# Willowood
# LACTOFEN 2EC

| LACTOFEN | GROUP | 14 | HERBICIDE |
|---|---|---|---|

Willowood Lactofen 2EC is a selective, broad-spectrum emulsifiable concentrate herbicide for use on soybeans, cotton, peanuts, conifer seedlings, conifer nurseries and kenaf

| **ACTIVE INGREDIENT:** | **By Wt.** |
|---|---|
| Lactofen: 2-ethoxy-1-methyl-2-oxoethyl 5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitrobenzoate | 24.0% |
| **OTHER INGREDIENTS:** | 76.0% |
| **TOTAL:** | 100.0% |

1 gallon contains 2 pounds of active ingredient.
Contains petroleum distillates.

**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 this label, find someone to explain it to you in detail.)

## FIRST AID

**If in Eyes:** Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

**If Swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies call your poison control center at 1-800-222-1222.

**NOTE TO PHYSICIAN**

Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.

**See label booklet for additional Precautionary Statements and Directions for Use.**

**Manufactured For:**
Willowood, LLC
1887 Whitney Mesa Drive # 9740
Henderson, NV 89014-2069
20201016

**EPA Reg. No. 87290-72**
**EPA Est. No. 05905-IA-001 (HD), 89332-GA-001 (MA), 39578-TX-001 (SE)**
**Letter(s) in lot number correspond to letter(s) following the EPA Est. No.**

**NET CONTENTS: 2.5 Gallons**

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER:** Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles, face shield, or safety glasses. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. This product contains lactofen, which has been determined to cause tumors in laboratory animals (mouse, rat).

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as Barrier Laminate or Viton ≥ 14 mils
- Protective eyewear
- Shoes plus socks
- For overhead exposure, chemical-resistant headgear
- When mixing, loading or cleaning equipment, chemical resistant apron

**Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate**. Do not reuse them. 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.

## USER SAFETY RECOMMENDATIONS

**Users should:**

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

This pesticide is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of waste. Do not apply when weather conditions favor drift from target area.

### Groundwater Advisory

This chemical (lactofen) has properties and characteristics associated with chemicals detected in groundwater. Acifluorfen, a degradate of this chemical, is known to leach through soil into groundwater under certain conditions as a result of labeled use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

## DIRECTIONS FOR USE

**It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.** READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS. 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.



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## 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), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS 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 or Viton ≥ 14 mils, protective eyewear, shoes plus socks, and chemical-resistant headgear for overhead exposure.

## RESISTANCE MANAGEMENT

For resistance management, Willowood Lactofen 2EC is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to Willowood Lactofen 2EC and other Group 14 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of Willowood Lactofen 2EC or other Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures from a different group if such use is permitted; where information on resistance in target weeds species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Suspected herbicide-resistant weeds may be identified by these indicators:
    - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
    - A spreading patch of non-controlled plants of a particular weed species; and
    - Surviving plants mixed with controlled individuals of the same species
- If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

Report any incidence of non-performance of this product against a particular weed species to your Willowood, LLC representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.



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## SPRAY DRIFT MANAGEMENT

**DO NOT** spray when conditions favor drift beyond the area intended for application. Conditions that contribute to drift include thermal inversion, wind speed and direction, spray nozzle/pressure combinations, spray droplet size, temperature/humidity, etc. Contact your state extension agent for spray drift prevention guidelines in your area. All application equipment must be properly maintained and calibrated using appropriate carriers. Avoiding spray drift at the application site is the responsibility of the applicator.

The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply under circumstances where possible drift to unprotected persons, to food, forage, or other plantings that might be damaged, or crops thereof rendered unfit for sale, use or consumption can occur.

### Application Methods and Equipment

Do NOT use the following delivery systems to apply this product:

- Flood nozzles
- Control Droplet Action (CDA)
- Flat fan nozzles larger than 8006
- Spray rigs that utilize wheel driven pumps

Apply this product and tank mixes containing this product using ground equipment with standard commercial sprayers equipped with flat fan (including split-nozzle systems which spray in opposite directions) or hollow cone nozzles designed to deliver the desired spray pressure and spray volume. *Thorough weed coverage is required for optimum control.* To provide adequate coverage, center spray nozzles at a maximum of 20-inch spacing.

### Carrier Volume and Spray Pressure

Use a minimum of 10 gallons of water per acre and a minimum spray pressure of 40 PSI measured at the boom. Willowood Lactofen 2EC is a contact herbicide that requires coverage for optimal control, and when targeting weeds at the maximum labeled growth stage at application, 20 gallons of water per acre is advised.

### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. Use the largest droplet size consistent with acceptable efficacy. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind**; **Temperature and Humidity**; and **Temperature Inversions**).

**Controlling droplet size:**

- **Volume –** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure –** Do not exceed the nozzle manufacturer's directed pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles –** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation –** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is advised. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type –** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### Wind

Drift potential is lowest when wind speed does not exceed 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application must be avoided below 2 mph due to variable



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wind direction and high inversion potential. Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

### Temperature and Humidity

Low humidity and high temperatures increase the evaporation of spray droplets and, therefore, the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures. When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### Temperature Inversions

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions because of the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### Sensitive Areas

Apply Willowood Lactofen 2EC only when the potential for drift to adjacent sensitive areas (e.g., bodies of water or nontarget crops) is minimal and when wind is blowing away from the sensitive areas.

**AERIAL APPLICATION**

Spray drift away from the site of application may cause damage to non-target vegetation. To minimize drift, apply the largest droplet size consistent with uniform coverage and satisfactory weed control. To obtain satisfactory application and avoid drift, the following directions must be observed:

- Do not apply during low-level inversion conditions (including fog), when winds are gusty or under other conditions that favor drift. Do not spray when wind velocity is less than 2 mph or more than 10 mph.
- Do not apply this product by air within 200 ft of non-target plants including non-target crops.
- Do not apply this product by air within 200 ft of emerged cotton crops.
- Do not apply this product by air within 200 ft of streams, wetlands, marshes, ponds, lakes and reservoirs.
- **Carrier Volume and Spray Pressure:** When used as part of a burndown weed control program, apply Willowood Lactofen 2EC in 7 to 10 gals of water per acre. Application at less than 7 gallons per acre may provide inadequate control. When used for preemergence weed control, apply Willowood Lactofen 2EC in 5 to 10 gals of water per acre. The higher gallonage applications generally afford more consistent weed control. Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Nozzle Selection and Orientation:** Formation of very small drops may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray pressure. Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles, such as diaphragm type nozzles, to avoid unwanted discharge of spray solution. The nozzles must be directed toward the rear of the aircraft, at an angle between 0 and 15° downward. Do not place nozzles on the outer 25% of the wings or rotors.

**Adjuvants and Drift Control Additives:**

Drift control additives are not advised with Willowood Lactofen 2EC.

**Swath Adjustment**

When applications are made with a cross wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).



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**Wind**
Variable wind speeds with changing directions may pose the largest potential for drift damage in areas that are adjacent to the field to be sprayed. Drift potential is lowest between wind speeds of 2 to 8 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

**Temperature and Humidity**
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation but they still should remain within the medium droplet size category. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions**
Do not spray at times when spray particles may be entrained into a temperature inversion layer. If inversion conditions are suspected, consult with local weather services before making an application. Applications must not occur during temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas**
The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Do not apply during low-level inversion conditions, when winds are gusty or under any other condition that favors drift. Do not spray when drift is possible or when wind velocity is less than 2 mph or more than 10 mph.

Drift may cause damage to any vegetation contacted to which application is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Do not apply this product within 200 feet of non-target plants including non-target crops.

Do not apply this product within 200 feet of streams, wetlands, marshes, ponds, lakes and reservoirs.

## ROTATIONAL CROP INTERVALS
There are no rotational crop restrictions for this product.



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# PRODUCT APPLICATION INSTRUCTIONS

Willowood Lactofen 2EC works primarily through contact action. Good coverage of young, actively growing weeds is essential for maximum weed control. The use of a spray adjuvant is usually required and for specific directions, refer to the section of this label titled ADJUVANTS AND ADDITIVES.

When Willowood Lactofen 2EC is applied postemergence, a portion of the spray solution may contact the soil surface. If soil moisture conditions are favorable for **preemergence activity** following the application, suppressed germination of small-seeded broadleaf weeds, such as nightshade and pigweed species (including waterhemp and Palmer amaranth) may be expected for a 2-week period at rates of 10 fluid ounces per acre or greater. Extensive crop or weed foliage at the time of application will reduce the amount of herbicide spray contacting the soil surface, and therefore reduce the amount of soil activity.

A **temporary crop response** should be expected following a postemergence application of Willowood Lactofen 2EC. Leaves which are open at the time of application will show some burn, bronzing and speckling. Leaves which have emerged but are unopened at the time of application may appear cupped at the tip and/or crinkled along the edges of the leaf. Labeled crops quickly outgrow all initial herbicide effects. When Willowood Lactofen 2EC is used as directed yields will not be adversely affected.

**RESTRICTIONS**

- Do NOT apply this product through any type of irrigation system.
- Do NOT make more than two applications per acre per year.

## ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE

For best results, apply to actively growing weeds within the growth stages indicated in this label. Applying under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply Willowood Lactofen 2EC when the crop or weeds are under stress due to drought, excessive water, extremes in temperature, disease or low humidity. This product is most effective when applied in sunny conditions at temperatures above 70ºF, and weeds that are stressed are less susceptible to this product.

## RAINFASTNESS

This product is rainfast 30 minutes after application. Do NOT apply if rain is expected within 30 minutes of application or efficacy may be reduced.

## APPLICATION AND CULTIVATION

Do NOT cultivate during or prior to application of this product.

Do NOT cause excessive dust to occur during application as the dust may interfere with the spray solution covering the leaf surfaces.

Weed control may be helped by cultivating 6-8 days after application.

## SEQUENTIAL APPLICATIONS

A sequential application of this product may be made a minimum of 14 days after the first application.

## CROP FAILURE

Refer to the ROTATIONAL CROP INTERVALS section of this label if crop treated with this product is lost due to a catastrophe such as hail or other types of inclement weather.

## ADJUVANTS AND ADDITIVES

The addition of an adjuvant to Willowood Lactofen 2EC is required for post-emergence weed control. Use a crop oil concentrate (COC), including methylated seed oils (MSO), containing at least 15% emulsifier or non-ionic surfactant containing at least 80% surfactant. The addition of nitrogen (28, 30 or 32%) or ammonium sulfate, in combination with COC or non-



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ionic surfactant, may enhance weed control. Mixing and compatibility qualities should be verified by a jar test.

**Crop Oil Concentrate:** The preferred adjuvant with Willowood Lactofen 2EC is COC for wide spectrum of weed control. Higher crop response is also generally observed with the use of a COC; however crops quickly outgrow all initial herbicide effects. The rate of COC will depend on the environmental conditions preceding the application and the weed size and species at the time of application. If environmental conditions are good and weeds are growing vigorously, use a low rate of COC. The higher rate is required when the weeds are under environmental stress such as low temperature, low humidity or low soil moisture.

**Non-Ionic Surfactant (NIS):** A NIS may be used in place of a COC when weeds are actively growing and the growing conditions are optimal.

**Drift Control Additives**
Drift control additives are not advised with Willowood Lactofen 2EC.

Also refer to crop specific directions for any additional adjuvant directions.

### Adjuvant Directions

| ADJUVANT | PERCENT RELATIVE HUMIDITY | | |
|---|---|---|---|
| | **> 80% (High)** | **60 to 80% (Medium)** | **< 60% (Low)** |
| Non-Ionic Surfactant (NIS) or | 0.25% v/v | Not Recommended | Not Recommended |
| Crop Oil Concentrate (COC) / Methylated Seed Oil (MSO) | 1 pt/A | 1.5 pt/A | 2 pt/A |
| A nitrogen source, such as ammonium sulfate (2.5 lb/A) or 28% (1 qt/A) may be added to enhance weed control. | | | |

v/v is volume NIS/volume of the tank solution.

## DETERMINING ADJUVANT COMPATIBILITY

A jar test should be performed before mixing commercial quantities of Willowood Lactofen 2EC when using Willowood Lactofen 2EC for the first time, when using new adjuvants, or when a new water source is being used.

1. Add 1 pint of water to a quart jar. The water should be from the same source and temperature as will be used in the spray tank mixing operation.
2. Add 2 ml (0.4 tsp) of Willowood Lactofen 2EC to the quart jar, gently mixing until the product dissipates.
3. Add 6 ml (1 tsp) of the crop oil concentrate or methylated seed oil to the quart jar, gently mix. If a non-ionic surfactant is being used in a tank mix, add 2.5 ml (0.5 tsp) of the non-ionic surfactant in place of the oil.
4. If nitrogen is being used, add 16 ml (1 tbsp or 0.5 oz) of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate (AMS) is being used, add 19 gm (0.04 lbs) AMS to the quart jar in place of the 28 to 32% nitrogen. Add Ammonium sulfate to the jar before Willowood Lactofen 2EC in step 2.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed the choice of adjuvant should be questioned:
    a) Layer of oil or globules on the mixture's surface.
    b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
    c) Clabbering: Thickening texture (coagulated) like gelatin.



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## MIXING INSTRUCTIONS

1. Fill spray tank with clean water 1/3 to 1/2 of desired level.
2. While agitating, add the required amount of Willowood Lactofen 2EC. Agitation should create a rippling or rolling action on the water surface. If tank mixing with other labeled pesticides, add water soluble bags first, followed by dry formulation, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
3. Add any required adjuvants.
4. Add any required nitrogen source, unless ammonium sulfate (AMS) is being used. If AMS is being used as the nitrogen source, it should be added after water soluble bags and before dry pesticides.
5. Fill spray tank to desired level with water. Agitation should continue until spray solution has been applied.
6. Mix only the amount of spray solution that can be applied the day of mixing. Willowood Lactofen 2EC will remain active in the spray solution for 12 hours.

## APPLICTION EQUIPMENT

Application equipment should be clean and in good repair. Space nozzles uniformly on boom and frequently check for accuracy. Ground speed should not exceed 10 mph to provide proper spray coverage. Boom height, ground speed, and pressure directions should not exceed those recommended by the spray nozzle manufacturer for the type and size of nozzle being used. Improper use of the selected spray nozzle will adversely affect the spray pattern, prevent proper coverage of weed leaf surface, and reduce weed control. Refer to the manufacturer's spray chart for nozzle selection and operating information. Give special attention to preparing and operating the spray equipment to assure proper coverage of weed foliage.



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# USE SITE APPLICATION INSTRUCTIONS

| | | | |
|---|---|---|---|
| **Use Site** | **Soybeans** | | |
| **Location** | Agricultural (Outdoor) | | |
| **Comments** | Apply Willowood Lactofen 2EC preplant, preemergence and/or postemergence.<br>**RESTRICTIONS**<br>• Do NOT apply more than 25 fl oz (0.4 lb ai) per acre per year which includes preplant, pre-emergence and/or postemergence applications.<br>• Preplant - Do NOT apply more than 12.5 fl oz/A (0.2 lb ai) per application.<br>• Preemergence - Do NOT apply more than 19 fl oz/A (0.3 lb ai) per application or per year.<br>• Postmergence - Do NOT apply more than 12.5 fl oz/A (0.2 lb ai) per application.<br>• Do NOT apply within 45 days of harvest<br>• Do NOT apply after growth stage R6 (full seed).<br>**NOTE: New York State Only –** Apply Willowood Lactofen 2EC only as a postemergence herbicide once per year, at a maximum annual application rate not to exceed 12.5 fl oz (0.2 lb ai) per acre, and not later than 90 days before harvest.<br>Do not graze animals on green forage or stubble.<br>Do not feed treated soybean silage (ensiled soybeans) to cattle.<br>Do not utilize hay or straw for animal feed or bedding. | | |
| **Pest(s)** | See Below | **Stage** | Postemergence |
| **Action** | Action Against Pest | **Subaction** | Control |
| **Comments** | | | |

**APPLICATION INSTRUCTIONS**
The effectiveness of this product is dependent on the proper weed stage (height) and conditions for favorable weed growth (such as too much or too little moisture, low humidity, temperature extremes and previous application of herbicides).
**APPLICATION TIMING**
Preplant
Willowood Lactofen 2EC may be applied prior to planting soybeans as part of a burndown program to control the emerged weeds listed below. This product will control the weeds if they are within the maximum leaf number and the maximum heights listed.
Postemergence
Willowood Lactofen 2EC controls the weeds listed below if they are within the maximum leaf number and the maximum heights. For best results, this product or tank mixes using this product should be applied to actively growing weeds. *Use of a crop oil concentrate or a non-ionic surfactant is required.* For specific directions, refer to the ADJUVANTS AND ADDITIVES section of this label.

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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Cocklebur, Common | *Xanthium strumarium* | 4 | 3 | 8* (0.125 lb ai) |
| Jimsonweed | *Datura stramonium* | 4 | 3 | |
| Nightshade, Black | *Solanum nigrum* | 4 | 4 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 3 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 3 | |
| Cocklebur, Common | *Xanthium strumarium* | 5 | 4 | 10* (0.156 lb ai) |
| Jimsonweed | *Datura stramonium* | 4 | 4 | |
| Nightshade, Black | *Solanum nigrum* | 5 | 4 | |
| Kochia | *Kochia scoparia* | 6 | 2 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 | |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 4 | 2 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 | |
| Ragweed, Common | *Ambrosia artemisiifolia* | 4 | 2 | |
| Waterhemp, Common | *Amaranthus rudis* | 4 | 2 | |
| Waterhemp, Tall | *Amaranthus tuberculatus* | 4 | 2 | |
| * For control, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control. | | | | |

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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Balloonvine | *Cardiospermum halicacabum* | 4 | 4 | 12.5 (0.2 lb ai.) |
| Beggarticks, Devils | *Bidens frondosa* | 6 | 4 | |
| Bristly Starbur | *Acanthospermum hispidum* | 4 | 4 | |
| Buffalobur | *Solanum rostratum* | 4 | 4 | |
| Burcucumber | *Sicyos angulatus* | 4 | 4 | |
| Carpetweed | *Mollugo verticillata* | 8" diameter | | |
| Common Cocklebur | *Xanthium strumarium* | 6 | 4 | |
| Common Purslane | *Portulaca oleracea* | 8" diameter | | |
| Copperleaf, Hophornbeam | *Acalypha ostryifolia* | 6 | 4 | |
| Copperleaf, Virginia | *Acalypha virginica* | 4 | 4 | |
| Croton, Tropic | *Croton glandulosus var. septentrionalis* | 4 | 4 | |
| Croton, Woolly | *Croton capitatus* | 4 | 4 | |
| Devil's Claw | *Probiscidea louisianica* | 4 | 4 | |
| Eclipta | *Eclipta prostrate* | 6 | 4 | |
| Florida Beggarweed | *Desmodium tortuosum* | 2 | 4 | |
| Florida Pusley | *Richardia scabre* | 6 | 4 | |
| Groundcherry, Cutleaf | *Physalis angulata* | 6 | 4 | |
| Groundcherry, Lanceleaf | | 6 | - | |
| Hairy Galinsoga | *Galinsoga quadriradiata* | 4 | 4 | |
| Hemp Sesbania | *Sesbania herbacea* | 6 | 4 | |
| Jimsonweed | *Datura stramonium* | 4 | 4 | |
| Kochia | *Kochia scoparia* | 6 | 2 | |
| Lanceleaf Sage | *Salvia reflexa* | 4 | 4 | |
| Texasweed | *Caperonia palustris* | 4 | 4 | |
| Morningglory, Cypressvine | *Ipomoea quamoclit* | 4 | 3 | |
| Morningglory, Entireleaf* | *Ipomoea hederacea var. integriuscula* | 4 | 3 | |
| Morningglory, Ivyleaf* | *Ipomoea hederacea* | 4 | 3 | |
| Morningglory, Palmleaf* | *Ipomoea wrightii* | 4 | 3 | |
| Morningglory, Pitted* | *Ipomoea lacunose* | 4 | 3 | |
| Morningglory, Purple Moonflower* | *Ipomoea turbinata* | 4 | 3 | |
| Morningglory, Smallflower* | *Jacquemontia tamnifolia* | 4 | 3 | |
| Morningglory, Tall* | *Ipomoea purpurea* | 4 | 3 | |
| Mustard, Wild | *Sinapis arvensis* | 6 | 4 | |
| Nightshade, Black | *Solanum nigrum* | 6 | 5 | |
| Nightshade, Eastern Black | *Solanum ptychanthum* | 6 | 5 | |
| Nightshade, Hairy | *Solanum physalifolium* | 4 | 5 | |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 6 | 3 | |

* For control, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.

(continued)



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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Pigweed, Prostrate | *Amaranthus blitoides* | 6 | 4 | 12.5 (0.2 lb ai.) |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 | |
| Pigweed, Spiny Amaranth | *Amaranthus spinosus* | 6 | 4 | |
| Poorjoe | *Diodia teres* | 6 | 3 | |
| Prickly Sida (Teaweed) | *Sida spinosa* | 4 | 3 | |
| Puncturevine | *Tribulus terrestris* | 1.5 inch diameter | | |
| Ragweed, Common | *Ambrosia artemisiifolia* | 6 | 4 | |
| Ragweed, Giant | *Ambrosia trifida* | 4 | 2 | |
| Showy Crotalaria | *Crotalaria spectabilis* | 4 | 4 | |
| Smellmelon | *Cucumis melo* | 6 | 4 | |
| Sunflower, Common* | *Helianthus annuus* | 2 | 4 | |
| Spurge, Prostrate | *Chamaesyce maculata* | 1.5 inch diameter | | |
| Spurge, Spotted | *Chameasyce maculata* | 4 | 4 | |
| Spurge, Toothed | *Euphorbia dentate* | 4 | 4 | |
| Venice Mallow | *Hibiscus trionum* | 4 | 4 | |
| Waterhemp, Common* | *Amaranthus rudis* | 6 | 3 | |
| Waterhemp, Tall* | *Amaranthus tuberculatus* | 6 | 3 | |
| Wild Poinsettia | *Euphorbia heterophylla* | 4 | 4 | |
| Witchweed | *Striga asiatica* | 6 to 8 inches and prior to bloom | | |

* For control, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.



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| | | | |
|---|---|---|---|
| **Pest(s)** | See Below | **Stage** | Postemergence |
| **Action** | Action Against Pest | **Subaction** | Suppression |
| **Comments** | Efficacy of this product may be diminished If any of the weeds listed below have been previously treated with a postemergence herbicide due to the weeds potentially being under stress. | | |

| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|
| Coffee Senna* | *Senna occidentialis* | 2 | 12.5 (0.2 lb ai) |
| Canada Thistle | *Cirsium arvense* | 6 | |
| Bristly Starbur | *Acanthospermum hispidum* | 6 | |
| Milkweed, Climbing | *Funastrum cynanchoides* | 6 | |
| Milkweed, Common | *Asclepias syriaca* | 6 | |
| Morningglory, Bigroot (Wild Sweet Potato) | *Ipomoea pandurata* | 6 | |
| Redvine | *Brunnichia ovate* | 6 | |
| Smartweed, Swamp | *Polgonum amphibium* | 6 | |
| Trumpetcreeper | *Campsis radicans* | 6 | |
| Smartweed, Pennsylvania | *Polygonum pensylvanicum* | 4 | |
| Spurred Anoda | *Anoda cristata* | 2 | |
| Velvetleaf* | *Abutilon theophrasti* | 4 | |

* For suppression of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.

**TANK MIXES FOR POST-EMERGENCE USE IN SOYBEANS**

This product may be tank mixed with the soybean herbicides listed below. Be sure to refer to tank mix partner's label(s) and follow the most restrictive combination of label restrictions, limitations and precautions. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

| | | |
|---|---|---|
| 2,4-DB | Glyphosate | Flumiclorac |
| Bentazon | Thifensulfuron | Imazaquin |
| Chlorimuron | Alachlor | Clethodim |
| S-Metolachlor | Dimethenamide-P | Acetochlor |
| Cloransulam-methyl | Imazethapyr | |
| Fluazifop | Quizalofop-p-ethyl | |
| Glufosinate | Imazamox | |



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| | | | |
|---|---|---|---|
| **Pest(s)** | See Below | **Stage** | Preplant / Preemergence |
| **Action** | Action Against Pest | **Subaction** | Control |
| **Comments** | This product may be applied as a pre-emergence soil applied herbicide for approximately two weeks of residual control of the annual broadleaf weeds in soybeans listed below.<br>NOTE: Do NOT apply more than 19 fl oz/A (0.3 lb ai) pre-emergence per acre per year.<br>A timely cultivation approximately one week after application will assist in weed control. | | |

| COMMON NAME | SCIENTIFIC NAME | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|
| Nightshade, Black | *Solanum nigrum* | 12.5 – 15.0 (0.2-0.23 lb ai) |
| Nightshade, Eastern Black | *Solanum ptychanthum* | |
| Pigweed, Redroot | *Amaranthus retroflexus* | |
| Pigweed, Smooth | *Amaranthus hybridus* | |
| Copperleaf, Hophornbeam | *Acalypha ostryifolia* | 15.0 – 19.0 (0.23-0.3 lb ai) |
| Copperleaf, Virginia | *Acalypha virginica* | |
| Lambsquarters, Common | *Chenopodium album* | |
| Nightshade, Black | *Solanum nigrum* | |
| Nightshade, Eastern Black | *Solanum phychanthum* | |
| Pigweed, Redroot | *Amaranthus retroflexus* | |
| Pigweed, Smooth | *Amaranthus hybridus* | |
| Ragweed, Common | *Ambrosia artemisiifolia* | |
| Waterhemp, Common | *Amaranthus rudis* | |
| Waterhemp, Tall | *Amaranthus tuberculatus* | |

**TANK MIXES FOR PREPLANT / PRE-EMERGENCE USE IN SOYBEANS**

This product may be tank mixed with the soybean herbicides listed below. Be sure to refer to tank mix partner's label(s) and follow the most restrictive combination of label restrictions, limitations and precautions.

- 2,4-D
- 2,4-DB
- Bentazon
- Chlorimuron
- S-metholachlor
- Pyroxasulfone/Flumioxazin
- Cloransulam-methyl
- Fluazifop
- Flumioxazin
- Glufosinate
- Glyphosate
- Thifensulfuron
- Alachlor
- Dimethenamide-P
- Imazethapyr
- Quizalofop-p-ethyl
- Imazamox
- Flumiclorac
- Imazaquin
- Clethodim
- Acetochlor



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| | | | |
|---|---|---|---|
| **Pest(s)** | White Mold (*Sclerotinia* stem rot)<br>Sudden Death Syndrome (*Fusarium virguliforme*) | **Stage** | Post-Emergence |
| **Action** | Action Against Disease | **Subaction** | Suppression |
| **Comments** | To suppress white mold, this product must be applied *prior* to infection occurring but *after* the soybeans have fully bloomed (R2).<br>NOTE: The effects of this product on white mold are not fungicidal, but involve Systemic Acquired Resistance (SAR). | | |

**APPLICATION INSTRUCTIONS**

Apply 6 – 12.5 fluid ounces of this product per acre at, or just before full bloom (R2).

For best results, use a Crop Oil Concentrate (COC) or Methylated Seed Oil adjuvant at a rate of 1.0 pints per acre, or a non-ionic surfactant at a rate of 0.25% v/v.



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| Use Site | Cotton |
|---|---|
| **Location** | Agricultural (Outdoor) |
| **Comments** | For early season post-emergence control of weeds in cotton, make a post-directed or layby application of this product postemergence as a directed spray application following a preplant incorporated or pre-emergence herbicide. Apply when the cotton plant has reached a minimum height of 6 inches and a height difference of 3 to 5 inches has been established between the lower leaves of the cotton plant and the top of the broadleaf weeds.<br><br>Layby applications of this product will control broadleaf weeds that do not exceed leaf stage directions listed in the table below.<br><br>For best results, this product or tank mixes using this product should be applied to actively growing weeds. ***Use of a crop oil concentrate or a non-ionic surfactant is required.*** For specific directions, refer to the ADJUVANTS AND ADDITIVES section of this label.<br><br>**RESTRICTIONS**<br>• Do NOT apply more than 12.5 fl oz/A (0.20 lb ai/A) of this product per application.<br>• Do NOT exceed a combined rate of 25 fl oz/A (0.40 lb ai/A) of this product per year.<br>• Do NOT make a sequential application of this product within 14 days of the first application.<br>• Do NOT make more than two (2) applications of this product per year.<br>• Do NOT apply within 70 days prior to harvest.<br>• Do NOT graze animals on green forage or stubble.<br>• Do NOT utilize hay or straw for animal feed or bedding.<br>• Do NOT apply Willowood Lactofen 2EC over the top of cotton.<br><br>**COTTON SENSITIVITY**<br>Apply this product to cotton ***only*** as a directed spray application with nozzles set to deliver the spray mixture toward the base of the cotton plant, as specified in the "Timing" and "Application" sections of this label. Lower leaves which are contacted by the spray mixture will appear spotted or light brown to bronze in color. This response will have no effect on the growth or development of the cotton crop, and all growth following application will be normal.<br><br>To ensure full coverage of the weed leaf surfaces while minimizing direct contact of the spray mixture with the upper leaves and terminal area of the cotton plant, there MUST be a height difference of 3-5 inches between the crop and the target weeds prior to application.<br><br>Because this product is a contact herbicide, it will not move throughout the cotton plant and it will not vaporize off the soil surface.<br><br>**APPLICATION TIMING**<br>**Post-Directed (cotton 6" or taller)**<br>This product must be applied to small but actively growing weeds for best results. Set the nozzles so that spray completely covers the weeds but does not hit more than the bottom 2-3" of the cotton stalk or the top of the bark formation.<br><br>**Layby (cotton 12" or taller)**<br>Willowood Lactofen 2EC controls the weeds listed below if they are within the maximum leaf number and the maximum heights. Nozzles should be set to spray no higher than the bottom 1/3 of the cotton stalk (up to the first fruiting node) and still fully cover the target weeds.<br>(continued) |



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| | | | |
|---|---|---|---|
| **Comments** | **TANK MIXES FOR POST-EMERGENCE USE IN COTTON**<br>This product may be tank mixed with the cotton herbicides listed below. Be sure to refer to tank mix partner's label(s) and follow the most restrictive combination of label restrictions, limitations and precautions.<br>Prometryn<br>Fluometuron<br>Diuron<br>Trifloxysulfuron-sodium<br>Glyphosate<br>Glufosinate<br>Linuron<br>MSMA<br>Clethodim<br>S-metolachlor<br>Flumioxazin<br>Acetochlor | | |
| **Pest(s)** | See Below | **Stage** | Post-Emergence |
| **Action** | Action Against Pest | **Subaction** | Control |

**APPLICATION INSTRUCTIONS**
When using this product by itself, make a broadcast application at a rate of 12.5 fl oz (0.2 lb ai) per acre. The sprayer must be equipped with a flat fan or off-center fan nozzles designed to deliver 10 to 30 gals of water per acre when operated at a spray pressure of 20 to 30 PSI measured at the nozzle. Pressures greater than 30 PSI may cause the spray mist to move upward into the cotton canopy resulting in severe crop injury.
**Post-Directed Applications: Cotton 6" or more –** For best results, apply this product to small, actively growing weeds. The nozzle should be set to spray no higher than the bottom 2 to 3 inches of the cotton stalk (or the top of the bark formation) and still fully cover the target weeds. A properly timed directed spray application will provide control of labeled weeds not larger than indicated in the table below.
**Layby Applications: Cotton 12" or more –** Nozzles should be set to spray no higher than the bottom 1/3 of the cotton stalk (up to the first fruiting node) and still fully cover the target weeds. Use of tank mix combinations will provide better control of larger, late season and/or troublesome weeds in cotton.
**CULTIVATION**
Apply a postemergence application as a directed spray at the same time as cultivation, the spray nozzles must be positioned in front of the cultivation equipment. Applying Willowood Lactofen 2EC at the time of cultivation under dry soil conditions will cause excessive dust which will prevent proper contact between Willowood Lactofen 2EC and the weed surface. This reduced contact will decrease weed control activity. In addition, applying Willowood Lactofen 2EC while cultivating at ground speeds greater than 5 mph will prevent good coverage of the weed surface by the spray solution and reduce weed control activity.
**ADJUVANTS**
Weed control over a wide range of application conditions has been enhanced through the use of specified adjuvants. Post-directed application to cotton at least 6" tall: Use either a non-ionic surfactant at 0.25% v/v; **OR** if bark formation has begun crop oil concentrate at a rate of 1 pint per acre (broadcast basis) may be used.
Layby application to cotton 12" tall (or more): Use a crop oil concentrate at 1 to 2 pts per acre (broadcast basis).

| Adjuvant | Post-Directed | Layby |
|---|---|---|
| Non-Ionic Surfactant (NIS) | 0.25% v/v | Not Recommended |
| Crop Oil Concentrate (COC)/Acre | 1 pt./A* | 1 to 2 pt./A |

*Only use COC during a post directed application if bark formation has begun.

(continued)



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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Cocklebur, Common | *Xanthium strumarium* | 4 | 3 | 12.5 (0.2 lb ai) |
| Jimsonweed | *Datura stramonium* | 4 | 3 | |
| Nightshade, Black | *Solanum nigrum* | 4 | 4 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 3 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 3 | |
| Cocklebur, Common | *Xanthium strumarium* | 5 | 4 | |
| Jimsonweed | *Datura stramonium* | 4 | 4 | |
| Nightshade, Black | *Solanum nigrum* | 5 | 4 | |
| Kochia | *Kochia scoparia* | 6 | 2 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 | |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 4 | 2 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 | |
| Ragweed, Common | *Ambrosia artemisiifolia* | 4 | 2 | |
| Waterhemp, Common | *Amaranthus rudis* | 4 | 2 | |
| Waterhemp, Tall | *Amaranthus tuberculatus* | 4 | 2 | |
| Balloonvine | *Cardiospermum halicacabum* | 4 | 4 | |
| Beggarticks, Devils | *Bidens frondosa* | 6 | 4 | |
| Bristly Starbur | *Acanthospermum hispidum* | 4 | 4 | |
| Buffalobur | *Solanum rostratum* | 4 | 4 | |
| Burcucumber | *Sicyos angulatus* | 4 | 4 | |
| Carpetweed | *Mollugo verticillata* | 8" diameter | | |
| Common Cocklebur | *Xanthium strumarium* | 6 | 4 | |
| Common Purslane | *Portulaca oleracea* | 8" diameter | | |
| Copperleaf, Hophornbeam | *Acalypha ostryifolia* | 6 | 4 | |
| Copperleaf, Virginia | *Acalypha virginica* | 4 | 4 | |
| Croton, Tropic | *Croton glandulosus var. septentrionalis* | 4 | 4 | |
| Croton, Woolly | *Croton capitatus* | 4 | 4 | |
| Devil's Claw | *Probiscidea louisianica* | 4 | 4 | |
| Eclipta | *Eclipta prostrate* | 6 | 4 | |
| Florida Beggarweed | *Desmodium tortuosum* | 2 | 4 | |
| Florida Pusley | *Richardia scabre* | 6 | 4 | |
| Groundcherry, Cutleaf | *Physalis angulata* | 6 | 4 | |
| Groundcherry, Lanceleaf | | 6 | - | |
| Hairy Galinsoga | *Galinsoga quadriradiata* | 4 | 4 | |
| Hemp Sesbania | *Sesbania herbacea* | 6 | 4 | |
| Jimsonweed | *Datura stramonium* | 4 | 4 | |
| Kochia | *Kochia scoparia* | 6 | 2 | |
| Lanceleaf Sage | *Salvia reflexa* | 4 | 4 | |

* For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.

(continued)



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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Texasweed | *Caperonia palustris* | 4 | 4 | 12.5 (0.2 lb ai) |
| Morningglory, Cypressvine | *Ipomoea quamoclit* | 4 | 3 | |
| Morningglory, Entireleaf* | *Ipomoea hederacea var. integriuscula* | 4 | 3 | |
| Morningglory, Ivyleaf* | *Ipomoea hederacea* | 4 | 3 | |
| Morningglory, Palmleaf* | *Ipomoea wrightii* | 4 | 3 | |
| Morningglory, Pitted* | *Ipomoea lacunose* | 4 | 3 | |
| Morningglory, Purple Moonflower* | *Ipomoea turbinata* | 4 | 3 | |
| Morningglory, Smallflower* | *Jacquemontia tamnifolia* | 4 | 3 | |
| Morningglory, Tall* | *Ipomoea purpurea* | 4 | 3 | |
| Mustard, Wild | *Sinapis arvensis* | 6 | 4 | |
| Nightshade, Black | *Solanum nigrum* | 6 | 5 | |
| Nightshade, Eastern Black | *Solanum ptychanthum* | 6 | 5 | |
| Nightshade, Hairy | *Solanum physalifolium* | 4 | 5 | |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 6 | 3 | |
| Pigweed, Prostrate | *Amaranthus blitoides* | 6 | 4 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 | |
| Pigweed, Spiny Amaranth | *Amaranthus spinosus* | 6 | 4 | |
| Poorjoe | *Diodia teres* | 6 | 3 | |
| Prickly Sida (Teaweed) | *Sida spinosa* | 4 | 3 | |
| Puncturevine | *Tribulus terrestris* | 1.5 inch diameter | | |
| Ragweed, Common | *Ambrosia artemisiifolia* | 6 | 4 | |
| Ragweed, Giant | *Ambrosia trifida* | 4 | 2 | |
| Showy Crotalaria | *Crotalaria spectabilis* | 4 | 4 | |
| Smellmelon | *Cucumis melo* | 6 | 4 | |
| Sunflower, Common* | *Helianthus annuus* | 2 | 4 | |
| Spurge, Prostrate | *Chamaesyce maculata* | 1.5 inch diameter | | |
| Spurge, Spotted | *Chameasyce maculata* | 4 | 4 | |
| Spurge, Toothed | *Euphorbia dentate* | 4 | 4 | |
| Venice Mallow | *Hibiscus trionum* | 4 | 4 | |
| Waterhemp, Common* | *Amaranthus rudis* | 6 | 3 | |
| Waterhemp, Tall* | *Amaranthus tuberculatus* | 6 | 3 | |
| Wild Poinsettia | *Euphorbia heterophylla* | 4 | 4 | |
| Witchweed | *Striga asiatica* | 6 to 8 inches and prior to bloom | | |

* For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.



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<table>
<tr><th>Use Site</th><th>Peanuts</th></tr>
<tr><td>Location</td><td>Agricultural (Outdoor)</td></tr>
<tr><td>Comments</td><td>
For post-emergence control of weeds in peanuts that do not exceed leaf stage directions listed in the table below, make an application of this product as a directed spray application. Peanuts with 6 or more emerged true leaves are not sensitive to post-emergence applications of this product. Mature peanut leaves treated with Willowood Lactofen 2EC will show some brown speckling and bronzing. Growth of the next 2 true leaves may show some cupping or crinkling of the leaf margins. Subsequent growth will be normal and peanuts quickly outgrow this temporary condition.<br><br>
For best results, this product or tank mixes using this product should be applied to actively growing weeds. Use of a crop oil concentrate or a non-ionic surfactant is required. For specific directions, refer to the ADJUVANTS AND ADDITIVES section of this label.<br><br>
RESTRICTIONS<br>
• Do NOT apply more than 12.5 fl oz/A (0.20 lb ai/A) of this product per application.<br>
• Do NOT exceed a combined rate of 25 fl oz/A (0.40 lb ai/A) of this product per year.<br>
• Do NOT make a sequential application of this product within 14 days of the first application.<br>
• Do NOT make more than two (2) applications of this product per year.<br>
• Do NOT apply within 45 days prior to harvest.<br>
• Do NOT allow livestock to graze treated foliage.<br>
• Do NOT use treated vines for feed or forage.<br><br>
TANK MIXES FOR POST-EMERGENCE USE IN PEANUTS<br>
This product may be tank mixed with the peanut herbicides listed below. Be sure to refer to tank mix partner's label(s) and follow the most restrictive combination of label restrictions, limitations and precautions.
<table>
<tr><td>2,4-DB*</td><td>Chlorimuron</td><td>Dimethenamide-P</td></tr>
<tr><td>Bentazon</td><td>S-metolaclor</td><td>Imazethapyr</td></tr>
<tr><td>Imazapic</td><td>Alachlor</td><td>Clethodim</td></tr>
</table>
*Use only 2,4-DB formulations approved for post-emergence use in peanuts. Add a crop oil concentrate at 1.0 to 2.0 pt/A or a non-ionic surfactant at 0.25% v/v to this mixture. Follow all 2,4-DB label restrictions relative to drift onto sensitive crops.<br><br>
PEANUT SENSITIVITY<br>
Peanuts with 6 or more emerged true leaves are not sensitive to post-emergence applications of this product. Some brown speckling and bronzing of mature peanut leaves will occur and growth of the next 2 true leaves may show some crinkling or cupping of the leaf margins. However, peanuts quickly outgrow this temporary condition and subsequent growth will be normal.
</td></tr>
</table>



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| Pest(s) | See Below | Stage | Post-Emergence |
|---|---|---|---|
| Action | Action Against Pest | Subaction | Control |

**APPLICATION INSTRUCTIONS**
To control early emerged broadleaf weeds, make a single early post-emergence treatment of this product applied at a rate of 12.5 fluid ounces per acre after the peanuts have at least 6 true leaves.

To control weeds that emerge later or weeds that survived the first application, a second post-emergence application of this product applied at a rate of 12.5 fluid ounces per acre may be made *as long as the weeds are still within the labeled growth stage*.

**ADJUVANTS**
Weed control over a wide range of application conditions has been enhanced through the use of specified adjuvants.

Post-directed application to peanut at least 6" tall: Use either a non-ionic surfactant at 0.25% v/v; **OR** if bark formation has begun crop oil concentrate at a rate of 1 pint per acre (broadcast basis) may be used.

Layby application to peanut 12" tall (or more): Use a crop oil concentrate at 1 to 2 pts per acre (broadcast basis).

| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Cocklebur, Common | *Xanthium strumarium* | 4 | 3 | 12.5 (0.2 lb ai) |
| Jimsonweed | *Datura stramonium* | 4 | 3 | |
| Nightshade, Black | *Solanum nigrum* | 4 | 4 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 3 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 3 | |
| Cocklebur, Common | *Xanthium strumarium* | 5 | 4 | |
| Jimsonweed | *Datura stramonium* | 4 | 4 | |
| Nightshade, Black | *Solanum nigrum* | 5 | 4 | |
| Kochia | *Kochia scoparia* | 6 | 2 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 | |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 4 | 2 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 | |
| Ragweed, Common | *Ambrosia artemisiifolia* | 4 | 2 | |
| Waterhemp, Common | *Amaranthus rudis* | 4 | 2 | |
| Waterhemp, Tall | *Amaranthus tuberculatus* | 4 | 2 | |
| Balloonvine | *Cardiospermum halicacabum* | 4 | 4 | |
| Beggarticks, Devils | *Bidens frondosa* | 6 | 4 | |
| Bristly Starbur | *Acanthospermum hispidum* | 4 | 4 | |
| Buffalobur | *Solanum rostratum* | 4 | 4 | |
| Burcucumber | *Sicyos angulatus* | 4 | 4 | |
| Carpetweed | *Mollugo verticillata* | 8" diameter | | |
| Common Cocklebur | *Xanthium strumarium* | 6 | 4 | |
| Common Purslane | *Portulaca oleracea* | 8" diameter | | |
| Copperleaf, Hophornbeam | *Acalypha ostryifolia* | 6 | 4 | |

* For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.

(Continued)



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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Copperleaf, Virginia | *Acalypha virginica* | 4 | 4 | |
| Croton, Tropic | *Croton glandulosus var. septentrionalis* | 4 | 4 | |
| Croton, Woolly | *Croton capitatus* | 4 | 4 | |
| Devil's Claw | *Probiscidea louisianica* | 4 | 4 | |
| Eclipta | *Eclipta prostrate* | 6 | 4 | |
| Florida Beggarweed | *Desmodium tortuosum* | 2 | 4 | |
| Florida Pusley | *Richardia scabre* | 6 | 4 | |
| Groundcherry, Cutleaf | *Physalis angulata* | 6 | 4 | |
| Groundcherry, Lanceleaf | | 6 | - | |
| Hairy Galinsoga | *Galinsoga quadriradiata* | 4 | 4 | |
| Hemp Sesbania | *Sesbania herbacea* | 6 | 4 | |
| Jimsonweed | *Datura stramonium* | 4 | 4 | |
| Kochia | *Kochia scoparia* | 6 | 2 | |
| Lanceleaf Sage | *Salvia reflexa* | 4 | 4 | |
| Texasweed | *Caperonia palustris* | 4 | 4 | |
| Morningglory, Cypressvine | *Ipomoea quamoclit* | 4 | 3 | |
| Morningglory, Entireleaf* | *Ipomoea hederacea var. integriuscula* | 4 | 3 | |
| Morningglory, Ivyleaf* | *Ipomoea hederacea* | 4 | 3 | |
| Morningglory, Palmleaf* | *Ipomoea wrightii* | 4 | 3 | 12.5 (0.2 lb ai) |
| Morningglory, Pitted* | *Ipomoea lacunose* | 4 | 3 | |
| Morningglory, Purple Moonflower* | *Ipomoea turbinata* | 4 | 3 | |
| Morningglory, Smallflower* | *Jacquemontia tamnifolia* | 4 | 3 | |
| Morningglory, Tall* | *Ipomoea purpurea* | 4 | 3 | |
| Mustard, Wild | *Sinapis arvensis* | 6 | 4 | |
| Nightshade, Black | *Solanum nigrum* | 6 | 5 | |
| Nightshade, Eastern Black | *Solanum ptychanthum* | 6 | 5 | |
| Nightshade, Hairy | *Solanum physalifolium* | 4 | 5 | |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 6 | 3 | |
| Pigweed, Prostrate | *Amaranthus blitoides* | 6 | 4 | |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 | |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 | |
| Pigweed, Spiny Amaranth | *Amaranthus spinosus* | 6 | 4 | |
| Poorjoe | *Diodia teres* | 6 | 3 | |
| Prickly Sida (Teaweed) | *Sida spinosa* | 4 | 3 | |
| Puncturevine | *Tribulus terrestris* | 1.5 inch diameter | | |
| Ragweed, Common | *Ambrosia artemisiifolia* | 6 | 4 | |
| Ragweed, Giant | *Ambrosia trifida* | 4 | 2 | |
| Showy Crotalaria | *Crotalaria spectabilis* | 4 | 4 | |

* For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.

(continued)



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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) | APPLICATION RATE (Fl. Oz. / A) |
|---|---|---|---|---|
| Smellmelon | *Cucumis melo* | 6 | 4 | 12.5 (0.2 lb ai) |
| Sunflower, Common* | *Helianthus annuus* | 2 | 4 | |
| Spurge, Prostrate | *Chamaesyce maculata* | 1.5 inch diameter | | |
| Spurge, Spotted | *Chameasyce maculata* | 4 | 4 | |
| Spurge, Toothed | *Euphorbia dentate* | 4 | 4 | |
| Venice Mallow | *Hibiscus trionum* | 4 | 4 | |
| Waterhemp, Common* | *Amaranthus rudis* | 6 | 3 | |
| Waterhemp, Tall* | *Amaranthus tuberculatus* | 6 | 3 | |
| Wild Poinsettia | *Euphorbia heterophylla* | 4 | 4 | |
| Witchweed | *Striga asiatica* | 6 to 8 inches and prior to bloom | | |

* For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.



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| Use Site | Conifer Seedlings and Conifer Nurseries |
|---|---|
| Location | Agricultural (Outdoor) |

**Comments**

Willowood Lactofen 2EC may be applied pre-emergence or post-emergence to outdoor conifer seedlings of the species listed below in seedbeds, containers, as seedling transplants and in conifer plantations (but not in forests) to control broadleaf weeds.

| Common Name | Scientific Name | Common Name | Scientific Name |
|---|---|---|---|
| Fir, Douglas | *Pseudotsuga menzesii* | Pine, Eastern White | *Pinus strobes* |
| Fir, Fraser | *Abies fraseri* | Pine, Jack | *Pinus banksiana* |
| Fir, Grand | *Abies gradis* | Pine, Loblolly | *Pinus taeda* |
| Fir, Noble | *Abies procera* | Pine, Lodgepole | *Pinus contorta* |
| Hemlock, Eastern | *Tsuga canadensis* | Pine, Longleaf | *Pinus palustris* |
| Hemlock, Western | *Tsuga heterophylla* | Pine, Ponderosa | *Pinus ponderosa* |
| Spruce, Blue | *Picea pungens* | Pine, Sand | *Pinus clausa* |
| Spruce, Dwarf Alberta | *Picea glauca conica* | Pine, Scotch | *Pinus sylvestris* |
| Spruce, Norway | *Picea abies* | Pine, Shortleaf | *Pinus echinata* |
| Spruce, Sitka | *Picea sitchensis* | Pine, Slash | *Pinus elliottii* |
| | | Pine, Virginia | *Pinus Virginiana* |

**USE RESTRICTIONS FOR WILLOWOOD LACTOFEN 2EC IN CONIFER SEEDLINGS**

- Do NOT apply when conifers are under stress from animal or winter injury, diseases, planting shock or other stresses.
- Do NOT apply more than 26 fluid ounces per acre in a year.
- Do NOT apply more than 16 fl oz (0.25 lb ai) per acre per application.
- For Southern Pine species only, apply four applications at weekly intervals of 6.5 fl oz/A (0.10 lb ai/A)or two applications at two week intervals of 13 fl oz/A (0.20 lb ai/A). For all other species, do not make more than 2 applications per year.
- Do NOT apply with spray adjuvants if conifer shoot growth is young and has not hardened off.

**CONIFER SENSITIVITY**

Following application, slight needle burn may be observed on the youngest growth. New growth will be normal and, under favorable environmental conditions, the seedlings will continue to grow vigorously.

Plant sensitivity to Willowood Lactofen 2EC at labeled rates has been found to be acceptable for the indicated genera and species listed above. However, due to variability within species, environmental conditions, crop growth stage, and application techniques, prior to widespread application, test on a few plants to determine if the herbicide can be used safely. *Neither the seller nor the manufacturer of Willowood Lactofen 2EC have investigated the safety factor to plants not listed on the label*.



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| | | | |
|---|---|---|---|
| **Pest(s)** | See Below | **Stage** | Pre-Emergence |
| **Action** | Action Against Pest | **Subaction** | Control |

**APPLICATION INSTRUCTIONS**

Apply to weed free, tilled and planted seedbeds or to weed free container grown seedlings after sowing but prior to seedling emergence. Following application and before conifer seedling emergence, the application may be incorporated using 0.25 - 0.5 inches of water. A weed pre-emergence application may be made directly over recently transplanted conifers as long as bud break has not yet occurred.

Thoroughly mix Willowood Lactofen 2EC with clean water and apply at a minimum of 30 PSI in a minimum of 20 gals per acre. Flat fan or hollow cone nozzles are recommended. Applications using less than 20 gallons per acre or less than 30 PSI will NOT provide complete weed coverage resulting in incomplete weed control.

Be sure the nursery species are not sensitive to applications of this product by testing limited areas of each species to be treated prior to complete application.

Do NOT mechanically incorporate this product as the effectiveness of this product will be impacted if the soil is disturbed after a pre-emergence application is made to seedbeds.

| WEEDS CONTROLLED | ADJUVANT | APPLICATION RATE (Fl. Oz. / Acre) |
|---|---|---|
| Clover (*Trifolium* spp.) | Do not use an adjuvant for pre-emergence applications | 8 - 16 (0.125 – 0.25 lb. ai/A) |
| Common Chickweed | | |
| Common Groundsel | | |
| Common Purslane | | |
| Common Ragweed | | |
| Cottonwood (*Populus* spp.) | | |
| Lambsquarters | | |
| Mustard species | | |
| Nightshade species | | |
| Pearlwort | | |
| Pigweed species | | |
| Pineapple weed | | |
| Sowthistle | | |
| Spurge, Prostrate | | |
| Spurge, Spotted | | |
| Willow (*Salix* spp.) | | |



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| Pest(s) | See Below | Stage | Post-Emergence |
|---|---|---|---|
| Action | Action Against Pest | Subaction | Control |

**APPLICATION INSTRUCTIONS**

Thoroughly mix Willowood Lactofen 2EC with clean water and apply at a minimum of 30 PSI in a minimum of 20 gals per acre. Flat fan or hollow cone nozzles are recommended. Applications using less than 20 gallons per acre or less than 30 PSI will NOT provide complete weed coverage resulting in incomplete weed control.

Be sure the nursery species are not sensitive to applications of this product by testing limited areas of each species to be treated prior to complete application.

Make post-emergence applications when weeds are actively growing but no larger than 4 inches in height. The conifer seedlings listed above are not sensitive to post-emergence treatments when the application is made after complete stand emergence and when the primary shoot growth is complete and has hardened off. Some forking and stunting of seedlings may result if this product is applied to newly emerged seedlings. Conifer transplants will tolerate post-emergence treatments when applications are made before bud break or after foliage has had an opportunity to harden off. Slight needle burn may occur on the youngest conifer growth following application. New growth will not be adversely affected and conifers will continue to grow vigorously under favorable environmental conditions.

| WEEDS CONTROLLED | ADJUVANT | APPLICATION RATE (Fl. Oz. / Acre) |
|---|---|---|
| Carpetweed | 0.25% v/v non-ionic surfactant or 0.125% v/v crop oil concentrate (COC)** | 6.5 – 16 * (0.125 – 0.25 lb. ai/A) |
| Clover (*Trifolium* spp.) | | |
| Common Chickweed | | |
| Common Dayflower | | |
| Common Groundsel | | |
| Common Purslane | | |
| Common Ragweed | | |
| Cottonwood (*Populus* spp.) | | |
| Dogfennel | | |
| Eclipta | | |
| Florida Beggarweed | | |
| Florida Pusley | | |
| Hairy Galinsoga | | |
| Mayweed | | |
| Morningglory species | | |
| Mustard species | | |
| Nightshade species | | |
| Pearlwort | | |
| Pigweed species | | |
| Pineapple weed | | |
| Poorjoe | | |
| Prickly Sida | | |
| Showy Crotalaria | | |

* Apply four applications at weekly intervals of 6.5 fl oz/A (0.10 lb ai/A) or two applications at two week intervals of 13 fl oz/A (0.20 lb ai/A) for Southern Pine species only.

**Crop oil concentrate has been proven safe only in Southern Pine conifer species (after primary shoot growth has begun).

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| WEEDS CONTROLLED | ADJUVANT | APPLICATION RATE (Fl. Oz. / Acre) |
|---|---|---|
| Sowthistle | 0.25% v/v non-ionic surfactant<br>or<br>0.125% v/v crop oil concentrate (COC)** | 6.5 – 16 *<br>(0.125 – 0.25 lb. ai/A) |
| Spurge | | |
| Prostrate | | |
| Spotted | | |
| Tropic Croton | | |
| Willow (*Salix* spp.) | | |
| Witchweed | | |
| Yellow Woodsorrell | | |
| * Apply four applications at weekly intervals of 6.5 fl oz/A (0.10 lb ai/A) or two applications at two week intervals of 13 fl oz/A (0.20 lb ai/A) for Southern Pine species only. | | |
| **Crop oil concentrate has been proven safe only in Southern Pine conifer species (after primary shoot growth has begun). | | |



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| Use Site | Kenaf | | |
|---|---|---|---|
| **Location** | Agricultural (Outdoor) | | |
| **Comments** | **CROP INFORMATION**<br>Willowood Lactofen 2EC may be used for post-emergence directed control of broadleaf weeds in kenaf. For early season control of grasses and broadleaf weeds, apply as a directed spray following a pre-plant incorporated or pre-emergence herbicide application. Apply when the Kenaf plant has reached a minimum height of 10 inches and a height difference of 3 to 5 inches has been established between the lower leaves of the kenaf plant and the top of the broadleaf weeds. *Make only a single application of this product to Kenaf per year*.<br><br>NOTE: If this product comes into contact with the kenaf plant, injury may result.<br><br>Post-emergence directed applications of this product or tank mixes containing this product should use equipment designed to minimize spray solution contacting the kenaf plant. This equipment includes spray nozzles positioned a minimum of 3 inches above the soil surface and angled backward so that the spray solution discharges to the rear and underneath the row canopy, nozzles as described above with leaf lifter or shields and/or plastic preformed hooded sprayers positioned to run between the kenaf rows, all of which are designed to help reduce spray contact with the kenaf plant. Willowood Lactofen 2EC is a contact herbicide. It does not move throughout the kenaf plant and it will not vaporize off the soil surface.<br><br>**KENAF SENSITIVITY**<br>**ONLY** apply Willowood Lactofen 2EC to kenaf as a directed spray application with nozzles set to deliver the spray mixture toward the base of the kenaf plant. Lower leaves exposed to the spray mixture will appear spotted or light brown to bronze in color. This response will have no effect on the growth or development of the kenaf crop, and all further growth following application will be normal.<br><br>To ensure full coverage of the weed leaf surfaces while minimizing direct contact of the spray mixture with the upper leaves and terminal area of the kenaf plant, it is *critical* that a height differential of 3 to 5 inches between the crop and the target weeds exists prior to application. | | |
| **Pest(s)** | See Below | **Stage** | Post-Emergence |
| **Action** | Action Against Pest | **Subaction** | Control |



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**APPLICATION INSTRUCTIONS**
NOTE: DO NOT APPLY THIS PRODUCT OVER THE TOP OF KENAF.

**Post-Directed: KENAF 10" or More –** For best results, apply Willowood Lactofen 2EC to small, actively growing weeds. Set nozzles to spray no higher than the bottom 2 - 3 inches of the kenaf stalk and still fully cover the target weeds. A properly timed directed spray application will provide control of labeled weeds not larger than indicated in the table below.

**DIRECTED BAND APPLICATION**
Directed row banding is required for use of Willowood Lactofen 2EC in kenaf. Two nozzles per row, one on each side, are required for postemergence directed application. Tractor ground speed should not exceed 5 mph. The spray equipment used should accurately direct the spray pattern to the base of the kenaf plant to minimize contact with the kenaf plant and provide good coverage of the target weeds. Spray nozzles should be positioned a minimum of 3 inches above the soil surface and angled backward so that the spray solution discharges to the rear and under the row canopy. Use leaf lifters or shields on application equipment to help reduce spray contact with the kenaf plant. Row banding equipment should be adjusted to provide maximum coverage of weeds in the banding area.

**CULTIVATION**
When post-emergence directing this product at the same time as cultivation, the spray nozzle must be positioned in front of the cultivation equipment. Applying Willowood Lactofen 2EC at the time of cultivation under dry soil conditions will cause excessive dust which will prevent proper contact between this product and the weed surface, adversely impacting weed control activity. In addition, applying this product while cultivating at ground speeds greater than 5 mph will prevent good coverage of the weed surface by the spray solution and reduce weed control.

**APPLICATION RATES**
Broadcast apply Willowood Lactofen 2EC to Kenaf that is at least 10" tall at a rate of 12.5 fluid ounces per acre. The sprayer must be equipped with flat fan or off-center fan nozzles designed to deliver a minimum of 10 gallons of water per acre when operated at a minimum spray pressure of 20 PSI measured at the nozzle. Pressures greater than 30 PSI may cause the spray mist to move upward into the kenaf canopy resulting in severe crop injury.

Use of a 1% v/v Crop Oil Concentrate (COC) spray adjuvant will enhance control of the broadleaf weeds.

NOTE: The broadcast rate must be reduced in proportion to the band area actually treated.

| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) |
|---|---|---|---|
| Cocklebur, Common | *Xanthium strumarium* | 4 | 3 |
| Jimsonweed | *Datura stramonium* | 4 | 3 |
| Nightshade, Black | *Solanum nigrum* | 4 | 4 |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 3 |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 3 |
| Cocklebur, Common | *Xanthium strumarium* | 5 | 4 |
| Jimsonweed | *Datura stramonium* | 4 | 4 |
| Nightshade, Black | *Solanum nigrum* | 5 | 4 |
| Kochia | *Kochia scoparia* | 6 | 2 |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 4 | 2 |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 |
| *For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control. | | | |

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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) |
|---|---|---|---|
| Ragweed, Common | *Ambrosia artemisiifolia* | 4 | 2 |
| Waterhemp, Common | *Amaranthus rudis* | 4 | 2 |
| Waterhemp, Tall | *Amaranthus tuberculatus* | 4 | 2 |
| Balloonvine | *Cardiospermum halicacabum* | 4 | 4 |
| Beggarticks, Devils | *Bidens frondosa* | 6 | 4 |
| Bristly Starbur | *Acanthospermum hispidum* | 4 | 4 |
| Buffalobur | *Solanum rostratum* | 4 | 4 |
| Burcucumber | *Sicyos angulatus* | 4 | 4 |
| Carpetweed | *Mollugo verticillata* | 8" diameter | |
| Common Cocklebur | *Xanthium strumarium* | 6 | 4 |
| Common Purslane | *Portulaca oleracea* | 8" diameter | |
| Copperleaf, Hophornbeam | *Acalypha ostryifolia* | 6 | 4 |
| Copperleaf, Virginia | *Acalypha virginica* | 4 | 4 |
| Croton, Tropic | *Croton glandulosus var. septentrionalis* | 4 | 4 |
| Croton, Woolly | *Croton capitatus* | 4 | 4 |
| Devil's Claw | *Probiscidea louisianica* | 4 | 4 |
| Eclipta | *Eclipta prostrate* | 6 | 4 |
| Florida Beggarweed | *Desmodium tortuosum* | 2 | 4 |
| Florida Pusley | *Richardia scabre* | 6 | 4 |
| Groundcherry, Cutleaf | *Physalis angulata* | 6 | 4 |
| Groundcherry, Lanceleaf | | 6 | - |
| Hairy Galinsoga | *Galinsoga quadriradiata* | 4 | 4 |
| Hemp Sesbania | *Sesbania herbacea* | 6 | 4 |
| Jimsonweed | *Datura stramonium* | 4 | 4 |
| Kochia | *Kochia scoparia* | 6 | 2 |
| Lanceleaf Sage | *Salvia reflexa* | 4 | 4 |
| Texasweed | *Caperonia palustris* | 4 | 4 |
| Morningglory, Cypressvine | *Ipomoea quamoclit* | 4 | 3 |
| Morningglory, Entireleaf* | *Ipomoea hederacea var. integriuscula* | 4 | 3 |
| Morningglory, Ivyleaf* | *Ipomoea hederacea* | 4 | 3 |
| Morningglory, Palmleaf* | *Ipomoea wrightii* | 4 | 3 |
| Morningglory, Pitted* | *Ipomoea lacunose* | 4 | 3 |
| Morningglory, Purple Moonflower* | *Ipomoea turbinata* | 4 | 3 |
| Morningglory, Smallflower* | *Jacquemontia tamnifolia* | 4 | 3 |
| Morningglory, Tall* | *Ipomoea purpurea* | 4 | 3 |
| Mustard, Wild | *Sinapis arvensis* | 6 | 4 |
| Nightshade, Black | *Solanum nigrum* | 6 | 5 |
| Nightshade, Eastern Black | *Solanum ptychanthum* | 6 | 5 |

*For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.

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| COMMON NAME | SCIENTIFIC NAME | MAXIMUM NUMBER OF LEAVES | MAXIMUM HEIGHT (INCHES) |
|---|---|---|---|
| Nightshade, Hairy | *Solanum physalifolium* | 4 | 5 |
| Pigweed, Palmer Amaranth* | *Amaranthus palmeri* | 6 | 3 |
| Pigweed, Prostrate | *Amaranthus blitoides* | 6 | 4 |
| Pigweed, Redroot | *Amaranthus retroflexus* | 6 | 4 |
| Pigweed, Smooth | *Amaranthus hybridus* | 6 | 4 |
| Pigweed, Spiny Amaranth | *Amaranthus spinosus* | 6 | 4 |
| Poorjoe | *Diodia teres* | 6 | 3 |
| Prickly Sida (Teaweed) | *Sida spinosa* | 4 | 3 |
| Puncturevine | *Tribulus terrestris* | 1.5 inch diameter | |
| Ragweed, Common | *Ambrosia artemisiifolia* | 6 | 4 |
| Ragweed, Giant | *Ambrosia trifida* | 4 | 2 |
| Showy Crotalaria | *Crotalaria spectabilis* | 4 | 4 |
| Smellmelon | *Cucumis melo* | 6 | 4 |
| Sunflower, Common* | *Helianthus annuus* | 2 | 4 |
| Spurge, Prostrate | *Chamaesyce maculata* | 1.5 inch diameter | |
| Spurge, Spotted | *Chameasyce maculata* | 4 | 4 |
| Spurge, Toothed | *Euphorbia dentate* | 4 | 4 |
| Venice Mallow | *Hibiscus trionum* | 4 | 4 |
| Waterhemp, Common* | *Amaranthus rudis* | 6 | 3 |
| Waterhemp, Tall* | *Amaranthus tuberculatus* | 6 | 3 |
| Wild Poinsettia | *Euphorbia heterophylla* | 4 | 4 |
| Witchweed | *Striga asiatica* | 6 to 8 inches and prior to bloom | |

*For control of these weeds, crop oil concentrate must be used. Ammonium sulfate or liquid nitrogen (28%, 30% or 32%) added to the COC may improve weed control.



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| Use Site | Snap Beans (Oregon and Tennessee ONLY) | | |
|---|---|---|---|
| Location | Agricultural (Outdoor) | | |
| Comments | **CROP INFORMATION**<br>Oregon and Tennessee ONLY – Apply Willowood Lactofen 2EC preemergence to the soil for control of the annual broadleaf weeds listed below in snap bean. | | |
| Pest(s) | See Below | Stage | Preemergence |
| Action | Action Against Pest | Subaction | Control |

**APPLICATION INSTRUCTIONS**

Apply a single preemergence application of this product at the rates listed below. Use the higher rates on clay loam and finer soil textures and lower rate on silt loams and coarser textured soils. Make application after planting but no longer than 48 hours after planting. Incorporate this product with ¼ to ½ inch of water immediately following application. Tank mix this product with an appropriately labeled grass herbicide for preemergence control of grasses.

**Application Rates for Preemergence Application in Snap Beans**

| State | Application Rate | Weeds Controlled | |
|---|---|---|---|
| | | Common Name | Scientific Name |
| Oregon | 8-12 fl. oz./A<br>(0.125-0.19 lb. ai/A) | Hairy Nightshade<br>Black Nightshade<br>Redroot Pigweed | *Solanum sarrachoides*<br>*Solanum nigrum*<br>*Amaranthus retroflexus* |
| Tennessee | 10-16 fl. oz./A<br>(0.16-0.25 lb. ai/A) | Hairy Nightshade<br>Black Nightshade<br>Redroot Pigweed | *Solanum sarrachoides*<br>*Solanum nigrum*<br>*Amaranthus retroflexus* |

**PRECAUTIONS:**

Read and follow all label directions when using this or any pesticide alone or sequentially. Follow the most restrictive labeling when using a tank mix.

Excessive rain at emergence can cause splashing of treated soil resulting in unacceptable damage to snap beans. Usually, this crop response is temporary and beans quickly outgrow the condition without negatively affecting yield or quality. If beans are already under stress at emergence, severe crop response can be aggravated. Avoid field conditions that do not favor quick snap bean emergence which includes soil temperature below 60°F, planting depth less than 1.5 inches and the use of rollers after planting that compacts and seals the soil surface. Flat sealed soil surfaces lead to water ponding and splashing of treated soil during thunderstorms that can splash treated soil directly onto plant leaves.

**RESTRICTIONS:**

**Pre-Harvest Interval (PHI):** 55 days

Do not make more than one (1) application per year.

Applying this product at ground crackling or later will result in injury (necrosis) to snap beans and decreased yield production. Do not apply more than 48 hours after planting.

Do not apply this product preemergence to snap beans planted in high sand soils including fine sandy loams, sandy loams, coarse sandy loams, loamy sands and gravely loams or gravely sandy loams.
Do not apply this product in fields irrigated with a traveling gun sprinkler system. This type of system can result in excessive splashing of treated soil.
Do not soil incorporate this product with mechanical incorporation equipment.



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# STORAGE AND DISPOSAL

**Do NOT contaminate water, food or feed by storage or disposal of this product.**

**PESTICIDE STORAGE**

Store in a cool, dry place. Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Not for use or storage in or around the home.

**PESTICIDE DISPOSAL**

This product is 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.

**CONTAINER HANDLING**

**Nonrefillable containers less than or equal to 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse 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 a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available, or dispose of empty containers in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.



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## Conditions of Sale and Limitation of Warranty and Liability

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Willowood, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Willowood, LLC and Seller harmless for any claims relating to such factors.

Willowood, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Willowood, LLC, and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, WILLOWOOD, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither Willowood, LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF WILLOWOOD, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF WILLOWOOD, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Willowood, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Willowood, LLC.

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# WILLOWOOD
# LACTOFEN 2EC

| ACTIVE INGREDIENT: | By Wt. |
|---|---|
| *Lactofen | 24% |
| OTHER INGREDIENTS: | 76% |
| TOTAL: | 100% |

*2-ethoxy-1-methyl-2-oxoethyl 5-[2-chloro-4-(trifluoromethyl) phenoxy]-2-nitrobenzoate

Contains petroleum distillates.

Contains 2 lbs. of active ingredient per gallon.

## 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.)**

## FIRST AID

**If in eyes:** Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

**If swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies call your poison control center at 1-800-222-1222.

**NOTE TO PHYSICIAN**

Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.

## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles, face shield, or safety glasses. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. This product contains lactofen, which has been determined to cause tumors in laboratory animals (mouse, rat).

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE**

Store in a cool, dry place. Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Not for use or storage in or around the home.

**PESTICIDE DISPOSAL**

This product is 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.

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**See label booklet for additional Precautionary Statements and Directions for Use.**

**EPA Reg. No. 87290-72**

**EPA Est. No. 05905-IA-001 (HD)**
**89332-GA-001 (MA)**
**39578-TX-001 (SE)**
**Letter(s) in lot number correspond to letter(s) following the EPA Est. No.**

**Manufactured For:**
Willowood, LLC
1887 Whitney Mesa Drive # 9740
Henderson, NV 89014-2069

20201016

**NET CONTENTS: 2.5 Gallons**

PEEL BACK BOOK HERE



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# PROOF

## THIS PROOF IS TO BE CHECKED FOR ACCURACY

Please review and approve **Text, Spelling, Copy Placement, Size, Shape, Colors** and **Dieline.**

**Authorized signature** accepts responsibility for accuracy of all copy, color break and artwork. Cimarron Label is not liable for any discrepancies subsequently identified.

**PLEASE NOTE:** Due to color variance between printers/monitors, the colors represented by this proof cannot be deemed accurate. Please refer to a color matching system such as the Pantone Matching System for a truer representation of spot colors.

**THIS PROOF IS NOT ACCURATE FOR COLOR-MATCH.**

*Dieline does not print.*


Cimarron Label
Experts in Extended Text Labeling

4201 North Westport Ave. • Sioux Falls, SD 57107
Phone: (605) 978-0451 • Fax: (605) 978-0463


| DATE | JOB NUMBER | CUSTOMER |
|---|---|---|
| 10/16/20 | 174120 | Willowood |
| **LABEL SIZE** | **BOOKLET SIZE** | |
| 6.75" x 6.75" | 6.5" x 5.75" | |
| **LABEL COLORS** | **BOOKLET OUTSIDE COLORS** | **BOOKLET INSIDE COLORS** |
| BLK | BLK, 111 | BLK |

PATTERN VARNISH: ☒ YES ☐ NO

Form: CS 006B - 3/29/2017

☐ ***ARTWORK IS APPROVED*** ☐ ***REVISED PROOF NEEDED***

***WE CANNOT PROCESS THIS ORDER WITHOUT AN AUTHORIZED SIGNATURE***

**Signed**_____ **Date**_____