

MAY 13 1987

Ms. Karen R. Blundell
BASF Corporation Chemicals Division
Agricultural Chemicals Group
100 Cherry Hill Road
Parsippany, NJ 07054

Dear Ms. Blundell:

Subject: Revised Labeling - Use of Urea Ammonium Nitrate
Laddok Herbicide
EPA Registration No. 7969-54
Your Submission Dated February 16, 1987

The revised labeling is acceptable provided that the following changes are incorporated into your final printed labeling:

1. Add the statement, "May cause allergic skin response" to the precautionary statements on the front panel.
2. Change the Environmental Hazards statement to:

Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes.
3. Remove the Environmental Hazards section from page 7 on the label.

A stamped copy of the label is enclosed for your information. Please submit five (5) copies of final printed labeling incorporating this amendment and above changes.

Sincerely yours,

BEST AVAILABLE COPY

Robert J. Taylor
Product Manager (25,
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Enclosure
91191:I:Miller:T-6:KENCO:5/9/87:5/19/87:NeeCee:vo:ek:de

CONCURRENCES							
SYMBOL	TS-767C						
SURNAME	J. Miller						
DATE	5/13/87						

LADDOK^R
POSTEMERGENCE FLOWABLE-~~HERBICIDE~~

For Selective Postemergence Broadleaf Weed Control in
Field Corn, Seed Corn, Silage Corn, Sweet Corn and Popcorn;
and in Grain Sorghum

Active Ingredients:

Sodium salt of bentazon* (3-(Isopropyl)-1H-2,1,3-
benzothiadiazin-4(3H)-one, 2,2-dioxide.....18.52%
Atrazine* (2-chloro-4-ethylamino-6-isopropylamino-
s-triazine).....16.96%

Inert Ingredients.....64.52%

*Equivalent to 1.66 pounds per gallon each of
bentazon and atrazine.

EPA REGISTRATION NO. 7969-54

KEEP OUT OF REACH OF CHILDREN

DANGER

Corrosive. Causes eye damage and skin irritation. Do not get in
eyes, on skin or on clothing. Wear goggles or face shield and
rubber gloves when handling. Harmful if swallowed.

If in eyes, immediately flush eyes with plenty of water. Get
medical attention. If on skin, immediately flush skin with
plenty of water. Get medical attention if irritation persists.

ENVIRONMENTAL HAZARDS

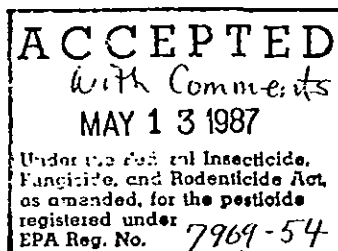
Do not apply directly to lakes, ponds, or streams. Do not
contaminate water by cleaning of equipment or disposal of wastes.

SHAKE WELL BEFORE USING

NET CONTENT - 2 1/2 Gallons

BASF CORPORATION

Parsippany, N.J. 07054



Not Intended For Use
in California

DIRECTIONS FOR USE

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

GENERAL INFORMATION

Laddok selective herbicide is intended for the postemergence control of a broad spectrum of broadleaf weeds. LADDOK DOES NOT CONTROL GRASSES. Laddok is effective mainly through contact action; therefore, weeds must be thoroughly covered with spray. Large crop-and-weed-leaf canopies shelter smaller weeds and prevent adequate spray coverage.

Corn is tolerant to Laddok at all stages of growth. Very slight leaf speckling of corn may occur but plants generally outgrow this condition within 10 days. Corn types included are field, sweet and popcorn; and corn grown for seed or silage.

Always add UAN solution or oil concentrate according to the section entitled "Additive Information".

TIMING OF APPLICATIONS

Apply Laddok early postemergence when weeds are small and actively growing and before weeds reach the maximum size listed in the LADDOK APPLICATION RATE TABLE FOR CORN AND GRAIN SORGHUM. Such applications generally correspond to the crop growth stages of one to five leaves.

Early application to weeds produces the most beneficial effect on weed control, allows use of the lower rate (depending on weed species), and makes it easier to obtain thorough spray coverage. Delay in application which permits weeds to exceed the maximum size stated will result in inadequate control.

Do not cultivate within 5 days before or after application of Laddok in the following states: AZ, CO, CT, ID, IL, IN, IA, KS, KY, ME, MA, MI, MN, MO, MT, NB, NV, NH, NJ, NY, ND, OH, OR, PA, RI, SD, UT, VT, WA, WV, WI, WY. A cultivation 5 or more days after application may be necessary if all weeds are not controlled or if a second flush of weeds occurs.

WATER VOLUME AND SPRAY PRESSURE

Apply recommended rates of Laddok as follows:

Ground equipment: Use a minimum of 20 gals. of water per broadcast acre and a minimum of 40 psi pressure (measured at the boom, not at the pump or in the line). When crop and weed foliage is dense use up to 50 gals. of water and up to 80 psi pressure. Use standard high pressure pesticide hollow cone or flat fan nozzles spaced 20 inches apart. Do not use flood or whirl chamber nozzles.

Air equipment: Use a minimum of 5 gals. of water per acre and a maximum of 40 psi pressure. Use only diaphragm-type nozzles producing cone or fan spray patterns.

AERIAL APPLICATION-SPECIAL DIRECTIONS

To obtain uniform coverage and to avoid drift hazards, the following application equipment and practices should be used:

Nozzle height: Maximum of 10 feet above crop.

Nozzle orientation: Nozzles must be oriented so as to discharge straight back with the air stream (opposite the direction of travel of the aircraft) or at some angle between straight back and straight down.

Nozzles must be located no farther out than three-fourths the distance from the center of the aircraft to the end of the wing or rotor.

Water volume and spray pressure: See Air equipment.

Do not apply Laddok by aircraft when wind is blowing at a velocity above 10 mph. Coarse sprays (larger droplets) are less likely to drift.

Do not apply Laddok by air within 200 feet upwind of ornamental or sensitive nontarget crops such as cotton, sugarbeets, sunflowers or okra.

Applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

SPECIAL INFORMATION FOR IRRIGATED AREAS

In irrigated areas, it may be necessary to irrigate prior to treatment with Laddok to ensure weeds are growing actively. Weeds growing under drought conditions usually are not satisfactorily controlled.

ADDITIVE INFORMATION

UAN Solution:

In corn and grain sorghum UAN (Urea Ammonium Nitrate) solution may be added to Laddok in the place of oil concentrate for all weeds (except common ragweed); UAN solution is commonly referred to as 28,30 or 32% N. With the addition of UAN solution to Laddok on corn or grain sorghum, a slight leaf tip burn or yellowing and speckling may occur. New growth is normal and vigor is not reduced. Do not use brass or aluminum nozzles when spraying Laddok with UAN solution.

Rate of UAN Solution

Ground application - 1 gallon per acre.

Air application - 1 gallon per acre.

Oil Concentrate:

If UAN solution is not used a nonphytotoxic oil concentrate (commonly referred to as oil concentrate) should be added to the spray tank. Use oil concentrate if common ragweed is the predominate weed to be controlled. The oil concentrate must contain either a petroleum or vegetable oil base and must meet the following criteria: 1) be nonphytotoxic, 2) contain only EPA-exempt ingredients, 3) provide good mixing quality in the jar test (see below), and 4) be successful in local experience.

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers which provide good mixing quality. For vegetable oil concentrates, it has been observed that highly refined vegetable oils are more satisfactory than unrefined vegetable oils. For additional information see "Jar Test for Estimating Suitability of Oil Concentrates" at the end of this section.

Rate of Oil Concentrate:

Ground application-2 pints/acre (maximum)

Air application-1 pint/acre (maximum)

Jar Test for Estimating Suitability of Oil Concentrates:

1. Water supply: Use only water from intended source and at the source temperature.
2. Amount of water in jar:
Ground Application-For 20 gal/A spray volume use 3 1/3 cups (800 ml) of water.
Air Application- For 5 gal/A spray volume use 5/6 cup (200 ml) of water, or
For 10 gal/A spray volume use 1 2/3 cups (400 ml) of water.
For other spray volumes, adjust proportionately to above.
3. Amount of herbicide and oil concentrate or UAN solution to add: Add herbicide and oil concentrate or UAN solution at the rate of 1 teaspoon (5 ml) for each pint of recommended label rate.
4. Add components in following sequence, gently mixing between component additions:
 1. UAN solution (if used)
 2. Laddok
 3. Oil concentrate (if used)
5. Cap jar, invert 10 cycles, let stand for 15 minutes, evaluate.
6. Evaluation: An ideal tank mix combination will be uniform; thus, the suitability of the oil concentrate is questionable if any of the following are observed:

Free oil at the surface - film or globules.

Flocculation - fine particles which may be suspended in the liquid or found as a precipitated layer at the bottom of the jar.

Clabbering - thickening texture (coagulated) resembling yogurt or a curd-like texture as with cottage cheese.

MIXING/SPRAYING

Fill tank of a thoroughly clean sprayer half to two-thirds full with clean water. Start agitation of UAN solution then add Laddok; allow to mix thoroughly. If UAN solution is not used add oil concentrate and remaining volume of water. Maintain constant agitation during application. Avoid allowing the mixture to stand overnight. Always clean sprayer thoroughly immediately after use by flushing the system with water and a strong detergent. Do not allow cleaning water to contaminate any streams or ponds.

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APPLICATION RATE TABLE FOR CORN AND GRAIN SORGHUM

	Application Rates For Weed Growth Stages			
	2 2/5 PTS/ ACRE*		3 3/5 pts/ ACRE*	
	Leaf Stage	Max. Height	Leaf Stage	Max. Height
Weeds Controlled				
Cocklebur (Xanthium strumarium)	2-6**	4"	6-10	8"
Common Lambsquarters (Chenopodium album)	4-8	2"	8-12	4"
Common Ragweed (Ambrosia artemisiifolia)	Up to 4***	2"	4-6***	3"
Giant Ragweed (Ambrosia trifida)	Up to 4	4"	4-6	6"
Jimsonweed (Datura stramonium)	Up to 6	4"	6-10	8"
Ladysthumb (Polygonum persicaria)	Up to 6	4"	6-10	8"
Penna. Smartweed (Polygonum pensylvanicum)	Up to 6	4"	6-10	8"
Redroot Pigweed (Amaranthus retroflexus)	4-8	2"	8-12	4"
Smooth Pigweed (Amaranthus hybridis)	4-8	2"	8-12	4"
Tall Waterhemp (Amaranthus tuberculatus)	4-8	2"	--	--
Velvetleaf (Abutilon theophrasti)	Up to 4	2"	4-6	5"
Venice Mallow (Hibiscus trionum)	Up to 6	2"	6-10	4"
Wild Buckwheat (Polygonum convolvulus)	Up to 4	3"	4-6	5"
Wild Mustard (Sinapis arvensis)	Up to 6	4"	6-10	8"
Wild Sunflower (Helianthus annuus)	Up to 4	4"	4-6	8"
Beggarticks (Bidens frondosa)	Not Recommended		Up to 6	6"
Bristly Starbur (Acanthospermum hispidum)	Not Recommended		Up to 4	2"
Dayflower (Commelina spp.)	Not Recommended		Up to 6	4"
Prickly Sida or Teaweed (Sida spinosa)	Not Recommended		Up to 6	3"
Spurred Anoda (Anoda cristata)	Not Recommended		Up to 6	3"

* Always add one gallon per acre of UAN solution or one quart per acre of oil concentrate to Laddok. See section Additive information.

** Do not treat earlier than leaf stage shown and do not count cotyledon leaves.

*** Add one quart per acre of oil concentrate when this weed predominates. See section Additive Information.

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For the control of:

Annual Morningglories (*Ipomoea* spp. and *Jacquemontia tamnifolia*), Canada Thistle (*Cirsium arvense*), Yellow Nutsedge (*Cyperus esculentus*), refer to the specimen label for Basagran Herbicide.

RESTRICTIONS AND LIMITATIONS

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

Do not use Laddok when crop is under stress from prolonged cold, wet weather, poor fertility, or other factors or when crop is wet and succulent from recent rainfall as crop injury may occur.

Seed corn producers should consult the seed corn company regarding tolerance of seed population inbred lines to Laddok.

Do not apply to grain sorghum that is heading out or blooming.

Do not make more than one application of Laddok per season.

Do not graze treated area or feed treated forage to livestock for 21 days following application.

Do not apply Laddok if crop shows injury (leaf phytotoxicity and/or plant stunting) produced by any other prior herbicide applications, because this injury may be enhanced and/or prolonged.

Do not apply Laddok during prolonged periods of drought or during unseasonably cold weather, as unsatisfactory weed control may result.

Rainfall or overhead irrigation soon after application (within 8 hours) may nullify the effectiveness of Laddok.

Do not mix or apply Laddok with any other pesticide or with fertilizer except as specifically recommended on this labeling.

ENVIRONMENTAL HAZARDS

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

Notice: It is a violation of Federal laws to use any pesticide in a manner that results in the death of an endangered species or adverse modification of their habitat.

STORAGE AND DISPOSAL

Do not allow product to freeze.

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

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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

IN CASE OF EMERGENCY

In Case of Large Scale Spillage Regarding This Product: Avoid contact, isolate area and keep out animals and unprotected persons. Confine spill and call:

Chemtrec 800-424-9300
BASF 201-263-3400 (Collect)

In Case of Medical Emergency Regarding This Product,
Call:

1. Your Local Doctor for Immediate Treatment.
2. Your Local Poison Control Center (Hospital).
3. BASF 201-263-3400 (Collect).

CONDITIONS OF SALE AND WARRANTY

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION or the Seller. All such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL BASF OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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