

82681-3

4/28/2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division (7511P)
1200 Pennsylvania Avenue NW
Washington, DC 20460

NOTICE OF PESTICIDE REGISTRATION

X Registration
Reregistration

(under FIFRA, as amended)

EPA Reg. Number:

82681-3

Date of Issuance:

Term of Issuance:

Conditional

Name of Pesticide Product:

LockDown™ Liquid

Name and Address of Registrant (include ZIP Code):

Kelly Cartwright, Ph.D.
President
Agricultural Research Initiatives, Inc.
700 Research Center Blvd.
Fayetteville, AR 72701

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention 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 (FIFRA).

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.

The registration amendment application, referred to above, is acceptable under Section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, provided that you do the following:

- 1. Submit/cite all data required for registration of your product under FIFRA Section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit three (3) copies of the revised final printed labeling before you release the product for shipment. Refer to attached Type Size Requirements for final printed labeling.

Signature of Approving Official:

Wan

(See second page for signature)

Date:

4/28/09

CONCURRENCES

Table with 4 columns and 3 rows (SYMBOL, SURNAME, DATE) containing handwritten entries for EPA Form 7511P, names (Beachus, Barsoun, KOUGH, Rully), and dates (4/27/09, 4/28/09, 4/28/09, 4/28/09).

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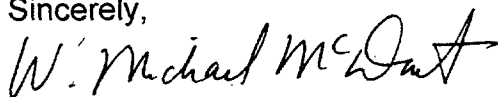
3. Provide confirmatory data to demonstrate that potential unintentional ingredients, including fungal and microbiological contaminants, of the technical active ingredient, *Colletotrichum gloeosporioides* f. sp. *aeschynomene* (C.g.a.), will not harm human health and the environment. These data must include analyses of five production batches using selective media for analyses of microbial contaminants and must meet the microbial pesticide data requirements of 40 CFR §158.2100 (OPPTS guidelines 885.1200 and 885.1300).

This registration will automatically expire on midnight December 31, 2010, if you do not comply with these conditions. Any requests for time extensions to provide the data must be submitted in writing prior to the expiration date. If approved, extension requests will result in other appropriate expiration dates as determined by the Agency. When you submit the data required, the registration will continue until the data are evaluated and found to be acceptable to the Agency and in accordance with new projections regarding appropriate expiration dates.

If at any time, EPA determines that additional data are required to maintain an existing conditional registration, the Agency will require such data under Section 3(c)(2)(B) of FIFRA. If you do not comply with these conditions, this registration is subject to cancellation under FIFRA section 6(e). Your release of this product for shipment constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records. If you need further assistance on this matter, please email Shanaz Bacchus at bacchus.shanaz@epa.gov or call her on 703-308-8097.

Sincerely,



W. Michael McDavit, Associate Director
Biopesticides and Pollution Prevention Division.

Enclosure: stamped label
Cc: 82681-3

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LockDown™ Liquid

For selective postemergence control of Northern Jointvetch (Curly Indigo) in Rice.

Active Ingredient: *Colletotrichum gloeosporioides* f. sp. *aeschynomene*
and fermentation medium100.0 %

Total :100.0%

Contains at least 2 X 10⁸ viable fungal spores per ml of product

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye • Call a poison control center or doctor for treatment advice
Hotline: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information, you can reach a local poison control center at 1-800-222-1222.	

THIS PRODUCT IS LABELED FOR USE ONLY IN THE STATES OF ARKANSAS, LOUISIANA, MISSISSIPPI, TEXAS AND MISSOURI

EPA Reg. No.: 82681-3
EPA Est. No.: 082681-AR-001

Agricultural Research Initiatives, Inc. (ARI)
700 Research Center Blvd.
Fayetteville, AR 72701
479-841-3699
479-575-7446 (FAX)
dkellyc@windstream.net

ACCEPTED

4/28/09

Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for
the pesticide registered under
EPA Reg. No. 82681-3

Net Contents

- 3.5 L of formulated C.g.a. spores (1 container with 3.5 L of product)

NOTE-3.5 L of formulated C.g.a. spores will treat 10 acres

Refrigerate upon arrival. Use within three days of arrival.

Product expires on XXX

Batch # XXX

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS: CAUTION.

Causes slight eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and launder before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE): Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves and shoes plus socks. All mixers/loaders or applicators must wear a dust/mist-filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, P, R, or HE filter. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow manufacturer's instructions for

cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS:

Keep out of lakes, ponds, or streams. 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. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

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 intervals (REI). 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 of 4 hours.

PPE requirement 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, long sleeve shirt, long pants, waterproof gloves, shoes plus socks and a dust/mist-filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, P, R, or HE filter.

DIRECTIONS FOR USE

THIS PRODUCT MAY ONLY BE APPLIED IN THE STATES OF ARKANSAS, LOUISIANA, TEXAS, MISSOURI & MISSISSIPPI. READ ENTIRE LABEL BEFORE USING

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 person, 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.

GENERAL INFORMATION

LockDown™ Liquid is a postemergence mycoherbicide containing a fungus for control of the weed northern jointvetch (curly indigo) *Aeschynomene virginica* (L.) B.S.P. in rice (*Oryza sativa* L.). Apply **LockDown™ Liquid** to emerged northern jointvetch plants that are from **8 to 24 inches tall and have not reached the bloom stage**. **LockDown™ Liquid** will cause disease lesions that 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. Diseased plants wilt and may die. Plants not killed by **LockDown™ Liquid** are stunted, unthrifty, and unable to produce abundant seed or compete with the crop. Death of northern jointvetch plants may not occur for five (5) weeks or more after application.

LockDown™ Liquid consists of a liquid fungal spore formulation of *Colletotrichum gloeosporioides* f. sp. *aeschynomene* that is suspended in water just before use. It is sold in a plastic container.

DIRECTIONS FOR APPLICATION OF **LockDown™ Liquid** TO CONTROL NORTHERN JOINTVETCH

For optimal results, use the product upon arrival. After receiving product, refrigerate and use within three days of arrival. The product must be kept cold by holding on ice or refrigerated prior to use. This is a fresh product. **LockDown™ Liquid** contains viable fungal spores. To maximize spore viability, do not allow **LockDown™ Liquid** to freeze (fall below 32° F) or to be held for 2 hours or more at temperatures above 95 F either outside or contained in the spray tank.

APPLICATION RATE: One container (3.5L) of formulated C.g.a. spores mixed in water will treat 10 acres **WHEN TO APPLY LockDown™ Liquid.** At any vegetative state of rice growth if the northern jointvetch is at least 8 inches tall (but preferable no more than 24 inches). Flood rice fields before application.

Remarks: Do not apply *LockDown™ Liquid* after rice heads emerge from the boot: spraying at this time may not allow enough time for *LockDown™ Liquid* to damage the northern jointvetch enough to prevent seed production.

Timing: Apply *LockDown™ Liquid* when the leaves of northern jointvetch are moist and are expected to remain so for at least 12 hours. Following *LockDown™ Liquid* application, free moisture or a relative humidity above 80%, and air temperatures of approximately 80F are necessary for at least 12 hours for development of the highest degree of infection. These conditions usually prevail during the evening in rice fields. *Apply as close to dusk as possible.*

Note: Do not apply *LockDown™ Liquid* during periods when rice is under moisture stress or when drying conditions are likely to occur. Do not apply *LockDown™ Liquid* to Northern Jointvetch plants previously treated with phenoxy herbicides. Do not apply fungicides for at least one week before or following *LockDown™ Liquid* application.

COMPATIBILITY: *LockDown™ Liquid* contains live fungal spores; exercise care in handling the spores. *LockDown™ Liquid* is not compatible with liquid nitrogen fertilizers, insecticides, fungicides, and herbicides such as 2,4-D. Germination of the spores is reduced if combined with these materials.

APPLICATION EQUIPMENT: Chemical pesticide residues that remain in the spray tank and boom may kill the live *LockDown™ Liquid* spores. Therefore, before use of *LockDown Liquid*, 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 *LockDown™ Liquid*. Be sure the sprayer is calibrated to deliver proper spray volume with a uniform spray pattern, as thorough coverage of the northern jointvetch leaves and stems with *LockDown™ Liquid* is essential. Check frequently during application for output of desired volume. 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.

MIXING INSTRUCTIONS: Use the following sequence of steps to prepare the spores for application to 10 acres:

- 1) Clean spray tank, boom, nozzles and screens (see above) with activated charcoal
- 2) Fill the spray tank one-half full with water and begin agitation
- 3) Vigorously shake/mix the *LockDown™ Liquid* product.
- 4) Pour the contents of the container with the *LockDown™ Liquid* directly into the spray tank while maintaining agitation.
- 5) Finish filling spray tank with water and continue agitation
- 6) Maintain agitation during application.

For more than 10 acres, see table below to determine amount(s) of *LockDown™ Liquid* to use

SPRAY APPLICATION: *LockDown™ Liquid* is to be applied by aerial application with fixed-wing or helicopter aircraft. Use a recommended spray volume of at least 10 gallons of water per acre.

Sample set-up and instructions for LockDown™ Liquid

<i>Acres to be treated</i>	<i># of containers LockDown™ Liquid</i>	<i>Minimum total spray volume</i>	<i>Maximum total spray volume</i>
10	1	100 gal	150 gal
20	2	200 gal	300 gal
30	3	300 gal	450 gal
40	4	400 gal	600 gal

Spray volumes other than those listed may decrease effectiveness of the LockDown™ Liquid product

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MONITORING EFFECTIVENESS OF *LockDown™ Liquid* For 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 *LockDown™ Liquid* may be reduced by mistakes in application, fertilization, cultivation and management practices. Results will be affected by extremes in weather, soil moisture and temperatures. If the disease lesions caused by *LockDown™ Liquid* 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 *LockDown™ Liquid* is recommended. See Application Rate and Recommendations Sections for *LockDown™ Liquid* amounts and timing.

CROP ROTATION

Any food, feed and forage crops except peas may be sown in *LockDown™ Liquid*-treated fields immediately after harvest of rice. Peas may be rotated with rice the following season after rice has been treated with the *LockDown™ Liquid* product but not immediately after harvesting of treated rice.

SPRAY DRIFT ADVISORY

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

For ground applications, apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. Use this section only if there are ground applications.

For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 -- 10 mph as measured by an anemometer. Use coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.

For overhead chemigation, apply only when wind speed is 10 mph or less.

The applicator also must use all other measures necessary to control drift.

Ground applications are not prohibited; however, they may be impractical in most rice situations where northern jointvetch is found, with the exception of special areas such as levees where ground applications are practical. Use a spray volume of at least 10-15 gallons of water per acre.

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STORAGE AND DISPOSAL

For optimal results, use the product upon arrival. After receiving product, refrigerate and use within three days of arrival. The product must be kept cold by holding on ice or refrigerated prior to use. This is a fresh product. **LockDown™ Liquid** contains viable fungal spores. To maximize spore viability, do not allow **LockDown™ Liquid** to freeze (fall below 32 F) or to be held for 2 hours or more at temperatures above 95 F either outside or contained in the spray tank.

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

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to an approved waste disposal facility or to a federal, state, local or applicable industry program.

Container Handling and Disposal: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store for later disposal. Repeat this procedure two more times. If available, recycle the container or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn unless allowed by state and local ordinances.

DISCLAIMER

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 **ARI, Inc's** control, it is impossible for **ARI, Inc.** 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

ARI, Inc. 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. To the extent consistent with applicable law, **ARI, Inc.** and the seller makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label.

LIMITATIONS OF LIABILITY

To the extent allowed by state law, the liability of **ARI, Inc.** 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 **ARI, Inc.**) 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.

ARI, INC. AND SELLER MAKE NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS, MERCHANTABILITY OR OTHERWISE.