The minimum recropping interval is from time of last application to the anticipated date of planting.

		Minimum Recropping Interval (Months)		
Soil pH*	Use Rate (oz/acre)	Wheat/Rye/Triticale	Oats	Barley
7.9 or lower	1/6 to 1/3	0	10	10
7.9 or lower	1/2	4	10	16
above 7.9	Do Not Use	——Not Applicable——		

RECROPPING TO WHEAT, OATS, BARLEY, RYE AND TRITICALE IN CA, NORTHERN ID, OR AND WA: Recropping plans are determined by soil pH, rate of "Glean" FC applied and a minimum recropping interval. The minimum recropping interval is from time of last application to the anticipated date of planting.

		Minimum Recropping Interval (Months)		
Soil pH*	Use Rate (oz/acre)	Wheat/Rye/Triticale	Oats	Barley
6.5 or lower	1/6 to 1/3	0	10	10
6.5 or lower	1/2	4	10	10
6.6 to 7.5	1/6 to 1/3	0	10	16
6.6 to 7.5	1/2	4	16	24
7.6 to 7.9	1/6 to 1/3	4	16	24
above 7.9	Do Not Use	——Not Applicable——		

ROTATION INTERVAL FOR PLANTING GRASSES ON CONSERVATION RESERVE PROGRAM (CRP) ACRES

Wherever "Glean" FC has previously been used in wheat, barley, oats or fallow, the following grasses may be planted after the intervals specified in the tables below. The planting of grass and legume mixtures is not recommended as injury to the legume may occur.

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

ROTATION INTERVALS IN:

AR, KS, LA, NE, OK and TX :

Soil pH*	Use Rate (oz/acre)	Minimum Interval for Planting Grasses
7.9 or lower	1/6 to 1/3	2 months (all grasses)
7.9 or lower	1/2	4 months (all grasses)

CA, Northern ID, OR and WA:

Soil pH*	Use Rate (oz/acre)	Minimum Interval for Planting Grasses
7.9 or lower	1/6 to 1/3	2 months (all grasses)
7.5 or lower	1/2	4 months (all grasses)

* See "Maximum Use Rates, and Soil pH Limitations" section of label.

CROP ROTATION RECOMMENDATIONS

(NONCEREAL CROPS)

The crop rotation intervals specified in this section of the label must be followed unless a field or LRBsm bioassay indicates a shorter planting interval.

Soil pH as specified in this section of the label is to be determined by laboratory analysis using the 1:1; soil:water suspension method on representative soil samples taken at 0-4" depth. Consult local extension publications for recommended soil sampling procedures.

Cumulative Precipitation as specified in this section of the label is defined as the total amount received from the date of "Glean" FC application to the date of planting. Should accumulated precipitation not be sufficient to meet the indicated amounts, do not rotate to the indicated crops until the following growing season.

ARKANSAS/LOUISIANA

Unless a Crop Rotation Interval is specified, a field bioassay must be completed before rotating to any crop other than those listed below. See "Bioassay" section. DO NOT USE ON SOILS WITH A pH GREATER THAN 7.9.

Cotton, Grain Sorghum, Soybeans:

In Southwest AR and Northwest LA on nonirrigated land, the interval for these crops is:

Crop	Soil pH*	Use Rate (oz/acre)	Cumulative Precipitation (inches)	Rotation Interval (months)
Cotton, Grain Sorghum, Soybeans	7.9 or lower	1/6 to 1/2	25	14

KANSAS

Unless a Crop Rotation Interval is specified, a field bioassay must be completed before rotating to any crop other than those listed below. See "Bioassay" section. DO NOT USE ON SOILS WITH A pH GREATER THAN 7.9.

Grain Sorghum and Soybeans:

In Central KS (generally east of Hwy. 183 and west of the Flinthills) on nonirrigated land, the intervals for grain sorghum and soybeans are:

Crop	Soil pH*	Use Rate (oz/acre)	Cumulative Precipitation (inches)	Rotation Interval (months)
Grain Sorghum	7.9 or lower	1/6 to 1/2	25	14
	7.5 or lower	1/6 to 1/3	25	14
Soybeans	7.5 or lower	1/2	46	26
	7.6 to 7.9	1/6 to 1/3	46	26
	7.6 to 7.9	1/2	64	36

In West Central and Western KS (generally west of Hwy. 183 to the western edge of these counties—Grant, Kearny, Logan, Rawlings, Stevens, Thomas, Wichita) on nonirrigated land, the intervals are:

Grain Sorghum	7.5 or lower	1/6 to 1/3	21	14
	7.5 or lower	1/2	42	26
	7.6 to 7.9	1/6 to 1/3	42	26
	7.6 to 7.9	1/2	54	36

Far Western KS: In the last tier of counties along the Kansas/Colorado border (Cheyenne, Greeley, Hamilton, Morton, Sherman, Stanton, Wallace) on nonirrigated land, the intervals are:

Grain Sorghum	7.5 or lower	1/6 to 1/3	36	26
	7.5 or lower	1/2	45	36
	7.6 to 7.9	1/6 to 1/2	60	48

NEBRASKA

Unless a Crop Rotation Interval is specified, a field bioassay must be completed before rotating to any crop other than those listed below. See "Bioassay" section. DO NOT USE ON SOILS WITH A pH GREATER THAN 7.9.

Grain Sorghum and Soybeans:

In the South Central NE counties of Franklin, Nuckolls, Thayer and Webster on nonirrigated land, the intervals for grain sorghum and soybeans are:

Crop	Soil pH*	Use Rate (oz/acre)	Cumulative Precipitation (inches)	Rotation Interval (months)
Grain Sorghum	7.9 or lower	1/6 to 1/2	25	14
	7.5 or lower	1/6 to 1/3	25	14
Soybeans	7.5 or lower	1/2	46	26
	7.6 to 7.9	1/6 to 1/3	46	26
	7.6 to 7.9	1/2	64	36

Field Corn, Proso and Setaria (Hay) Millets, Grain Sorghum, Soybeans:

In Western NE (generally west of Hwy. 183 to the WY border) on nonirrigated land, the intervals are:

Field Corn,	7.5 or lower	1/6 to 1/3	40	24
Millets,	7.5 or lower	1/2	60	36
Grain	7.6 to 7.9	1/6 to 1/3	60	36
Sorghum,	7.6 to 7.9	1/2	80	48
Soybeans				

OKLAHOMA

Unless a Crop Rotation Interval is specified, a field bioassay must be completed before rotating to any crop other than those listed below. See "Bioassay" section. DO NOT USE ON SOILS WITH A pH GREATER THAN 7.9.

Cotton, Mungbeans, Grain Sorghum, Soybeans:

In Central and Eastern OK (generally east of Hwy. 183) on nonirrigated land, the intervals for these crops are:

Crop	Soil pH*	Use Rate (oz/acre)	Cumulative Precipitation (inches)	Rotation Interval (months)
Grain Sorghum, Cotton, Mungbeans, Soybeans	7.9 or lower	1/6 to 1/2	25	14

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In Western OK (generally west of Hwy. 183 and east of the Panhandle) on nonirrigated land, the interval for cotton and grain sorghum is:

Cotton,	7.9 or lower	1/6 to 1/3	25	14
Grain Sorghum	7.9 or lower	1/2	46	26

In the OK Panhandle, on nonirrigated land, the interval for grain sorghum is:

Grain Sorghum	7.9 or lower	1/6 to 1/3	30	25

OREGON

Unless a Crop Rotation Interval is specified, a field or LRBsm bioassay must be completed before rotating to crops other than those listed on this or other "Glean" FC labels.

See Oregon 24(c) label for rotation intervals for annual and perennial ryegrasses, crimson and red clovers, snap beans and corn.

PACIFIC NORTHWEST (NORTHERN ID, NORTH-EASTERN OR, EASTERN WA)

Unless a Crop Rotation Interval is specified, a field or LRBsm bioassay must be completed before rotating to any crop other than those listed below. See "Bioassay" section.

NOTE: Successful rotation to peas and lentils can be expected in fields of even terrain having well drained soils with a uniform pH of 6.5 or less. Localized areas of crop injury may occur in fields that have highly variable terrain with areas of poor drainage and/or areas of high soil pH (eroded knolls, exposed calcareous subsoil where pH is above 6.5).

Peas and Lentils:

Northern ID, Northeastern OR, Eastern WA Counties:

ID: Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce

OR: Baker, Umatilla, Union, Wallowa

WA: Asotin, Columbia, Garfield, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman

In the above counties on nonirrigated land, the intervals are:

Crop	Soil pH*	Use Rate (oz/acre)	Cumulative Precipitation (inches)	Rotation Interval (months)
Pea	6.5 or lower	1/6 to 1/3	35	24
(Alaska,	6.5 or lower	1/2	—	*
Columbian)	6.6 to 7.5	1/6 to 1/2	—	*
	7.6 to 7.9	1/6 to 1/3	—	*
	6.5 or lower	1/6 to 1/3	50	36
Lentils	6.5 or lower	1/2	—	*
(Chilean)	6.6 to 7.5	1/6 to 1/2	—	*
	7.6 to 7.9	1/6 to 1/3	—	*

*Field or LRBsm Bioassay

TEXAS

Unless a Crop Rotation Interval is specified, a field bioassay must be completed before rotating to any crop other than those listed below. See "Bioassay" section. DO NOT USE ON SOILS WITH A pH GREATER THAN 7.9.

Cotton, Mungbeans, Grain Sorghum, Soybeans:

Eastern TX Counties:

Archer, Bell, Bosque, Bowie, Camp, Cass, Clay, Colin, Cooke, Coryell, Dallas, Delta, Denton, Ellis, Falls, Fannin, Franklin, Grayson, Hill, Hood, Hopkins, Hunt, Jack, Johnson, Kaufman, Lamar, Limestone, McLennan, Milam, Montague, Morris, Navarro, Palo Pinto, Parker, Rains, Red River, Robertson, Rockwall, Somervell, Tarrent, Titus, Upshur, Van Zandt, Wichita, Williamson, Wise, Wood, Young

In the above counties of Eastern TX on nonirrigated land, the interval for these crops is:

Crop	Soil pH*	Use Rate (oz/acre)	Cumulative Precipitation (inches)	Rotation Interval (months)
Grain Sorghum, Cotton, Mungbeans, Soybeans	7.9 or lower	1/6 to 1/2	25	14

Central TX Counties:

Baylor, Callahan, Eastland, Foard, Hardeman, Haskell, Knox, Shackelford, Stephens, Throckmorton, Wilbarger

In the above courties of Central TX on nonirrigated land, the interval for cotton and grain sorghum is:

Cotton,	7.9 or lower	1/6 to 1/3	25	14
Grain Sorghum	7.9 or lower	1/2	46	26

In the TX Panhandle, on nonirrigated land, the interval for commercial grain sorghum is:

Grain Sorghum	7.9 or lower	1/6 to 1/3	30	25

NOTE: Do not plant sorghum grown for hybrid seed production.

SPRAYER CLEANUP

AT THE END OF THE DAY

It is recommended that during periods when multiple loads of "Glean" FC herbicide will be applied, at the end of each day of spraying rinse the interior of the tank with fresh water, then partially fill the tank and flush the boom and hoses. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

AFTER SPRAYING "GLEAN" FC AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, OATS OR BARLEY

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of "Glean" FC as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water.
2. Fill the tank with clean water and one gallon of household ammonia* (contains 3% active) for every 100 gallons of water. Flush the hoses, boom and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circluate the cleaning solution through the tank and hoses for at least 15 minutes. Again flush the hoses,

boom and nozzles with the cleaning solution and then drain the tank.

3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom and hoses with clean water.
6. The rinsate may be disposed of on site or at an approved waste disposal facility.

*Equivalent amounts of an alternate strength ammonia solution or a DuPont approved cleaner (See bulletin H-28617) can be used in the cleanout procedure. Carefully read and follow the individua' cleaner instructions.

NOTES

1. A steam cleaning of aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
2. When "Glean" FC is tank mixed with other pesticides, all cleanout procedures should be examined and the most rigorous procedure should be followed.
3. In addition to this cleanout procedure, all precleanout guidelines on subsequently applied products should be followed as per the individual labels.
4. Where routine spraying practices include shared equipment frequently being switched between applications of "Glean" FC and applications to sensitive crops during the same spray season, it is recommended a sprayer be dedicated to "Glean" FC to further reduce the chance of crop injury.

PRECAUTIONS

Varieties of wheat, oats and barley differ in their tolerance to herbicides. When using "Glean" FC for the first time on a particular variety, limit initial use to one 1 lb 4 oz bottle. If no symptoms of crop injury occur 14 days after treatment, balance of acreage can be treated.

Do not apply "Glean" FC to wheat, oats or barley that are stressed by severe weather conditions, drought, low fertility, water saturated soil, disease or insect damage, as crop injury may result. Severe winter stress, drought, disease, or insect damage following application may also result in crop injury.

Do not apply to wheat, barley or oats undersown with legumes and grasses, as injury to the forages will result.

Do not apply to frozen ground where surface run-off may occur.

Do not apply to snow covered ground.

Do not apply to irrigated land where tailwater will be used to irrigate other cropland.

The combined effects of preemergence "Glean" FC plus preemergence wild oat herbicides may cause crop injury to spring wheat when crop stress (soil crusting, planting too deep, prolonged cold, wet weather, or drought) causes poor seedling vigor.

Tank mixtures or sequential treatments of "Glean" FC and organophosphate insecticides (such as methyl or ethyl parathion, "Di-Syston", etc.) may cause temporary discoloration or crop injury.

Wherever land has been or will be treated with "Assert" or "Amber" herbicide and "Glean" FC, plant only wheat or barley until a bioassay (see "Bioassay" section of label) demonstrates that other crops can be successfully grown. On land that is frequently rotated to crops other than wheat or barley, do not use "Glean" FC wherever "Assert" has been or will be used. The additive effect of soil residues from these treatments has not been determined and crop rotation guidelines and minimum rotation intervals are not known; injury to rotational crops may occur.

To prevent cold weather-related crop injury, avoid making preemergence applications or early postemergence applications (2-4 leaf stage) to wheat or barley during late fall or winter when cold weather conditions are unpredictable and can be severe. The combined effects of herbicide stress plus cold weather stress can result in greater crop injury than either stress factor alone.

Preemergence weed control or suppression may be unsatisfactory on soils containing 5% or more organic matter.

Fall applications on coarse textured soils (especially those having a pH of greater than 7.0) may not provide adequate control or suppression of spring germinating weeds.

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, trashy mulch, reduced tillage or other cultural practices. Injury to adjacent crops may occur when treated soil is blown onto land used to produce crops other than cereal grains.

For ground applications applied postemergence to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced. The addition of 2,4-D or MCPA should improve weed control under these conditions.

Preemergence applications of 2,4-D or herbicides containing 2,4-D made within two weeks of planting spring cereals may cause crop injury when used in conjunction with preemergence or early postemergence applications of "Glean" FC.

Tank mix applications of "Glean" FC Herbicide plus "Assert" may cause temporary discoloration/stunting or injury to the crop when heavy rainfall occurs shortly after the application.

BIOASSAY

A bioassay (field or LRBsm) must be completed before rotating to crops not listed on this label or rotating at intervals shorter than those listed in the "Crop Rotation Recommendations (Noncereal Crops)" section.

• *FIELD BIOASSAY*

A field bioassay will be necessary if crops other than wheat, barley or oats or those listed on the label are to be planted on land previously treated with "Glean" FC. Crop response will indicate whether or not to rotate to the crop(s) grown in the test strips.

A field bioassay involves growing test strips of the crop or crops you plan to grow the following year in fields previously treated with "Glean" FC. Crop response will indicate whether or not to rotate to the crop(s) grown in the test strips.

"Glean" FC breaks down most rapidly in soils having a pH less than 7.0, in areas having 20" or more of annual rainfall,

and a long growing season with warm soil temperatures. "Glean" FC residues breakdown more slowly as soil pH increases above 7.0. Other contributing factors that slow the disappearance of "Glean" FC are low rainfall and prolonged periods of soil temperatures less than 40 Deg. F.

Of the key factors that influence the rate of disappearance, only soil pH remains relatively constant from year to year. Soil temperature, and to a larger degree soil moisture, can vary greatly from year to year and from area to area. Consequently, it is not always possible to accurately predict when areas treated with "Glean" FC can be rotated to crops other than those listed on label.

A bioassay of your "Glean" FC treated field is the only sure way of determining when crops other than those listed on label can be grown.

1. The accuracy and reliability of any field bioassay is largely dependent on the location and number of strips planted. Be sure to select areas of the field previously treated with "Glean" FC that are representative of the various field conditions. Be sure to consider factors such as field size, soil texture, drainage, turnaround areas, eroded knolls or alkaline spots when selecting the sites that are most representative of the soil conditions in the field.

   Even in small fields, more than one test strip is required to accurately determine whether it is safe to rotate to a crop not listed on the label. On large fields, several test strips will be needed in order to obtain reliable results based on the field variables mentioned above.
2. Plant the test strips perpendicular to the direction in which the field was sprayed. Each strip should be long enough to cross the width of several spray swathes. A large test strip area is more reliable than a small one. Suggested size is 1/4 to 1/2 acre per test strip.
3. Use standard tillage and seeding equipment to plant the bioassay.
4. Prepare a seed bed and plant the crops and varieties you want the option of growing the following year. IT IS IMPORTANT TO USE THE SAME PLANTING TIME, CONDITIONS, TECHNIQUES AND CULTURAL PRACTICES YOU NORMALLY USE TO PLANT AND GROW THE BIOASSAY CROP(S). If possible, plant into an adjacent area not treated with "Glean" FC to use as a comparison.
5. Do not overspray the test strips with herbicides that may damage the bioassay crop(s).
6. If the crop(s) in the test strip(s) grow to maturity with a normal harvest, the assay is positive and you may now rotate to the new crop. However, if the crop(s) in the test strips dies, are stunted, or fail to yield a normal harvest, the assay is negative and you should not rotate to the new crop(s). Run the assay until positive results are obtained before rotating to the new crop(s).
7. If the bioassay indicates that "Glean" FC residues are still present, do not rotate to crops other than wheat, barley, or oats or those listed on label until bioassay results indicate that the assay crops are growing normally.

- DU PONT LRBSM BIOASSAY SERVICE

In ID, OR and WA, the Du Pont LRBsm Bioassay Service is available through certain dealers and/or consultants. This service uses soil samples taken by Du Pont certified individuals for laboratory bioassay analysis. LRBsm results will serve as a crop rotation recommendation.

Check with your local Du Pont representative or call toll free 1-800-782-3557 for information regarding the LRBsm Bioassay Service.

With any chemical, follow labeling instructions and warnings carefully.

STORAGE AND DISPOSAL

STORAGE: Store product in original container only, away from other pesticides, fertilizer, food or feed.

PRODUCT DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE TO BUYER: Purchase of this material does not confer any rights under patents of countries outside of the United States.

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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