

→ New # 69843-1

RECEIVED  
 JUN 3 1982  
 Insecticide,  
 Fungicide Act,  
 1023-63

Complete directions for use

# Collego™

Selective Postemergent Herbicide  
 Biological Weed Control Agent

For Control of Northern Jointvetch  
 (curly indigo) in Rice and Soybean

**TUCO**

LIVING FUNGAL SPORES  
 STORE AT TEMPERATURES OF 40° TO 80° F

Collego is a two component product.  
 —Component A: A fungal spore rehydrating agent.  
 —Component B:

BEST DOCUMENT AVAILABLE

**ACTIVE INGREDIENT**

*Colletotrichum gloeosporioides* f. sp. .... 15% w/w\*

*aeschyromene* ATCC 20358 ..... 85% w/w

**INERT INGREDIENTS** ..... Total 100% w/w

\*Contains at least 75.7 x 10<sup>10</sup> viable fungal spores.

KEEP OUT OF REACH OF CHILDREN  
**CAUTION**

**PRECAUTIONARY STATEMENT**

**HAZARD TO HUMANS AND DOMESTIC ANIMALS.** Caution. Causes slight eye irritation. Avoid contact with eyes or clothing.

**STATEMENT OF PRACTICAL TREATMENT.** If In Eyes: Flush with plenty of water. Get medical attention if irritation persists. Wash thoroughly with soap and water after handling.

**ENVIRONMENTAL HAZARDS.** Do not apply directly to water except as indicated in the directions for use. Do not contaminate water by cleaning of equipment or disposal of wastes.

**DIRECTIONS FOR USE**

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

**GENERAL INFORMATION**

Collego is a selective postemergent mycoherbicide which is a specific biological weed control agent. Postemergent applications of Collego will selectively control northern jointvetch (curly indigo) *Aeschynomene virginica* (L.) B.S.P. in rice (*Oryza sativa* L.) and soybean (*Glycine max* (L.) Merr.). Collego should be applied to emerged northern jointvetch plants that are from 8 to 24 inches tall and have not reached the bloom stage. Collego will cause disease lesions that will completely encircle the stems of the northern jointvetch plants. The fungus primarily infects the stems of the weed but it also infects the petioles and leaflets.

Disease plants become limp; they may collapse. Plants not killed by Collego are stunted, unthrifty, unable to compete with the rice or soybean and will not be able to seed. Death of northern jointvetch plants may not occur for five (5) weeks after application.

Collego is a two component product. Collego Component A consists of three 1-quart bottles containing a water soluble spore rehydrating agent that allows the spores to take up water prior to germination. Collego Component B consists of three bags that contain a water suspendible dried fungal spore formulation of *Colletotrichum gloeosporioides* f.sp. *aeschyromene* ATCC 20358. Both components are packaged in a 5 gallon plastic mixing container with a lid and stirring paddle.

**APPLICATION RATE**

Collego Component A (1 quart) and Component B (1 bag) will treat 10 acres.

Acreage to be Treated	Amount Required	
	Component A	Component B
10	1 quart	1 bag
20	2 quarts	2 bags
30	3 quarts	3 bags

1023-63

**SPECIFIC PRECAUTIONS**

After 7 days following application, the grower should frequently examine the northern jointvetch plants to determine if disease lesions are developing.

As with other pesticides, effectiveness of *Collego* may be reduced by mistakes in application, fertilization, cultivation and management practices. Results will be affected by extremes in weather, soil moisture and temperature.

If the disease lesions caused by *Collego* do not reach one-half (1/2) inch in diameter and do not encircle the stems of the northern jointvetch plants within 14 days after treatment, a second application of *Collego* should be made. See Application Rate and Recommendations Sections for *Collego* amounts and timing.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.

**STORAGE:** Store *Collego* at temperatures of 40° to 80° F. *Collego* contains viable fungal spores. Germination of these spores will be reduced by temperatures below 32° F or when *Collego* is held for 12 hours or more at temperatures above 105° F.

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State, or local procedures under the Resource Conservation and Recovery Act.

**CONTAINER DISPOSAL:** Triple rinse plastic containers (or equivalent) and offer for recycling or reconditioning, or dispose of in a sanitary landfill or by incineration if permitted by State or local authorities.

Do not reuse bag. When empty dispose of in an incinerator or according to approved Federal, State or local procedures under the Resource Conservation and Recovery Act.

**IMPORTANT-READ BEFORE USE**

By using this product, user accepts the following conditions, warranty, disclaimer of warranties and limitations of liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and should be followed carefully. However, because of extreme weather and soil conditions, manner of use and other factors beyond TUCO's control, it is impossible for TUCO to eliminate all risks associated with use of this product. As a result, crop injury or ineffectiveness is always possible.

**WARRANTY AND DISCLAIMER OF WARRANTIES:** TUCO warrants that this material conforms to the description and conditions on the label and is reasonably fit for use under the directions and conditions

of this label. **TUCO AND SELLER MAKE NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS, MERCHANTABILITY OR OTHERWISE.**

**LIMITATIONS OF LIABILITY:** The liability of TUCO or Seller for damages arising from the use of this product is limited to the replacement cost of the product used and shall not include any consequential damages such as loss of profits or other values.

**NO CHANGES AUTHORIZED:** No one (other than an authorized Agent of TUCO) is authorized to make any other warranty, or change the above conditions, disclaimer or limitations, and then only if in writing and with a specific reference to this label.

Ordram® Trademark of Stauffer Chemical Co.  
Blazer® Trademark of Rohm and Haas Co.

**TUCO**  
Division of The Upjohn Company  
Kalamazoo, Michigan 49001, U.S.A.

EPA Est. No. 1023-MI-2

812 245 001 a

1023-63

2

**RECOMMENDATIONS FOR CONTROL OF NORTHERN JOINTVETCH (CURLY INDIGO)**

CROP*	WHEN TO APPLY COLLEGO	REMARKS
RICE	At any vegetative stage of rice growth if the northern jointvetch is at least 8 inches tall. Rice fields should be flooded before application.	Do not apply <b>Collego</b> after rice heads emerge from the boot; spraying at this time will not completely prevent seed production of the northern jointvetch.
SOYBEAN	After the soybean plants begin to flower if the northern jointvetch is at least 8 inches tall. Soybean fields should be irrigated just prior to application.	Do not apply <b>Collego</b> after pods form on the lower nodes of the soybean plants; spraying at this time will not completely prevent seed production of the northern jointvetch.

\***Collego** is exempt from the requirement of a tolerance for residues in or on rice and soybean when used according to these directions for use.

**TIMING**

Apply **Collego** when the leaves of northern jointvetch are moist and can be expected to remain so for at least 12 hours. Following **Collego** application, free moisture or relative humidities above 80% and air temperatures of approximately 80° F for at least 12 hours are necessary for development of the highest degree of infection. These conditions usually prevail during the evening in rice and soybean fields. Soybean fields should be irrigated just prior to application; rice fields should be flooded.

**CAUTION: DO NOT APPLY Collego DURING PERIODS WHEN RICE AND SOYBEANS ARE UNDER STRESS FOR MOISTURE OR WHEN DRYING CONDITIONS ARE LIKELY TO OCCUR. DO NOT APPLY Collego TO NORTHERN JOINTVETCH PLANTS PREVIOUSLY TREATED WITH PHENOXY HERBICIDES. DO NOT APPLY FUNGICIDES FOR AT LEAST THREE WEEKS FOLLOWING Collego APPLICATION.**

**APPLICATION EQUIPMENT**

Chemical pesticide residues that remain in the spray tank and boom may kill the live **Collego** spores. Therefore, prior to use of **Collego**, thoroughly clean the spray tank, boom, nozzles and screens with an activated charcoal water suspension. Prepare activated charcoal powder following manufacturer's recommendations for use.

Thoroughly rinse the spraying system to remove all the charcoal water suspension prior to the application of **Collego**.

Be sure the sprayer has been calibrated to deliver proper spray gallonage with a uniform spray pattern as thorough coverage of the northern jointvetch leaves and stems with **Collego** is essential. Check frequently during application for output of desired gallonage. Use proper nozzle discs and nozzle arrangements on the spray boom. Use 50-mesh or coarser screens in strainers, nozzles and suction units. Clean nozzles and screens frequently. Wind may cause uneven coverage. Do not apply when wind velocity is greater than 10 miles per hour.

**FILLING THE SPRAY TANK**

Fill the spray tank one-half full with water; add the **Collego** spore suspension (see Spore Preparation below) to the tank and rinse the mixing container, finish filling the tank to the desired spray volume. Agitate the spores and water to maintain the spore suspension. For best results, maintain continuous agitation during spraying.

**SPORE PREPARATION**

**Collego** Component B, dried fungal spores, must be rehydrated just prior to use. The sequence of the steps that must be used in rehydrating the spores for 10 acres:

- Step 1: Pour the contents from the 1 quart container of **Collego** Component A into the 5 gallon mixing container.
- Step 2: Completely fill the **Collego** Component A container with water and empty into mixing container.
- Step 3: Repeat Step 2. (Final concentration is 1 part rehydrating solution and 2 parts water).
- Step 4: Vigorously stir until **Collego** Component A is completely dissolved.
- Step 5: Add one bag Component B and stir with mixing paddle until the spores are completely wet and suspended.
- Step 6: The suspension of spores may then be added to the spray tank. Rinse the mixing container to remove all of the spore suspension.
- Step 7: Dilute the spore suspension in the spray tank to the desired volume.

found with the exception of special areas such as levees where ground applications are practical. See Application Equipment section for instructions for preparing the ground spray rig prior to use of **Collego**. Use a spray volume of at least 15 gallons of water per acre.

**CAUTION: DO NOT ALLOW SPRAY SUSPENSION TO REMAIN IN THE SPRAY TANK FOR MORE THAN 12 HOURS OR ALLOW THE SUSPENSION TO HEAT UP.**

**COMPATIBILITY**

**Collego** contains live fungal spores; care must be exercised in the handling of the spores. **Collego** is not compatible with liquid nitrogen fertilizers, insecticides, fungicides, and herbicides such as MCP, 2,4-D, 2,4-DB, 2,4,5-T and molinate (Ordram®). Germination of the spores will be reduced if combined with these materials.

**Collego** is compatible with acifluorfen (Blazer®).

**SPRAY APPLICATION**

For best results, **Collego** should be applied by aerial application with fixed-wing or helicopter aircraft. Use a spray volume of at least 10 gallons of water per acre.

Ground applications are not prohibited; however they may be impractical in most rice and soybean situations where northern jointvetch is

**CROP ROTATION**

Food, feed and forage crops may be sown in **Collego** treated fields immediately after harvest of rice or soybeans.