



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
524-479

Date of Issuance:
FEB 26 1997

Term of Issuance: **Conditional**

NOTICE OF PESTICIDE:

XX Registration
Reregistration

Name of Pesticide Product:
Genesis® Hybridizing Agent

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

PM-25 *Reg # 524-479* *1911*
Monsanto Company
700 14th Street, N.W., Suite 1100
Washington, DC 20005

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. Make the following label changes:
 - a. Revise the EPA Registration Number to read, "EPA Reg. No. 524-479".
 - b. In the **MIXING INSTRUCTIONS** section, under **NOTE:**, modify the statement as follows: "The use of a closed transfer system is required to be used by all mixer/loader and/or applicators if more than 50 acres are to be treated in a single day with Genesis® hybridizing agent."
3. You must submit the following product chemistry data within one year of the date of registration:
 - a. 61-2 Starting Materials and Manufacturing Process: An amendment to the manufacturing process is required providing the complete details of the full scale equipment and operating conditions.

continued on page 2

Signature of Approving Official:

Product Manager (25), Fungicide-Herbicide
Branch, Registration Division (7505C)

Date:

2/26/97

- b. 61-3 Discussion of Impurities: A detailed discussion is required concerning the revised process control, purification and quality control procedures used in full scale production which resulted in the reduction of one impurity of concern to levels almost 10 times lower than the levels found in earlier pilot scale production.
4. You must provide annual reports on production of end-use products containing clofencet, number of acres treated, and a best estimate of which crops and how many acres were planted as rotational crops on fields previously planted to wheat treated with clofencet. You must also provide field residue data on wheat grain, forage, hay and straw from commercially treated crops beginning 18 months after the wheat grain is first harvested. Field residue trials on the rotational crops listed in this document may also be required. The Agency will require periodic reevaluation of the dietary exposure, if warranted, with percent crop treated, number of acres of wheat treated and end-use product production information produced by you and other available sources, and submitted field residue data. You must petition the Agency before you increase production of clofencet product for treatment of greater than 35,000 acres per year. Before expansion beyond 0.1% is allowed, reevaluation of the dietary exposure may be performed using all available information as necessary.
5. You must submit, upon EPA's request and according to a schedule determined by the Agency, such information as the Agency directs to be submitted in order to evaluate issues related to whether clofencet share(s) a common mechanism of toxicity with any other substance and, if so, whether any tolerances for clofencet need to be modified or revoked.
6. Submit production information (pounds/gallons produced) for this product for the fiscal year in which the use on wheat are conditionally registered, in accordance with FIFRA Section 29. The conditional registration allows wheat rotated with the crops soybeans and cereal grains group (except rice, wild rice, sweet corn, and wheat). The fiscal year begins on October 1st and ends on September 30th. Production information will be submitted to the Agency no later than November 15th, following the end of the preceding fiscal year. This information should be submitted to:

U.S. Environmental Protection Agency
Office of Pesticide Programs (7404C)
Document Processing Desk (RSB)
401 M Street, SW., (CM #2)
Washington, DC 20460

7. Submit two copies of the revised final printed label for the record.

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

A stamped copy of the label is enclosed for your records.

3911

RESTRICTED USE CHEMICAL
For controlled application by trained contract applicators or certified hybrid seed technicians.

ACCEPTED
WITH COMMENTS
FEB 26 1997
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 524-479

GENESIS®
HYBRIDIZING AGENT

Genesis® hybridizing agent is a foliar applied compound used for the development of hybrid wheat.

This label must be in the possession of the user at the time of application. This product is not for sale to or use by any person other than a licensee or contract seed grower.

EPA Registration No. 524-UTO

1996-1

A-000.01

Read the entire label before using this product.

Use only according to label directions.

Read "LIMIT OF WARRANTY AND LIABILITY" carefully before using. If the terms are not acceptable, return the product at once unopened.

The contents of this container may not be **REFORMULATED**, nor, except in accordance with the Monsanto Repackaging Agreement, **REPACKAGED**.

- Genesis is a registered trademark of HybriTech Seed International; a subsidiary of Monsanto Company.

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LIMIT OF WARRANTY AND LIABILITY

This company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in these Directions for Use ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR OF MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Users assume all risks and are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to, drift to, or contact with nontarget crops, vegetation or property, weather and soil conditions, weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions; moisture conditions outside the moisture range specified in the Directions, or the presence of pests, disease, or other materials or products in or on the soil, crop, or treated vegetation.

THE EXCLUSIVE REMEDY OF THE USER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE REPLACEMENT OF THE QUANTITY OF THIS PRODUCT INVOLVED. IN NO EVENT SHALL THIS COMPANY BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Licensees and contract seed growers are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY by accepting, using and applying this product. These terms may not be varied by any verbal or written agreement.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES EYE IRRITATION.

Avoid contact with eyes or clothing.

FIRST AID: IF IN EYES, immediately flush with plenty of water. Get medical attention.

Personal Protective Equipment

Applicators and other handlers must wear long-sleeved shirt, long pants, and 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.

When handlers use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

Environmental Hazards

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

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

- Do not apply within 50 ft of small bodies of water (streams or ponds).
- Do not apply to sand soils with less than 3% organic matter and a water table depth of less than 30 ft.
- When using the compound on coarse-textured soils, do not apply within 100 feet of any drinking water well that is screened at a depth of 50 ft or less.

Genesis has a high potential to leach to ground water in highly permeable soils (permeability >6 in/hr) or other soils rated by the Natural Resources Conservation Service (NRCS) as having a severe leaching potential. The potential for ground water contamination is greater in areas where the water table depth is less than 30 feet.

This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks,

container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Genesis can contaminate surface water through spray drift.

Under some conditions, Genesis may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These conditions include poorly-draining or wet soils with readily visible slopes toward adjacent surface waters, frequently-flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

Applications should not be made to a field that is less than 500 feet from large bodies of water.

ACTIVE INGREDIENT:

[2-(4-chlorophenyl)-3-ethyl-2,5-dihydro-5-oxo-4-pyridinecarboxylic acid, potassium salt].....22.4%

INERT INGREDIENTS:.....77.6%

TOTAL 100.0%

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DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any 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 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 and shoes plus socks.

For more product information, call toll-free 1(800) 332-3111.

STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

STORAGE: Do not store below 40°F or above 120°F.

DISPOSAL: Wastes resulting from the use of this product that cannot be used by a licensee or contract grower in accordance with this label or chemically reprocessed by the manufacturer should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

Emptied container contains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Do not reuse this container, except for refill in accordance with a valid Monsanto Repackaging or Toll Repackaging Agreement. If not refilled or returned to an authorized repackaging facility, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If container is burned, stay out of smoke.

GENERAL INFORMATION

Genesis is a hybridizing agent which can completely suppress pollen development in wheat. This property makes it possible to use Genesis to produce hybrid wheat. Genesis is an effective hybridizing agent on a broad spectrum of wheat cultivars.

Genesis hybridizing agent is formulated as a water soluble concentrate (WSC) containing 2 pounds of active ingredient per gallon of product. The use of a nonionic surfactant and a humectant, both cleared for application on wheat, is essential. The surfactant should be used at a maximum rate of 1 percent of carrier volume, and the humectant at a maximum rate of 2 percent of carrier volume. Thorough spray coverage of wheat foliage is essential. The use of the nonionic surfactant and humectant will aid spray coverage and wetting of the foliage which will improve uptake.

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MIXING INSTRUCTIONS

NOTE: The use of a mechanical transfer system is required to be used by all mixer/loader and/or applicators if more than 50 acres are to be treated in a single day with Genesis hybridizing agent.

Apply Genesis hybridizing agent at a rate not to exceed 10 pounds active ingredient per acre. **CONSULT YOUR HYBRITECH SEED INTERNATIONAL TECHNICAL REPRESENTATIVE FOR ASSISTANCE WITH SPECIFIC USE RATES AND THE RECOMMENDED GROWTH STAGE OF DEVELOPMENT TO ACHIEVE MAXIMUM MALE PLANT STERILITY.** Fill the spray tank with water to about two-thirds of the total volume to be sprayed. Add the required amount of Genesis hybridizing agent, surfactant and humectant, mix thoroughly and continue filling the spray tank. If needed, an anti-foaming agent may be added to the tank mixture at a rate of 0.5 percent or less of carrier volume. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture.

APPLICATION RECOMMENDATIONS

Apply Genesis hybridizing agent to wheat with ground equipment only. Use low-pressure, low-drift flat fan nozzles. A shield should be mounted on each end of the spray boom to prevent direct spraying of outer rows of male parent strips. Apply Genesis only to the female parent which is planted in alternating strips between the male parent strips. The width of the male and female strips is dependent upon production efficiency and agronomic requirements of each hybrid. The female and male parent strips should be harvested separately and in such a manner as to avoid possible mixing of any treated female seed with male seed. Calibrate spray equipment to deliver 3 to 50 gallons of spray mixture per acre. A spray pressure of 15 to 30 psi at the nozzle tip is recommended when using the recommended low-pressure, low-drift flat fan nozzles. Adjust the height of the spray boom above the wheat to give complete coverage of foliage. The high gallonage will provide the necessary coverage of foliage and the low pressure will reduce drift onto the male parent strips. When spraying, avoid combinations of pressure and nozzle type that will result in fine particles (mist) which are likely to result in spray drift. Do not apply under wind or other conditions which allow drift to occur. For further information on optimum spray pressure for specific nozzles, refer to the manufacturer of the nozzles.

Application of Genesis must be made at least 45 days prior to the harvest of the hybrid wheat seed.

TIMING OF APPLICATION

Apply Genesis to wheat between tip emergence of the penultimate leaf (Feekes Scale 7.0, Zadoks Scale 32) and emergence of the flag leaf ligule (Feekes Scale 9.0, Zadoks Scale 39). The timing of the application is dependent upon factors such as variety, temperature, humidity and available soil moisture. Consequently, it is necessary to pay close attention to development stages after the wheat enters its early spring, vigorous growth stage. Do not apply Genesis when temperatures fall below 32°F or exceed 100°F. Do not spray if rainfall is anticipated within 24 hours after application. If rainfall occurs within 24 hours after application, reapplication is permitted, with the total of all applications including the reapplications not to exceed 10 pounds of active ingredient per acre. Consult your HybriTech Seed International technical representative for assistance with specific use rates and growth stage determinations.

ROTATIONAL CROP GUIDELINES

Following the application of Genesis to wheat, rotate treated areas **only** to **cereal grains** (except sweet corn, rice or wild rice) and **soybeans**.

Allowable cereal grains rotations include **wheat, barley, buckwheat, corn (field-, seed- and pop-corn), millet (proso and pearl), oats, rye, sorghum, teosinte and triticale.**

EPA Reg. No. 524-UTO

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In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000.

MONSANTO COMPANY
 AGRICULTURAL PRODUCTS
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