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ACCEPTED
APR - 4 1986
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 352-443

DU PONT GEMINI™ HERBICIDE

ACTIVE INGREDIENTS	60%
[3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea]	55.4%
Ethyl 2-[[[(4-chloro-6-methoxypyrimidin-2-yl)amino]- carbonyl]amino]sulfonyl]benzoate	4.6%
INERT INGREDIENTS	40%

EPA Reg. No. 352-XXX
U.S. Pat. 4,394,506

EPA Est.

Net Contents: 10 lb. (4540 gms)

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Agricultural Products Department
Wilmington, Delaware 19898

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KEEP OUT OF REACH OF CHILDREN.
PRECAUTIONARY STATEMENTS - HAZARDS TO HUMANS

CAUTION! Causes eye injury. Harmful if swallowed.

Avoid breathing dust or spray mist. Avoid contact with skin, eyes, and clothing. In case of contact with eyes, immediately flush with plenty of water. Get medical attention if irritation persists. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

STATEMENT OF PRACTICAL TREATMENT

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

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.

For medical emergencies involving this product, call toll free 1-800-441-3657.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes.

IMPORTANT

Injury to or loss of desirable trees or vegetation may result from failure to observe the following: Do not apply or 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. Keep from contact with fertilizers, insecticides, fungicides, and seeds during storage.

PRIOR TO USING "GEMINI", CONSIDERATION SHOULD BE GIVEN TO CROP ROTATION PLANS. Crops other than soybeans can be extremely sensitive to low concentrations of "Gemini" remaining in the soil the next planting season. Choice of rotation crop is restricted following application of "Gemini". (See "MINIMUM RECROPPING INTERVAL AND ROTATIONAL GUIDELINES".)

Thoroughly clean all traces of "Gemini" from application equipment immediately after use and prior to spraying crops other than soybeans. Clean-up procedures are described in the "SPRAYER CLEANUP" section of this label. Failure to follow these procedures may result in injury to subsequently sprayed crops.

GENERAL INFORMATION

Du Pont GeminiTM Herbicide is a dispersible granule formulation to be mixed with water and sprayed for selective preemergence weed control in soybeans. When applied according to the instructions on this label, it will control many broadleaf weeds and provide partial control of nutsedge and annual grasses.

Preemergence applications of "Gemini" require rainfall or sprinkler irrigation to activate the herbicide. Degree of control and duration of effect depend on: rate used, weed spectrum, growing conditions at and following time of treatment, soil pH, texture, organic matter, moisture, and precipitation.

Because most crops are highly sensitive to "Gemini", all direct or indirect contact (such as spray drift) to crops or to land scheduled to be planted to crops other than soybeans should be avoided.

BIOLOGICAL ACTIVITY

"Gemini" rapidly inhibits the growth of susceptible weeds. Following preemergence treatment, susceptible weeds may germinate and emerge, but growth then ceases and leaves become chlorotic 3-5 days after emergence. Necrosis of leaf tissue and growing point will follow in some species while others remain green but stunted and noncompetitive. "Gemini" provides partial control of some annual grasses when used preemergence but other products may be needed to ensure adequate grass control.

DIRECTIONS FOR USE

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

EQUIPMENT - SPRAY VOLUMES

Apply uniformly by ground equipment with a properly calibrated low pressure (20 to 40 psi) fixed-boom sprayer equipped with fan-type nozzles and screens no finer than 50 mesh. Use 10 to 40 gals. of water per acre.

Continuous agitation in the spray tank is required to keep the material in suspension. Avoid overlap, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

PREEMERGENCE USE IN SOYBEANS

Apply after planting but before soybeans emerge. Do not spray overtop of emerged soybeans as injury will occur. Preeemergence activity of "Gemini" requires enough rainfall or irrigation to activate. Best results are obtained if treatment is made to moist soil and followed by rainfall or irrigation (1/2-1") before weeds germinate. If moisture is insufficient to activate the herbicide, rotary hoeing or a shallow cultivation should be made after emergence of crop while weeds are small enough to be controlled by mechanical means. "Gemini" can be applied preemergence in combination with "Lasso"^{1/}, "Dual"^{2/}, or following the use of a preplant grass material such as "Treflan"^{4/} or "Prowl"^{3/}. "Gemini" should not be applied on soils above pH 7.0 except in those states as directed in Section III of "MINIMUM RECROPPING INTERVAL AND ROTATIONAL GUIDELINES" where applications can be made to soils with a pH as high as 7.5. Do not use on sand or loamy sand nor on any soil with less than 1/2% organic matter. Injury to soybeans may occur if application is made to fields with standing water or when too wet to cultivate. Soybean injury may occur if excessive rainfall occurs after application but before soybeans germinate.

Apply as Follows:

Soil Texture	Rate(Ounces Per Acre)
	1/2 - 3% Organic Matter
Sandy loam	12 - 16
Silty loam	16 - 20
Clay loam	20 - 24

Dosage rates listed are broadcast rates: For band applications use proportionately less.

Injury to soybeans may occur if "Gemini" is used on soils having a calcareous surface layer or a pH of 7.0 or higher, or if used in conjunction with soil-applied organic phosphate pesticides such as "Dasanit"^{5/}, "Disyston"^{5/}, "Mocap"^{6/}, Namacur"^{5/}, "Thimet"^{4/}, parathion, "Lorsban"^{7/} 15G, or "Counter"^{4/}. Note: Injury may occur if atrazine was applied on the soil the year before use of "Gemini". Seedling disease, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, or drought may weaken soybean seedlings and increase possibility of crop injury.

SOYBEANS - MINIMUM TILLAGE OR NO TILL

"Gemini" applied preemergence to soybeans but postemergence to broadleaf weeds and small annual grasses will provide burndown of existing weeds (for rates see "PREEMERGENCE USE IN SOYBEANS" section, above). When used for burndown add 0.25% surfactant such as "Surfactant" or a quart of crop oil concentrate. For added postemergence control especially on grasses "Gemini" can be applied with "Roundup"^{1/2}, paraquat, or "Bronco"^{1/2}. For added preemergence grass control "Gemini" can be mixed with "Dual" and "Lasso". Consult labels for rates and use instructions. Maintain constant agitation of spray mixture.

REPLANTING SOYBEANS

If initial seeding fails to produce a stand, treated fields may be replanted to soybeans. Do not rework soil; do not retreat field with a second application as injury to the crop may result. Do not replant treated areas to any crop other than soybeans within four months after treatment as injury to subsequent crops may result.

WEEDS CONTROLLED

The following weeds will be controlled at the above rates preemergence:

- | | | | |
|--------------------|-----------------------|-----------------|------------|
| bristly starbur | jimsonweed | prickly sida | *sicklepod |
| carpetweed | lambsquarters | purslane | smartweed |
| *cocklebur | *morningglory, annual | ragweed, common | sunflower |
| Florida beggarweed | ivyleaf | *ragweed, giant | velvetleaf |
| hemp sesbania | entireleaf | | |
| | pitted | | |
| | small flower | | |
| | tall | | |
| | cypressvine | | |
| | mustards | | |
| | pigweed | | |

*Large seeded weeds germinating deep in the soil such as sicklepod, morningglory, cocklebur and giant ragweed may require a cultivation or an application of a postemergent herbicide for season long control.

Partial Control: Yellow nutsedge, purple nutsedge, and annual grasses.

NOTE: Consult "Lasso", "Dual", "Prowl", or "Treflan" labels for additional weeds controlled when "Gemini" is used in conjunction with these herbicides.

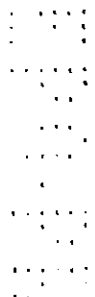
SPRAY TANK PREPARATION

Fill tank 1/4 full with water. Start agitation system, add "Gemini" and continue adding water. Add separately each additional component of any tank mix while adding water. Continue agitation throughout. If poor mixing should occur with any component, premix the component with two parts water before adding to the spray tank.

A fertilizer solution may be used in the spray mixture. Small quantities should be tested for compatibility by the following procedures before full scale mixing.

1. Put 1 pint of fertilizer solution in a quart jar.
2. Mix 2 teaspoons "Gemini" with 2 tablespoons of water; mix thoroughly and add to fertilizer solution.
3. Close jar and shake well.
4. If other herbicides are to be used in the mixture, premix 2 teaspoons of wettable powers to 1 teaspoon of liquids with 2 tablespoons of water; add to "Gemini"/fertilizer solution mixture.
5. Close jar and shake well.
6. Watch mixture for several seconds; check again in 30 minutes.
7. If mixture does not separate, foam, gel, or become lumpy, it may be used.
8. Mixing ability may be improved by adding compatibility agents such as Kalo Laboratories' "Compex"^{8/} or Witco Chemicals' "Sponto"^{9/} 168D. Follow directions on container.

Provided the above procedure shows the mixture to be compatible, prepare the tank mixture as follows: Add the fertilizer solution to the spray tank first, with the agitator running, add the required amount of "Gemini" and thoroughly mix. For tank mixtures with other herbicides, follow directions above. Use "Gemini" spray preparations the same day as mixed or product degradation may occur. Thoroughly reagitate before using if allowed to set.



MINIMUM RECROPPING INTERVAL AND ROTATIONAL GUIDELINES

Crops that can be planted after using "Gemini" are listed below. Choice of rotational crop is determined by geographical location (state), soil pH and time interval elapsed since last application.

Section I - Southern States

State	Soil pH 7.0 or Less	Time Interval before Replanting				
		Before 4 Months	After 4 Months	After 10 Months	After 18 Months	After 30 Months
Alabama	All Rates	Soybeans	Soybeans	Soybeans	Soybeans	Field
Arkansas			Wheat	Wheat	Wheat	Bioassay**
Florida			Barley	Barley	Barley	For All
Georgia				Corn	Corn	Other
Louisiana				Cotton	Cotton	Crops
Mississippi				Peanuts	Peanuts	
Texas				Sorghum	Sorghum	Rice

Section II - Low Rates

State	Soil pH 7.0 or Less	Time Interval before Replanting				
		Before 4 Months	After 4 Months	After 10 Months	After 18 Months	After 30 Months
Delaware	Less than 16	Soybeans	Soybeans	Soybeans	Soybeans	Field
Maryland	oz or 16-22 oz		Wheat	Wheat	Wheat	Bioassay**
New Jersey	with normal		Barley	Barley	Barley	For All
N. Carolina	or greater			Corn	Corn	Other
Pennsylvania	rainfall.*			Cotton	Cotton	Crops
S. Carolina				Peanuts	Peanuts	
Tennessee				Sorghum	Sorghum	
Virginia						
W. Virginia						
Missouri (Boot Heel)						

Section III - High pH

State	Soil pH 7.1 to 7.5	Time Interval before Replanting			
		Before 4 Months	After 4 Months	After 18 Months	After 30 Months
Only for states listed in Sections I & II excepting the black Belt Soils of AL & MS.	All Rates	Soybeans	Soybeans	Soybeans	Field Bioassay**
			Wheat	Wheat	For All
			Barley	Barley	Other
				Corn	Crops
				Cotton	
				Peanuts	
				Sorghum	

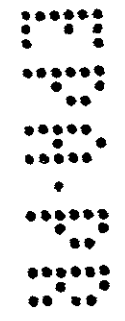
Section IV

State	Soil pH 7.0 or less	Time Interval before Replanting			
		Before 4 Months	After 4 Months	After 18 Months	After 30 Months
For states not listed in Sections I & II	All Rates	Soybeans	Soybeans	Soybeans	Field Bioassay**
			Wheat	Wheat	For All
Or For states listed in Section II.	Over 22 oz., or 16-22 oz. with below normal rainfall.			Corn	Other
				Cotton	Crops
				Peanuts	
				Sorghum	

*Normal rainfall is the 30 year rainfall average for the field location for the months of April through October. Each month is required to be near normal with the 7 month period (April to October) receiving a total rainfall at or above normal.

**Field Bioassay - The season before planting any crop not listed above, a successful field bioassay must be completed. The field bioassay will detect small quantities of "Gemini" which can remain in the soil and injure rotational crops. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production the following year. The test strip should cross the whole field including knolls and low areas.

Combination Treatment: When recommended tank mix combinations are used, consult the product label for replanting and recropping instructions and observe the directions that are the most restrictive.



SPRAYER CLEANUP

To avoid subsequent injury to crops other than soybeans, immediately after spraying and prior to spraying other crops, thoroughly remove all traces of "Gemini" Herbicide from mixing and spray equipment as follows:

- 1) Drain tank; then flush tank, boom, and hoses with clean water for a minimum of 10 minutes.
- 2) Fill the tank with clean water then add 1/2 gallon chlorine bleach (containing 5-1/4% sodium hypochlorite) per 100 gallons of water. Flush through boom and hoses, then allow to sit for 15 minutes with agitation; then drain.
- 3) Repeat Step 2.
- 4) Nozzles and screens should be removed and cleaned separately. To remove traces of chlorine bleach, rinse the tank thoroughly with clean water and flush through hoses and boom.

CAUTION: Do not use chlorine bleach with ammonia. All traces of liquid fertilizer containing ammonia, ammonium nitrate, or ammonium sulphate must be rinsed with water from the mixing and application equipment before adding chlorine bleach solution. Failure to do so will release a gas with a musty chlorine odor which can cause eye, nose, throat, and lung irritation. Do not clean equipment in an enclosed area.

PRECAUTIONS

Do not apply "Gemini" to soils with a pH greater than 7.0, except for those states listed in Sections I and II of the "MINIMUM RECROPPING INTERVAL AND ROTATIONAL GUIDELINES."

CAUTION: Soil pH varies greatly even within the same field. pH variations as much as 2 pH units are common when the soil has a calcareous sub soil. Determine soil pH by laboratory analysis using a 1:1 soil:water suspension.

Do not graze treated fields or harvest for forage or hay.

Do not mix "Gemini" Herbicide with any other crop protection chemical, fertilizer, or additive except as directed by this label.

Do not use on sand, muck, or peat soils, nor on soils with less than 1/2% organic matter as crop injury may result.

Do not apply "Gemini" after the soybean crop has emerged.

Use of "Gemini" may affect rotational crops. Follow "MINIMUM RECROPPING INTERVAL AND ROTATIONAL GUIDELINES".

Do not apply to Black Belt Soils of Alabama and Mississippi with soil pH greater than 7.0 as injury may occur.

STORAGE AND DISPOSAL

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

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.

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- 1/ Trademark of Monsanto Agricultural Products Co., St. Louis, MO.
 - 2/ Trademark of Ciba-Geigy Corp., Greensboro, NC.
 - 3/ Trademark of American Cyanamid Corp., Princeton, NJ.
 - 4/ Trademark of Elanco Products Co., Indianapolis, IN.
 - 5/ Trademark of Mobay Chemical Corp., Kansas City, MO.
 - 6/ Trademark of Rhone-Poulenc, Inc., Monmouth Junction, NJ.
 - 7/ Trademark of Dow Chemical Co., Midland, MI.
 - 8/ Trademark of Kalo Agricultural Chemicals, Inc., Overland Park, KS.
 - 9/ Trademark of Witco Chemical Corp., Houston, TX.

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purposes stated on such label when used in accordance with the 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 such 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 are 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.