

### OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

March 6, 2025

Laurent C. Mézin, Ph.D.
Director of NA Regulatory Affairs
GreenLight Biosciences, Inc.
9 Laboratory Drive, Suite 300
Durham NC, 27709

Subject: PRIA (Pesticide Registration Improvement Act) Labeling and Formulation Amendment –

Removal of tank mix restrictions, updates to company logos, updates to warranty statements, clarifications of product use, modified use instructions, updated use

restrictions.

Product Name: Calantha™

EPA Registration Number: 94614-2 EPA Receipt Date: 01/14/2024 Action Case Number: 00497549

Dear Dr. Mézin:

The amended labeling and Confidential Statements of Formula (CSFs) referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, are acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

Please note that the record for this product currently contains the following acceptable CSFs:

- Basic CSF dated 12/02/2022
- Alternate CSF #1 dated 12/02/2022
- Alternate CSF #2 dated 01/10/2024
- Alternate CSF #3 dated 01/10/2024

Any CSFs other than those listed above are superseded/no longer valid.

The supplemental labeling contains some new and/or revised uses and/or directions that may be additional to the uses and/or directions found on the label on or attached to the container, but the

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supplemental labeling does not by itself constitute the complete set of use directions. The complete set of use directions is set forth on the container label as combined with the supplemental labeling.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 § CFR 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Matt Weiner by phone at (202) 566-1509 or via email at weiner.matthew@epa.gov.

Sincerely,

Digitally signed by ALAN REYNOLDS

14:31:54 -05'00'

Alan Reynolds, Product Manager 94

Emerging Technologies Branch Biopesticides and Pollution

Prevention Division (7511M)

Office of Pesticide Programs

Enclosure: Calantha™ Stamped Label

{Front of label booklet, ALL containers.}



LEDPRONA GROUP 35 INSECTICIDE



# Calantha<sup>™</sup>

Bioinsecticide for control of Colorado Potato Beetle on potato plants

**Active Ingredient:** 

Ledprona (CAS# 2433753-68-3)*	0.8%
Other Ingredients	<u>99.2%</u>
TOTAL	100.0%

<sup>\*</sup> Calantha<sup>TM</sup> contains 0.067 lbs. of ledprona per gallon.

Refer to inside of label booklet for additional precautionary information and *Directions for Use* including *Storage and Disposal*.

Notice: Read the entire label before using. Use only according to label directions. Before buying or using this product, read Conditions, Disclaimer of Warranty, and Limitation of Liability statements at the end of the label booklet. If terms are unacceptable, return unopened at once.

Calantha™ is a trademark of GreenLight Biosciences, Inc., a wholly owned subsidiary of GreenLight Biosciences Holdings, PBC

GreenLight Biosciences, Inc. • 9 Laboratory Drive, Suite 300 • Durham, NC 27709, U.S.A.

# ACCEPTED

03/06/2025

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 2004 100

94614-2

## Keep Out of Reach of Children

## **CAUTION**

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### **FIRST AID**

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

[Net contents:\_\_\_\_\_(Non-refillable)]
[Net contents \_\_\_\_\_(Refillable)]

{Label booklet text, ALL containers.}

## PRECAUTIONARY STATEMENTS

**Hazards to Humans and Domestic Animals** 

### CAUTION

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Applicators and other handlers must wear:

- Long-sleeved shirt and long pants;
- Shoes plus socks:
- Protective eyeware;
- Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N\*,
   R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air purifying respirator with an HE filter.

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

#### **USER SAFETY RECOMMENDATIONS:**

#### User 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. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

For terrestrial use only. 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 wash water or rinsate.

## **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read all directions for use carefully before applying this product. Use only according to label directions. 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 requirement specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### 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, 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 4 hours.

For entry into treated areas that are permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, early-entry workers must wear:

- Coveralls;
- Chemical-resistant gloves (made of any waterproof material);
- Shoes plus socks;
- Protective eyewear;
- Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N\*, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air purifying respirator with an HE filter.

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

### PRODUCT INFORMATION

Calantha<sup>™</sup> is a foliar-applied double stranded RNA (dsRNA) based bio-insecticide for the selective control of Colorado Potato Beetle (*Leptinotarsa decemlineata*) on potato plants. Control of Colorado Potato Beetle with Calantha requires thorough coverage of the crop foliage since it must be ingested by the insect in order to be effective. Calantha works on all life stages of Colorado Potato Beetle except eggs, but is most effective on young larvae in the first or second instar (up to ¼ inch in length). For best results applications should be targeted to the first egg hatch and applied to young larvae if possible. Calantha<sup>™</sup> can also be highly effective against the second generation, provided that the first generation was successfully managed using a different mode of action. Calantha typically causes the larvae to stop feeding

within 2-3 days of application, but it may take up to 7-10 days for treated larvae to die and fall off of the plant.

Apply Calantha with properly calibrated ground sprayers, [or] fixed- or rotary-winged aircraft or through properly designed sprinkler type chemigation equipment using sufficient water to obtain full coverage of foliage. Apply in a minimum of 5 gallons of carrier per acre by air or 10 gallons of carrier per acre by ground unless otherwise specified in this label. When foliage is dense or pest pressure is high (heavier insect pressure or larger larval stages), use of higher application volumes may improve control.

#### **Use Precautions**

## **Integrated Pest Management (IPM) Programs**

Calantha is recommended for IPM programs in potatoes which may include crop rotation, biological, cultural or other practices aimed at reducing Colorado Potato Beetle populations and/or feeding damage. Apply Calantha when field scouting indicates Colorado Potato Beetle densities are approaching the economic threshold, (i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control) but before they are reached. Consult your local extension specialist, certified crop advisor, or other qualified authorities to determine the appropriate action threshold for treating Colorado Potato Beetle in your area. Other than reducing the Colorado Potato Beetle populations, Calantha does not have a significant effect on tested beneficial parasitic insects or the natural predaceous arthropod complex in treated crops. The feeding activities of these beneficials could aid in the natural control of Colorado Potato Beetle and other insects and reduce the likelihood of secondary pest outbreaks. When used without broad spectrum insecticides, Calantha preserves beneficial insects that may be effective as part of an IPM program.

**Scouting:** Monitor Colorado Potato Beetle populations to determine when egg hatch begins and whether or not there is a need to treat with Calantha based on locally determined economic thresholds and pest management guidelines considering that Calantha must be applied early to be most effective. Given its mode of action, Calantha should be applied early - before economic thresholds are reached. Also, given that Calantha is more effective on small larvae, applications should be timed to target small larvae (shortly after egg hatch begins). More than one successive treatment of Calantha is likely required to control Colorado Potato Beetle.

## **Insect Resistance Management (IRM)**

For resistance management, Calantha is a Group 35 insecticide (RNA interference mediated target suppressor). Colorado Potato Beetles are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

To delay the development of insecticide resistance, follow the guidelines below:

- Carefully follow the specific label guidelines within the use directions section of this label, especially in regard to IRM recommendations.
- Two to a maximum of four (2-4) successive applications (Do Not apply more than 4 applications) to control a single generation are acceptable where there are more than one generation of Colorado Potato Beetle per year. However, avoid the use of the same active ingredient or mode of action on consecutive generations of Colorado Potato Beetles. Treat the next or previous generation with an effective product which has an active ingredient with a different mode of action. In areas that have only one full generation of Colorado Potato Beetle per growing season and in Suffolk County on Long Island, New York, do not apply more than 2 applications of Calantha per growing season. In these areas, apply a product with a different mode of action following the 2 applications of Calantha.
- Avoid using less than labeled rates of any insecticide when applied alone or in tank mixtures.
- Target applications against early insect development stages whenever possible.
- Base insecticide use on comprehensive IPM programs including crop rotations, biological, cultural or other practices aimed at reducing Colorado Potato Beetle populations and/or feeding damage.
- Monitor treated insect populations in the field for loss of effectiveness.
- Contact your State or Local Extension Service Specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, contact your local GreenLight Biosciences representative.

#### SPRAY DRIFT ADVISORIES

The applicator is responsible for avoiding off-site spray drift. Be aware of nearby non-target sites and environmental conditions. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all of these factors when making decisions.

## **Importance of Droplet Size**

An effective way to reduce spray drift is to apply larger droplets. Use the largest droplets that still provide thorough coverage of the foliage. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

## Controlling Droplet Size – Ground Boom

- Volume Increasing the spray volume so that larger droplets are produced will reduce spray drift and will result in improved coverage. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

## Controlling Droplet Size - Aircraft

 Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

## **Boom Height – Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

## Release Height - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

### **Shielded Sprayers**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## **Temperature Inversions**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

#### Wind

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### SPRAY DRIFT MANAGEMENT

## **Aerial Applications**

- Do not release spray at a height greater than 10 ft above the vegetative canopy unless a greater application height is necessary for pilot safety.
- The boom length must not exceed 65% of the wingspan for fixed-wing airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

## **Ground Boom Applications**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the crop canopy.
- Do not apply when wind speed is greater than 15 MPH. The best coverage is obtained at wind speeds between 2-10 MPH.
- Avoid applying during temperature inversions.

#### APPLICATION INFORMATION

Proper application techniques help ensure thorough spray coverage of the crop foliage and the correct dosage necessary to obtain optimal control. Apply Calantha with properly calibrated ground sprayers, fixed- or rotary-winged aircraft [or through properly designed sprinkler type chemigation equipment] using sufficient water to obtain full coverage of foliage. When foliage is dense or pest pressure is high (heavier insect pressure or larger larval stages), use of higher application volumes may improve control.

**Ground application**: Use calibrated, power-operated ground spray equipment capable of providing uniform coverage of the target crop. Orient the boom and nozzles in a manner to minimize boom height, to optimize crop coverage uniformity, maximize deposition, and reduce spray drift. Use a

minimum of 10 gallons per acre application volume of spray solution. Higher application volumes will provide better coverage and may result in improved performance. It is recommended to use hollow cone, disc-core hollow cone, flat fan, or twin jet flat fan nozzles suitable for insecticide spraying in order to optimize coverage.

**Aerial application**: Apply in a minimum of 5 gallons of carrier per acre. Higher application volumes will provide better coverage and may result in improved performance. Nozzle orientation should ideally provide a medium to fine droplet size per ASABE S-572 standard. Adhere to the minimum safe application height – not greater than 10 feet above the crop canopy. The boom length must not exceed 65% of the wingspan for fixed-wing airplanes or 75% of the rotor blade diameter for helicopters.

Under low humidity and high temperatures, increase application volume in order to compensate for evaporation of spray droplets.

Chemigation application: Calantha may be applied through a properly equipped chemigation system and should only be applied through overhead sprinkler type irrigation systems which provide uniform coverage of the crop canopy. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended. Apply this product through the following types of irrigation systems: center pivot, lateral move, side (wheel) roll, micro sprinkler, hand move or solid set irrigation systems which will provide uniform coverage of the crop foliage. Do not apply Calantha through any other type of irrigation system. Crop injury or lack of effectiveness can result from non-uniform distribution of treated water. Applications should be made as concentrated as possible. Calantha should be applied in less than 0.2 inches of irrigation. Do not allow irrigation water to collect or runoff during chemigation; do not allow pooling of irrigation water. Inject Calantha downstream of any water filtration system.

A pesticide supply tank is recommended for the application of Calantha in chemigation systems. The pesticide supply tank holding the solution containing Calantha should be free of rust, fertilizer, sediment and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

GreenLight Biosciences recommends the use of a clean water source which is free of sediment and has low bacterial counts both in the pesticide supply tank and in the irrigation system. GreenLight Biosciences also recommends maintaining agitation of the solution containing Calantha in the pesticide supply tank during the entire operation.

Wear personal protective equipment as defined in the PPE section of the label for applicators and other handlers when making adjustments or repairs on the chemigation system when Calantha is in the irrigation water. When

application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

**Chemigation Equipment Preparation**: Thoroughly clean the chemigation system and pesticide supply tank of any fertilizer or chemical residues and dispose of the residues according to federal and state laws. Flush the injection system with soap or a cleaning agent and water.

Chemigation Equipment Calibration: In order to calibrate the irrigation system and injector to apply the mixture containing Calantha, follow these steps: 1) Calculate the number of acres irrigated by the system; 2) Calculate the amount of product required and premix; 3) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 4) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of the mixture needed by the number of minutes for the system to cover the treated area. This value equals the gallons per minute that the injector or eductor must deliver. Convert the gallons per minute to ounces per minute. Calibrate the injector pump with the system in operation at the desired irrigation rate. Calibrate the injector pump at least twice before operation and monitor it during the operation. If you have questions about calibration, you should contact your State or Local Extension Service Specialists, equipment manufacturers or other experts.

Injection into the chemigation system: Inject the proper amount of Calantha into the irrigation water flow using a positive displacement injection pump or a Venturi injector. Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water. To ensure uniform mixing of the insecticide into the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so that the turbulence created at these points will assist in mixing. For continuously moving systems, inject the solution containing Calantha into the irrigation water line continually and uniformly throughout the irrigation cycle. For overhead sprinkler systems that are stationary, add the solution containing Calantha to the irrigation water line near the end of the irrigation cycle.

## Chemigation specific requirements:

- Do not connect an irrigation system (including greenhouse systems)
  used for pesticide application to a public water system unless the
  pesticide label- prescribed safety devices for public water systems are
  in place.
- The system must contain a functional check valve, vacuum relief valve, and a low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural and Biological Engineers Practice 409

for more information or state specific regulations.

- The pesticide injection line must contain a functional, automatic, quickclosing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where the pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. An electronic powered pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- Use of public water supply requires approval of a back flow prevention device or air gap (preferred) by both state and local officials. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a
  functional, reduced-pressure zone, back flow preventer (RPZ) or the
  functional equivalent in the water supply line upstream from the point of
  pesticide injection. As an option to the RPZ, the water from the public
  water system should be discharged into a reservoir tank prior to pesticide
  introduction. There shall be a complete physical break (air gap) between
  the flow outlet end of the fill pipe and the top or overflow rim of the
  reservoir tank of at least twice the inside diameter of the fill pipe.
- Do not enter the treated area during the reentry interval specified in the Agricultural Use Requirements section of this label.

## Chemigation specific recommendation:

• Calantha may be applied to potatoes by chemigation at 16 fl. oz per acre.

#### **Tank Mix Directions**

**Mixing Directions - Calantha Alone:** Fill the spray tank with water to about one-half of the required spray volume. Start agitation and add the required amount of Calantha. Continue agitation while mixing and filling the spray tank to the required volume. Maintain adequate agitation during application to ensure uniform application of the spray mixture.

Calantha - Tank Mix: Calantha may be tank-mixed with other pesticides which are registered for use on potatoes to enhance or broaden insect control or to control other pests or otherwise enhance crop production, provided the labels for Calantha and the tank-mix partner do not prohibit such mixing. When tank-mixing, read and follow the labeled precautionary statements, directions for use, pests controlled, and other restrictions for each tank-mix product. When tank mixing Calantha with other products including foliar fertilizers, conduct a compatibility test (jar test) using the same relative proportions of the tank mix ingredients prior to mixing them in the spray tank. Add proportionate amounts of each tank mix ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let it sit for 15 minutes. Poor mixing or formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used. If the tank mix is not compatible, a higher water volume, reduced rate of the tank mix partner(s), reduced number of tank mix partners or a compatibility agent may be required. Vigorous, continuous agitation during mixing, filling, and throughout application is required for all tank mixtures.

For all tank mixtures, 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.

**Mixing Order for Tank Mixes:** Fill the spray tank with water to about one-half of the required spray volume and start agitation. Add different formulation types in the order listed below. Allow time for complete dispersion and mixing after the addition of each product. Additional time should be allowed for wettable powder and dry flowable formulations to disperse.

Add different formulation types in the following order:

- 1. Water soluble bag(s) (WSB)
- 2. Water soluble granules (SG)
- 3. Water dispersable granules (WG, XP, DF)
- 4. Wettable powders (WP)

Maintain agitation and fill spray tank to 3/4 of the total spray volume and then add:

- 5. Water-based solutions including Calantha
- 6. Suspoemulsions (SE)
- 7. Oil based suspension concentrations (OD)
- 8. Emulsifiable concentrates (EC)
- 9. Spray adjuvants, surfactants and oils
- 10. Foliar fertilizers
- 11. Drift retardants

Finish filling the spray tank. Maintain vigorous agitation throughout mixing, final filling and application. If spraying and agitation must be stopped before the spray tank is empty, the spray solution must be resuspended before spraying is resumed.

**Use of adjuvants:** In some situations, the use of an adjuvant may help improve leaf wetting, deposition, coverage and pest control. Follow these guidelines when using an adjuvant with Calantha:

- Use only adjuvant products which are labeled for agricultural use and follow the manufacturer's recommendations.
- When using adjuvants, always conduct a jar test to determine compatibility of the mixture. Confirm crop safety of the mixture by treating a small area of the target crop.
- Use only adjuvants that are non-phytotoxic to potatoes.
- While other adjuvant types may help improve pest control in some situations, latex based adjuvants or paraffin-based mineral oils have shown the most consistent improvement in pest control in research trials. Confirm the choice of specific adjuvants in your local conditions through your State Extension Service Specialists or other local experts.

## **Application Rate Reference Table**

Application Rate of Calantha (fl oz/acre)	Active Ingredient Equivalent (lb ai/acre)	Active Ingredient Equivalent (oz ai/acre)	Acres per gallon of Calantha
[12]	[0.0063]	[0.1]	[10.7]
16	0.0083	0.134	8

#### **USE DIRECTIONS**

Crop	Pest	Use rate (fl oz/acre)
Potato	Colorado Potato Beetle	[12-]16

#### **REMARKS**

- 1. [Apply higher rate within the listed range for heavier infestations, larger/denser crop canopy or extreme environmental conditions such as rainy weather and high temperatures.] Repeat applications may be necessary to protect new foliage and to control newly emerging larvae.
- 2. Recommended interval between applications: 7-10 days, or 5-7 days under heavy infestation.
- 3. Calantha is most effective on young larvae. Therefore, apply Calantha when field scouting indicates Colorado Potato Beetle densities or feeding damage are approaching the economic threshold, (i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control) but before they are reached ideally at approximately 10-50% egg hatch, aiming for 10-20% egg hatch in high pressure situations. Consult your local extension specialist, certified crop advisor, or other qualified authorities to determine the appropriate action threshold for treating Colorado Potato Beetle in your area.
- 4. Calantha<sup>™</sup> is recommended for use preferentially on the first generation of Colorado Potato Beetle. Calantha<sup>™</sup> can also be used against the second generation, provided that the first generation was successfully managed using a different mode of action.
- 5. In some situations, the use of an adjuvant may help improve leaf wetting, deposition, coverage and pest control. While other adjuvant types may help improve pest control in some situations, latex based adjuvants or paraffin-based mineral oils have shown the most consistent improvement in pest control in research trials. The choice of specific adjuvants should be confirmed in your local conditions through your State Extension Service Specialists or other local experts.
- 6. Calantha may be applied to potatoes by overhead sprinkler chemigation at 16 fl oz/acre.

## **USE RESTRICTIONS**

- For resistance management, in areas that have only one full generation of Colorado Potato Beetle per growing season and in Suffolk County on Long Island, New York, do not apply more than 2 applications of Calantha per growing season. In these areas, an effective product with a different mode of action should be applied following the 2 applications of Calantha.
- 2. For resistance management, in areas that have more than one full generation of Colorado Potato Beetle per growing season, do not apply more than 4 applications of Calantha on a single generation. When treating previous or subsequent generations, use an effective product with a different mode of action to control these other generations.
- 3. Do not make more than 4 applications per calendar year.
- 4. Do not apply more than 64 fl oz per acre (0.53 oz ai per acre) per calendar year.
- 5. [Not for use in California.]

#### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

## **Container Handling**

**Non-refillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Refillable Container. Refill this container with pesticide only. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return to point of sale. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) 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.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimers of Warranty and Limitation of Liability before using this product. If the terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimers of Warranty and Limitation of Liability.

CONDITIONS: The user or buyer is responsible for properly using, handling, storing and maintaining the product in accordance with the label, specifications and other handling directions, as applicable. The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors (without limitation) as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of GreenLight Biosciences, Inc. All such risks shall be assumed by the user or buyer.

DISCLAIMERS OF WARRANTY: To the extent consistent with applicable law, GreenLight Biosciences, Inc. makes no warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise regarding the company or this product. No agent of GreenLight Biosciences, Inc. is authorized to make any representations or warranties. To the extent consistent with applicable law, GreenLight Biosciences, Inc. disclaims any liability whatsoever for special, incidental, indirect, exemplary, punitive, lost profits or revenues, or consequential damages arising out of, relating to, in connection with, or resulting from the use or handling of this product.

LIMITATION OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall be at GreenLight Biosciences' election, the replacement of product or refund of the purchase price paid. Subject to applicable law, in no event shall GreenLight Biosciences' aggregate liability arising out of, in connection with, or otherwise related to this product exceed the purchase price paid for such product.

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{Base of label booklet, ALL containers. This will be firmly attached to the container}



LEDPRONA GROUP 35 INSECTICIDE



# Calantha<sup>™</sup>

**Bioinsecticide for control of Colorado Potato Beetle on potato plants** 

Active Ingredient:	
Ledprona (CAS# 2433753-68-3)*	0.8%
Other Ingredients	<u>99.2%</u>
TOTAL	100.0%
* Calantha™ contains 0.067 lbs. o	of ledprona per gallon.

## . . .

# Keep Out of Reach of Children

## **CAUTION**

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### **FIRST AID**

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

Refer to inside of label booklet for additional precautionary information and *Directions for Use* including *Storage and Disposal*.

Notice: Read the entire label before using. Use only according to label directions. Before buying or using this product, read Conditions, Disclaimer of Warranty, and Limitation of Liability statements at the end of the label booklet. If terms are unacceptable, return unopened at once.

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#### Storage and Disposal

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

Pesticide Storage: Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

Pesticide Disposal: Wastes resulting from the

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling** 

Non-refillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Refillable Container. Refill this container with pesticide only. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return to point of sale. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

See attached booklet for complete container disposal directions including triple rinsing and pressure rinsing instructions.

[Net contents:_	(Non-refillable)]
[Net contents _	(Refillable)]

{Supplemental label}

# **Supplemental Label**



# Calantha<sup>™</sup>

Bioinsecticide for control of Colorado Potato Beetle on potato plants EPA Reg. No. 94614-2

This supplemental labeling in addition to the product label on the container must be in the possession of the user at the time of application.

Read the entire label affixed to the container and this supplemental label before applying.

This supplemental label expires on 30 December 2026.

Attention: the updated language on this supplemental label modifies the use directions to the following:

#### **Tank Mix Directions**

**Mixing Directions - Calantha Alone:** Fill the spray tank with water to about one-half of the required spray volume. Start agitation and add the required amount of Calantha. Continue agitation while mixing and filling the spray tank to the required volume. Maintain adequate agitation during application to ensure uniform application of the spray mixture.

Calantha – Tank Mix: Calantha may be tank-mixed with other pesticides which are registered for use on potatoes to enhance or broaden insect control or to control other pests or otherwise enhance crop production, provided the labels for Calantha and the tank-mix partner do not prohibit such mixing. When tank-mixing, read and follow the labeled precautionary statements, directions for use, pests controlled, and other restrictions for each tank-mix product. When tank mixing Calantha with other products including foliar fertilizers, conduct a compatibility test (jar test) using the same relative proportions of the tank mix ingredients prior to mixing them in the spray tank. Add proportionate amounts of each tank mix ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let it sit for 15 minutes. Poor mixing or formation of precipitates that do not readily re-disperse indicates an incompatible mixture that should not be used. If the tank mix is not compatible, a higher water volume, reduced rate of the tank mix partner(s), reduced number of tank mix partners or a compatibility agent may be required. Vigorous, continuous agitation during mixing, filling, and throughout application is required for all tank mixtures.

For all tank mixtures, 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.

**Mixing Order for Tank Mixes:** Fill the spray tank with water to about one-half of the required spray volume and start agitation. Add different formulation types in the order listed below. Allow time for complete dispersion and mixing after the addition of each product. Additional time should be allowed for wettable powder and dry flowable formulations to disperse.

Add different formulation types in the following order:

- 1. Water soluble bag(s) (WSB)
- 2. Water soluble granules (SG)
- 3. Water dispersable granules (WG, XP, DF)
- 4. Wettable powders (WP)

Maintain agitation and fill spray tank to 3/4 of the total spray volume and then add:

- 5. Water-based solutions including Calantha
- 6. Suspoemulsions (SE)
- 7. Oil based suspension concentrations (OD)
- 8. Emulsifiable concentrates (EC)
- 9. Spray adjuvants, surfactants and oils
- 10. Foliar fertilizers
- 11. Drift retardants

Finish filling the spray tank. Maintain vigorous agitation throughout mixing, final filling and application. If spraying and agitation must be stopped before the spray tank is empty, the spray solution must be resuspended before spraying is resumed.

**Use of adjuvants:** In some situations, the use of an adjuvant may help improve leaf wetting, deposition, coverage and pest control. Follow these guidelines when using an adjuvant with Calantha:

- Use only adjuvant products which are labeled for agricultural use and follow the manufacturer's recommendations.
- When using adjuvants, always conduct a jar test to determine compatibility of the mixture. Confirm crop safety of the mixture by treating a small area of the target crop.
- Use only adjuvants that are non-phytotoxic to potatoes.
- While other adjuvant types may help improve pest control in some situations, latex based adjuvants or paraffin-based mineral oils have shown the most consistent improvement in pest control in research trials. Confirm the choice of specific adjuvants in your local conditions through your State Extension Service Specialists or other local experts.

#### **Application Rate Reference Table**

Application Rate of Calantha (fl oz/acre)	Active Ingredient Equivalent (lb ai/acre)	Active Ingredient Equivalent (oz ai/acre)	Acres per gallon of Calantha
[12]	[0.0063]	[0.1]	[10.7]
16	0.0083	0.134	8

#### **USE DIRECTIONS**

Crop	Pest	Use rate (fl oz/acre)
Potato	Colorado Potato Beetle	[12-]16

#### **REMARKS**

- 7. [Apply higher rate within the listed range for heavier infestations, larger/denser crop canopy or extreme environmental conditions such as rainy weather and high temperatures.] Repeat applications may be necessary to protect new foliage and to control newly emerging larvae.
- 8. Recommended interval between applications: 7-10 days, or 5-7 days under heavy infestation.
- 9. Calantha is most effective on young larvae. Therefore, apply Calantha when field scouting indicates Colorado Potato Beetle densities or feeding damage are approaching the economic threshold, (i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control) but before they are reached ideally at approximately approximately 10-50% egg hatch, aiming for 10-20% egg hatch in high pressure situations. Consult your local extension specialist, certified crop advisor, or other qualified authorities to determine the appropriate action threshold for treating Colorado Potato Beetle in your area.
- 10. Calantha<sup>™</sup> is recommended for use preferentially on the first generation of Colorado Potato Beetle. Calantha<sup>™</sup> can also be used against the second generation, provided that the first generation was successfully managed using a different mode of action.
- 11. In some situations, the use of an adjuvant may help improve leaf wetting, deposition, coverage and pest control. While other adjuvant types may help improve pest control in some situations, latex based adjuvants or paraffin-based mineral oils have shown the most consistent improvement in pest control in research trials. The choice of specific adjuvants should be confirmed in your local conditions through your State Extension Service Specialists or other local experts.
- 12. Calantha may be applied to potatoes by overhead sprinkler chemigation at 16 fl oz/acre.]

### [FPL20240930]

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