7969-148 4-1-1999 1/13

APR 1 1999

Laura A. Sears
BASF Corporation
26 Davis Drive
P.O. Box 13528
Research Triangle Park, NC 27709-3528

Dear Ms. Sears:

Subject: Label Revisions
OpTill Herbicide
EPA Registration No. 7969-148
Your Submission Dated March 30, 1999

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. According to PR Notice 83-3 this product requires the following Pesticide Disposal Statements since it is assigned to Toxicity Category I on the basis of eye irritation potential:

> 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."

b. We note that page 10 of the submitted labeling is blank.

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2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

Sincerely yours,

James A. Tompkins
Product Manager (25)
Herbicide Branch
Registration Division (7505C)

Enclosure

BASF

RT 3-12-99
Copy 3b

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ACCEPTED
with COMMENTS
In EPA Letter Dated:
APR 1 1999
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 7969-148

Highlighted Changes

OpTill™ herbicide

For use in field corn and grain sorghum

Active Ingredients:*

Dimethenamid: 2-chloro-N-[(1-methyl-2-methoxy)ethyl]-N-(2,4-dimethyl-thien-3-yl)-acetamide	53.41%
Dicamba: 3,6 dichloro-o-anisic acid	10.67%
Inert Ingredients:**	35.92%
Total	100.00%

* contains 5.0 pounds of dimethenamid and 1.0 pound of dicamba acid per gallon

** contains petroleum distillates, xylene or xylene range aromatic solvent

EPA Reg. Number: 7969-148 **EPA Est. Number: 55947-TX-1**

KEEP OUT OF REACH OF CHILDREN.

DANGER/PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

See inside labeling for complete **Precautionary Statements**, **Statement of Practical Treatment**, **Directions For Use**, and **Conditions of Sale and Warranty.**

Net contents: 2.5 gallons (9.46 liters)

Shake well before using.

BASF Corporation
P.O. Box 13528, Research Triangle Park, NC 27709

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Precautionary Statements

Hazards to Humans and Domestic Animals
DANGER. Corrosive. Causes irreversible eye damage. Do not get in eyes, on skin, or on clothing. Harmful if swallowed or absorbed through skin. Causes skin irritation, avoid contact with skin. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Statement of Practical Treatment
If in eyes: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.
If swallowed: Call a doctor and get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Do not give anything by mouth to an unconscious person. Avoid alcohol.
If on skin: Wash with plenty of soap and water. Get medical attention.
If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Personal Protective Equipment (PPE)
Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, or viton ≥ 14 mils
- Shoes plus socks
- Protective eyewear

Removed additional Handling Instructions

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not re-use them. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be re-used until it has been cleaned.

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft 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.
- 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.

Environmental Hazards

Do not apply directly to water, or 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 or rinsate. Dimethenamid has properties that may result in groundwater contamination. Application in areas where soils are permeable or coarse and groundwater is near the surface could result in groundwater contamination.
Dimethenamid has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.
1) Point source contamination: To prevent point source contamination, do not mix or load this or any other pesticide product within 50 feet of 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 as described below.
Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwaters, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment. Care must be taken when using this product to prevent: a) back siphoning into wells, b) spills, or c) improper disposal of excess pesticide, spray mixtures, or rinsates. Check valves or antisiphoning devices must be used on all mixing equipment.
2) Movement dissolved in runoff or through soil: Do not apply under conditions which favor runoff. Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen soils. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. To minimize the possibility of groundwater contamination, carefully follow rate recommendations as affected by soil type in section **II. Application Instructions**. Do not apply to coarse soils classified as sand with less than 3% organic matter (as determined by soil tests, if not known) and where depth to groundwater is 30 feet or less.
3) Movement by water erosion of treated soil: Do not apply or incorporate this product through any type of irrigation equipment nor by flood or furrow irrigation. Ensure treated areas have received at least 0.5" of raintall before using tailwater for subsequent irrigation of other fields.

Endangered Species Concerns

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of federal law.

Directions For Use

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 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.

All applicable directions, restrictions, precautions and **Conditions of Sale and Warranty** are to be followed. This labeling must be in the user's possession during application.

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 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 **48 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
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, PVC, or viton ≥ 14 mils
- Shoes plus socks
- Protective eyewear

Storage and Disposal

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

Pesticide Storage: Do not use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides. Groundwater contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

Pesticide Disposal: Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal:

- **Plastic Containers:** Triple rinse (or equivalent) and add rinsate to spray tank. 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.
- **Bulk/Mini-bulk Containers:** Reusable containers should be returned to the point of purchase for cleaning and refilling because the container must be thoroughly cleaned before refilling.

In Case of Emergency

In case of large-scale spillage regarding this product, call:

CHEMTREC	800-424-9300
BASF Corporation	800-832-HELP

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment.
- Your local poison control center (hospital).
- BASF Corporation (800-832-HELP)

Steps to be taken in case material is released or spilled:

Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing, and wash affected skin areas with soap and water. Wash clothing before re-use. Keep the spill out of all sewers and open bodies of water.

I. General Information

OpTill™ herbicide is designed to provide pre-emergence control of most annual grasses, many annual broadleaf weeds, plus burndown control of emerged annual broadleaf weeds, and growth suppression of many emerged perennial broadleaf weeds (refer to **Table 1**). **OpTill** provides residual control of annual grasses, contact control of annual broadleaf weeds, and residual control of some broadleaf weeds. For broad spectrum broadleaf weed control, **OpTill** should be used in sequential applications or tank mixes with other herbicides that provide additional control.

Mode of Action

OpTill contains two herbicide active ingredients: dimethenamid and dicamba. Dimethenamid is a root and shoot growth inhibitor that controls susceptible germinating seedlings before they emerge from the soil. Dicamba is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. Dicamba interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

Cleaning Spray Equipment

Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions and then triple rinsing the equipment before and after applying this product.

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Table 1. Weeds Controlled

Annual Broadleaves[3]	Spurge, Prostrate
Beggarweed, Florida[1]	Sunflower, Common (Wild), Volunteer
Buckwheat, Wild	Thistle, Russian
Burclover, California	Velvetleaf
Burcucumber (Carelessweed)	Waterhemp
Carpetweed	**Perennial Broadleaves**[1]
Chickweed, Common	Alfalfa
Clover, Annual, Red	Bindweed, Field, Hedge
Cocklebur, Common	Chickweed, mouse-ear, field
Jimsonweed	Dock, Curly, Broadleaf
Knotweed	Dogbane, Hemp
Kochia	Smartweed, swamp
Ladysthumb	Thistle, Canada
Lambsquarters, Common	**Annual Grasses**
Mallow, Common, Venice	Barnyardgrass
Marestail (Horseweed)	Crabgrass, smooth, large
Mustard, Tansy, Yellowtops, Wild	Cupgrass, southwestern, woolly[1]
Morningglory, Tall, Ivyleaf	Foxtail, giant, green, yellow
Nightshade, Black	Goosegrass
Pennycress, Field	Johnsongrass (seedling)[2]
Pigweed, Prostrate, Redroot, Rough, Smooth, Tumble	Millet, wild proso[1]
Puncturevine	Panicum, fall, Texas[1]
Purslane, Common	Red Rice
Ragweed, Common, Giant (Buffaloweed), Lance-Leaf	Sandbur[1]
Sicklepod	Shattercane[1]
Sida, Prickly (Teaweed)	Signalgrass, broadleaf
Smartweed, Green, Pennsylvania	Witchgrass
Spanish Needles	**Sedge**
Spikeweed, Common	Flatsedge, Rice
	Nutsedge, Yellow[1]

[1] Partial control or suppression. To complement control, **OpTill** should be used in tank mixes or sequential applications with other herbicides that provide additional control of these weed species.
[2] For best control of these species use the highest rate recommended by soil type. If dry conditions exist near application or excessive rainfall occurs early in season, a postemergence herbicide or cultivation may be required to help control these weeds.
[3] **OpTill** will provide burndown control of emerged broadleaf weeds plus early season residual control. For full season broadleaf weed control, **OpTill** should be used in sequential applications or tank mixed with other broadleaf herbicides.

II. Application Instructions

OpTill™ herbicide is recommended for preplant surface, preplant incorporated, pre-emergence, or early postemergence use in corn and preplant use in grain sorghum. **OpTill** may be applied using either water or fluid fertilizer as the spray carrier. Use of sprayable fluid fertilizer as a carrier is not recommended after crop emergence. Additionally, **OpTill** may be impregnated on and applied with dry bulk fertilizer.

Irrigation

In irrigated areas, sprinkler irrigation may be used following application to ensure soil activation when natural rainfall does not occur.

Application Rate

Recommended broadcast use rates for **OpTill** when used alone, in a tank mix, or sequential applications in corn are given in **Table 2**. Recommended use rates of this product vary by soil type. The most accurate indicator of appropriate use rate for **OpTill** is the Cation Exchange Capacity (CEC) of the soil to be treated. CEC values are available in standard soil testing procedures. If CEC values are not available, the recommended use rate of **OpTill** may be determined using the soil texture and organic matter. Soil texture groupings used in this label are coarse (sand, loamy sand, sandy loam), medium (silt, silt loam, loam, sandy clay loam), and fine (sandy clay, silty clay, silty clay loam, clay loam, and clay). Do not apply to sand-textured soil with less than 3% organic matter (as determined by soil tests, if not known) where depth to groundwater is 30 feet or less.
To determine **OpTill** use rates by either soil CEC values or by soil texture and organic matter, refer to **Table 2**. When use rates are expressed in ranges, use the lower rates for lower CEC values and use the higher rates for higher CEC values. If soil texture and organic matter content are used to determine use rates, use the lower rates for more coarsely textured soils low in organic matter and use the higher rates for more finely textured soils that are high in organic matter.

Table 2. OpTill Application Rates Per Acre

As determined by Cation Exchange Capacity (CEC) of the soil	
Cation Exchange Capacity (CEC) of Soil	**OpTill Use Rate Per Acre**
<10	24-28 fluid ounces
10-14	28-34 fluid ounces
15-20	34-38 fluid ounces
> 20	38 fluid ounces

As determined by soil texture and organic matter content		
Soil Texture	**Organic Matter Content**	
	Less than 3%	**3% or more[1]**
Coarse	24-28 fluid ounces	28-32 fluid ounces
Medium	28-32 fluid ounces	32-38 fluid ounces
Fine	32-38 fluid ounces	38 fluid ounces

[1] On all soils with >8% organic matter, use 38 fluid ounces of **OpTill** per acre.

Managing Off-target Movement

1) Spray Drift: High or gusty winds, high temperatures, low humidity, and temperature inversions increase the likelihood of spray drift from intended targets. Do not apply when these conditions exist. To minimize spray drift:

- Make application when conditions are favorable for even spray deposition (approximately 3-10 mph) on the soil surface. Do not apply when wind or wind gusts exceed 15 mph.
- Use as low pressure, properly calibrated, application equipment as possible to produce large spray droplets and sufficient spray volume to ensure adequate coverage. Do not use nozzles producing a mist droplet spray.
- Keep ground-driven spray boom as low as possible above the target surface.

2) Wind erosion of treated soil: Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

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Air Application

Water Volume: Use 2 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Adequate spray volume must be used to provide accurate and uniform distribution of spray particles over the treated area and to avoid drift of spray particles to nontarget areas.

Application Equipment: Use nozzle screens no finer than 50 mesh when spraying tank mixtures with wettable powder or flowable formulations.

Special Directions for Aerial Application

To obtain uniform coverage and to avoid drift hazards, follow these guidelines:

- Do not apply **OpTill** by aircraft when wind is blowing more than 10 mph. Use coarse sprays (larger droplets) as they are less likely to drift.
- Do not apply **OpTill** by air if sensitive species are within 200 feet downwind.

The 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.

Ground Application (Banding)

When applying **OpTill** by banding, determine the amount of herbicide and water volume needed using the following formula:

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$$

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast volume per acre} = \text{Banding water volume per acre}$$

Ground Application (Broadcast)

Water Volume: Use 2 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Adequate spray volume must be used to provide accurate and uniform distribution of spray particles over the treated area and to avoid drift of spray particles to nontarget areas.

Application Equipment: Use nozzle screens no finer than 50 mesh when spraying tank mixtures with wettable powder or flowable formulations.

Ground Application (Dry Bulk Fertilizer)

OpTill may be impregnated or coated onto dry bulk granular fertilizer carriers for preplant surface, preplant incorporated, or pre-emergence applications. Impregnation or coating may be conducted by either the in-plant bulk system or the on-board system. When impregnated onto some dry fertilizer blends, **OpTill** may exhibit a strong odor. Perform the mixing operation in well-ventilated areas.

OpTill may also be applied in herbicide tank mixes where the tank mix companion product is also registered for these application systems. Individuals or agents selling **OpTill** in these application systems are responsible for following all state and local regulations regarding fertilizer and herbicide blending.

Addition of a drying agent may be necessary if the fertilizer and herbicide blend is too wet for uniform application due to high humidity, high urea concentration, or low fertilizer use rate. Slowly add the drying agent to the blend until a flowable mixture is obtained. Drying agents are not recommended for use with on-board impregnation systems.

Under some conditions, fertilizer impregnated with **OpTill** may clog air tubes or deflector plates on pneumatic application systems. Mineral oil may be added to **OpTill** before blending with fertilizer to reduce plugging. Do not use drying agents when mineral oil is used. To avoid separation of **OpTill** and mineral oil mixes in cold temperatures, either keep mixture heated or agitated prior to blending with fertilizer. Mineral oil may be used at in-plant blending stations or on-board injection systems.

Apply 200-750 pounds of the fertilizer and herbicide blend per acre. Application must be made uniformly to the soil to prevent possible crop injury and offer satisfactory weed control. Impregnated fertilizer spread at half rate and overlapped to obtain a full rate will offer a more uniform distribution. A shallow (1-2") incorporation is desirable for improved weed control. Deeper incorporation may result in unsatisfactory weed control.

Formula to determine the herbicide rate when using dry bulk fertilizer applications:

$$\frac{\text{Fluid ounces or pounds of herbicide per acre}}{\text{pounds of fertilizer per acre}} \times 2{,}000 = \text{Fluid ounces or pounds of herbicide per ton of fertilizer}$$

Incompatible Mixtures

DO NOT impregnate **OpTill** or **OpTill** mixes on ammonium nitrate, potassium nitrate, or sodium nitrate fertilizers or fertilizer blends. Single superphosphate (0-20-0) and triple superphosphate (0-46-0) may be impregnated only with **OpTill** alone.

III. Additives

An agriculturally approved surfactant, crop oil, or sprayable fluid fertilizer or ammonium sulfate may be added to the spray mix to improve postemergence weed control, particularly on drought-stressed weeds. **OpTill™ herbicide** application may be made using either water or fluid fertilizer as the spray carrier. To improve burndown of emerged weeds, surfactants and/or low rate fertilizer (28%, 30%, or 32% UAN or ammonium sulfate), may be used with **OpTill** or **OpTill** tank mixes applied preplant, pre-emergence, or early postemergence to the crop. Crop oil concentrate may be used with **OpTill** in preplant or pre-emergence application but is not recommended for use after crop emergence.

Oil Concentrate

Crop oil concentrates may be used prior to crop emergence but are not recommended after crop emergence unless specified for a particular tank mix. A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:

- be nonphytotoxic,
- contain only EPA-exempt ingredients,
- provide good mixing quality in the jar test, and
- be successful in local experience.

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers to provide good mixing quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils.

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Nitrogen Source

- **Urea ammonium nitrate (UAN):** Use 2-4 quarts of UAN (commonly referred to as 28%, 30%, or 32% nitrogen solution) per acre. Do not use brass or aluminum nozzles when spraying UAN.
- **Ammonium sulfate (AMS):** AMS at 2.5 pounds per acre may be substituted for UAN. Use high-quality AMS (spray grade) to avoid plugging of nozzles. Other sources of nitrogen are not as effective as those mentioned. BASF does not recommend applying AMS if applied in less than 10 gallons per acre because of potential problems with precipitation in reduced volumes. Use AMS only if it has been demonstrated to be successful in local experience.

Nonionic Surfactant

The standard label recommendation is 1 pint of an 80% active nonionic spray surfactant per 100 gallons of water. For certain weeds, a higher spray surfactant rate is recommended.

Table 3. Additive Rate Per Acre

Additive	Rate Per Acre
Nonionic Surfactant	1-2 pints per 100 gallons
AMS	2.5 pounds
UAN Solution	2-4 quarts
Crop Oil Concentrate	1 quart*
* see manufacturer's label for specific rate recommendations	

IV. General Tank Mixing Information

OpTill™ herbicide may be tank mixed or applied sequentially with one or more of the following herbicide products according to the specific tank mixing instructions in this label and respective product labels.

Tank Mix Partners/Components

The following products may be tank mixed with **OpTill** according to the specific tank mixing instructions in this label and respective product labels.

- **Accent®** (nicosulfuron)
- **Atrazine**
- **Banvel®** (dicamba)
- **Basagran®** (bentazon)
- **Beacon®** (primisulfuron)
- **Bladex®** (cyanazine)
- **Celebrity®** (dicamba + nicosulfuron)
- **Clarity®** (dicamba)
- **Cyclone®** (paraquat)
- **Extrazine® II** (cyanazine - atrazine)
- **Gramoxone®** Extra (paraquat)
- **Laddok® S-12** (bentazor
- **Landmaster®** (glyphosate + 2,4-D)
- **Liberty®** (bentazon + atrazine)
- **Marksman®** (dicamba + atrazine)
- **Princep®** (simazine)
- **Prowl®** (pendimethalin)
- **Pursuit®** (imazethapyr)
- **Roundup Ultra®** (glyphosate)
- **Touchdown®** (sulfosate)
- **2,4-D**

See section **VI. Crop-Specific Information** for more details. Read and follow the applicable **Restrictions and Limitations** and **Directions For Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

Physical incompatibility, reduced weed control, or crop injury may result from mixing **OpTill** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. BASF does not recommend using tank mixes other than those listed on BASF labeling. Local agricultural authorities may be a source of information when using other than BASF recommended tank mixes.

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.

Add components in the sequence indicated in the **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, do not mix the ingredients in the same tank.

Mixing Order

1) **Water.** Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
2) **Agitation.** Maintain constant agitation throughout mixing and application.
3) **Products in PVA bags.** Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4) **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates, or suspo-emulsions). If an inductor is used, rinse it thoroughly after the component has been added.
5) **Water-soluble products.** If an inductor is used, rinse it thoroughly after the component has been added.
6) **Emulsifiable concentrates** (such as **OpTill**, oil concentrate when applicable). If an inductor is used, rinse it thoroughly after the component has been added.
7) **Water-soluble additives** (such as AMS or UAN when applicable). If an inductor is used, rinse it thoroughly after the component has been added.
8) **Remaining quantity of water.**

Maintain constant agitation during application.

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V. Restrictions and Limitations

- **Maximum seasonal use rate:** Do not apply more than a **total of 38 fluid ounces** of **OpTill™ herbicide** per acre, per crop.
- **Preharvest Interval (PHI):** Refer to section **VI. Crop-Specific Information** for crop-specific preharvest intervals and feeding and grazing restrictions.
- **Restricted Entry Interval (REI): 48 hours**
- The New York State Department of Environmental Conservation prohibits use in Long Island, NY.
- **Crop Rotation Restriction:**

  — If the crop treated with **OpTill** is lost to adverse weather or for other reasons, the area treated may be replanted to corn immediately or grain sorghum 2 weeks or more after application. If the original **OpTill** treatment was broadcast, do not make a second application of **OpTill**. If corn or grain sorghum are replanted, do not apply **Clarity®**, **Banvel®**, or **Marksman® herbicides** until after emergence.

  — If the original application was banded and the second crop is planted in the row middles, a second band application may be applied. OK

  — Following **OpTill** application and an accumulation of 1" or more of rainfall or overhead irrigation, soybeans may be planted after 14 days or more for rates up to 32 fluid ounces per acre and 21 days or more for rates above 32 fluid ounces per acre and up to 38 fluid ounces per acre. Soybeans should not be planted in the same year as **OpTill** applications in geographic areas with average annual rainfall of less than 25".

  — Fall-seeded cereals may be planted 4 or more months after a spring application of **OpTill**.

  — There are no rotational crop restrictions in the spring following the previous year's application of **OpTill**.
- **Rainfast period:** Rainfall or irrigation occurring within **4 hours** after postemergence applications may reduce the effectiveness of **OpTill** in controlling emerged broadleaf weeds.
- **Stress:** Do not apply to crops under stress such as stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating air temperatures, as crop injury may result.
- Do not apply through any type of **irrigation** equipment. Do not contaminate irrigation ditches or water used for domestic purposes.

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VI. Crop-Specific Information

Field Corn

OpTill™ herbicide may be used in field corn (grown for grain or silage).
OpTill is not registered for use in sweet corn.
OpTill may be applied preplant surface, preplant incorporated, pre-emergence, or early postemergence (up to 8" tall) to corn.
Corn may be grazed or fed to livestock 40 days or more after **OpTill** application.
To avoid risk of injury from preplant or pre-emergence application, corn must be planted so at least 1.5" of soil cover the seed.

Preplant or Pre-emergence Applications in Minimum or No-Till Systems
Use for residual control of annual grasses, early-season residual control of annual broadleaf weeds, postemergence control of emerged annual broadleaf weeds, and postemergence suppression of emerged perennial broadleaf weeds. **OpTill** may be applied alone or in tank mixes up to 30 days before planting, during planting, or following planting and before crop emergence.
When making early preplant applications (15-30 days prior to planting) use the highest rate recommended for the specific soil type. Early preplant applications are not recommended for use on coarse-textured soils or in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40". Applications on coarse-textured soils made within 7 days of planting may result in temporary crop injury. Crop recovery should occur within 7-14 days.
Tank mixes with postemergence herbicides such as **Roundup® Ultra** (glyphosate), **Touchdown®** (sulfosate), or **Gramoxone® Extra** (paraquat), must be used when grasses are emerged at the time of application.
When planting into a legume sod (e.g., alfalfa or clover), or for added control of dandelion or plantain, 2,4-D at 0.25-0.5 pounds of a.i. per acre may be tank mixed with **OpTill**.

Preplant or Pre-emergence Applications in Conventional or Reduced Tillage Systems
Use **OpTill** for residual control of annual grasses and early-season residual control of annual broadleaf weeds. Broadcast the treatment uniformly to the soil surface before or after planting and before crop emergence. Rainfall, sprinkler irrigation, or mechanical incorporation after application is required to move this product into the upper soil surface where weed seeds germinate. If adequate rainfall or irrigation does not occur and weed seedling emergence begins, a shallow cultivation or rotary hoeing will improve performance. If **OpTill** is mechanically incorporated into the soil, use equipment capable of providing shallow incorporation (maximum of 1-2" depth). Streaking or deep incorporation may result in reduced weed control or crop injury.This application should only be made on medium- or fine-textured soils that contain 2.5% or greater organic matter or CEC of 15 or greater.

Early Postemergence Applications in All Tillage Systems
OpTill may be used in early postemergence (spike up to 8" tall corn). Application must be made prior to grass seedling emergence or in a tank mix with products that control emerged grasses.

Sequential Applications of OpTill
OpTill may be used in split application programs where applications are made as part of the methods described above. If applications are less than 2 weeks apart, the total **OpTill** rate used must not exceed the maximum rate given for each specific soil type. If applications are 2 weeks or more apart, a total **OpTill** use rate of up to 38 fluid ounces per acre per year may be used on any soil type.

Corn Tank Mixes and Sequential Uses

OpTill may be tank mixed or applied sequentially in corn with one or more of the following herbicide products according to the specific tank mixing instructions in this label and respective product labels. Read and follow the applicable **Restrictions and Limitations** and **Directions For Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

- **Accent®** [1]
- **Atrazine**
- **Banvel®** [1]
- **Basagran®**
- **Beacon®** [1]
- **Bladex®**
- **Celebrity®** [1]
- **Clarity®** [1]
- **Extrazine® II**
- **Gramoxone® Extra**
- **Laddok® S-12**
- **Liberty®** [2]
- **Marksman®** [1]
- **Princep®**
- **Prowl®**
- **Pursuit®** [3]
- **Roundup Ultra®** [4]
- **Touchdown®**
- **2,4-D** [5]

[1] See **Table 4** for additional limitations or restrictions that apply for tank mix or sequential use programs with these products
[2] Use only on **Liberty Link®** (glufosinate tolerant) corn hybrids.
[3] Use only on **IMI™** (imidazolinone tolerant) corn hybrids.
[4] Includes postemergence use on **Roundup Ready®** (glyphosate tolerant) corn hybrids.
[5] Tank mix partner for preplant and pre-emergence use only.

Table 4. Specific Guidelines for Tank Mixes or Sequential Use Programs

Tank Mix Partner	Rate Per Acre
Accent or **Beacon**	When tank mixing, applications immediately following extreme day or night temperature fluctuations or applications when daytime temperatures do not exceed 50° F may result in decreased weed control or crop injury. Delay application until the temperatures warm and both weeds and crop resume normal growth.
Banvel, Celebrity, Clarity, or Marksman	Tank mixes with these products that contain dicamba must not exceed a total combined rate of 0.50 pounds of dicamba acid equivalent per acre (0.25 pound on coarse-textured soils). Up to 2 applications of **OpTill** may be made during a growing season. Sequential applications of these products must be separated by a minimum of 2 weeks unless the combined rate is less than 0.5 pounds of dicamba acid equivalent per acre, (0.25 pounds on coarse-textured soils) and corn is 8" tall or less and must not exceed a combined total of 0.75 pounds dicamba acid equivalent per acre for in-crop use.

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Sorgum (grain)

All **OpTill™ herbicide** applications must only be made to sorghum seed that has been properly treated by the seed company with an approved chloroacetamide herbicide safener or severe injury may occur.
OpTill may be applied 15-30 days prior to planting in minimum tillage or no-tillage production systems for burndown of emerged and actively growing annual broadleaf weeds and residual control of grass weeds.
Do not apply to grain sorghum after crop emergence.
When grass weeds are present at the time of application, tank mixes with postemergence herbicides such as **Cyclone®**, **Gramoxone® Extra**, or **Roundup Ultra®** must be used.
Refer to **Table 2** for sorghum use rates.
Under high soil moisture or cool conditions, **OpTill** application may cause temporary stunting or leaf wrapping of sorghum. However, sorghum will normally outgrow these symptoms in 10-14 days.

Crop-Specific Restrictions and Limitations
Do not graze or feed treated sorghum or silage prior to mature grain stage.
Do not apply **OpTill** to sorghum grown for seed production.
OpTill is not registered for use on sweet or forage sorghum.
Make no more than one application per growing season.
For sorghum produced under irrigation, use a minimum of 28 fluid ounces per acre.
Do not apply on coarse-textured soils with less than 1.5% organic matter.

Sorghum Tank Mixes and Sequential Uses

OpTill may be tank mixed or applied sequentially in sorghum with one or more of the following herbicide products according to the specific tank mixing instructions in this label and respective product labels. Read and follow the applicable **Restrictions and Limitations** and **Directions For Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

- **Atrazine**
- **Cyclone®**
- **Gramoxone® Extra**
- **Landmaster® BW**
- **Roundup Ultra®**
- **2,4-D**

OpTill can be used in sequential applications with other herbicides labeled for use on grain sorghum such as: **Banvel®**, **Basagran®**, **Buctril®**, **Clarity®**, **Laddok® S-12**, **Marksman®**, or **Weedmaster®**. This product cannot be mixed with any product containing a label prohibition against such mixing.

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Crops

This product can be used **on** the following crops:

Field Corn
Sorghum (grain)

Look inside for complete **Restrictions and Limitations** and **Application Instructions.**

Pests listed in this label:

Common Name	Scientific Name
Barnyardgrass	*Echinochloa crus-galli*
Beggarweed, Florida	*Desmodium tortuosum*
Buckwheat, Wild	*Polygonum convolvulus*
Carpetweed	*Mullugo verticillata*
Cocklebur, Common	*Xanthium pensylvanicum*
Crabgrass, Large	*Digitaria sanguinalis*
, Smooth	*Digitaria ischaemum*
Cupgrass, Southwestern	*Eriochloa gracilis*
, Woolly	*Eriochloa villosa*
Flatsedge, Rice	*Cyperus iria*
Foxtail, Giant	*Setaria faberi*
, Green	*Setaria viridis*
, Yellow	*Setaria lutescens*
Goosegrass	*Eleusine indica*
Jimsonweed	*Datura stramonium*
Johnsongrass (seedling)	*Sorghum halepense*
Kochia	*Kochia scoparia*
Lambsquarters, Common	*Chenopodium album*
Millet, Wild Proso	*Panicum miliaceum*
Morningglory, Ivyleaf	*Ipomoea hederacea*
, Tall	*Ipomoea purpurea*
Mustard, Wild	*Sinapis arvensis*
Nightshade, Black	*Solanum nigrum*
, Eastern Black	*Solanum ptycanthum*
, Hairy	*Solanum sarrachoides*
Nutsedge, Yellow	*Cyperus esculentus*
Oats, Wild	*Avena fatua*
Panicum, Fall	*Panicum dichotomiflorum*
, Texas	*Panicum texanum*
Pigweed, Amaranth	*Amaranthus palmeri*
, Palmer	*Amaranthus blitoides*
, Prostrate	*Amaranthus blitoides*
, Redroot	*Amaranthus retroflexus*
, Smooth	*Amaranthus hybridus*
, Tumble	*Amaranthus albus*
Pusley, Florida	*Richardia scabra*
Purslane, Common	*Protulaca oleracea*
Red Rice	*Oryza sativa*
Ragweed, Common	*Ambrosia artemisifolia*
, Giant	*Ambrosia trifida*
Sandbur	*Cenchrus spp.*
Shattercane	*Sorghum bicolor*
Signalgrass, Broadleaf	*Brachiaria platphylla*
Smartweed species	*Polygonum spp.*
Spurge, Prostrate	*Euphorbia nutans*
Velvetleaf	*Abutilon theophrastic*
Waterhemp, Common	*Amaranthus rudis*
, Tall	*Amaranthus tuberculatus*
Witchgrass	*Panicum capillare*

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 ("BASF") 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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