April 13, 2022

## **PROBLAD VERDE**

13585.1

## FIFRA Section 24(c) Supplemental Label For Use on Coffee to control Coffee Leaf Rust

#### FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF HAWAII

EPA REG. No.: 84876-2 EPA SLN No.: HI-220001

This label expires and must not be distributed or used in accordance with this SLN registration after April 12, 2027.

# ACTIVE INGREDIENT: Banda de Lupinus albus doce (BLAD)\* OTHER INGREDIENTS: 100%

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This state-specific Section 24(c) labeling must be in the possession of the user at the tie of application.
- Follow all applicable directions, restrictions, and precautions on the EPA registered label for EPA Reg. No. 84876-2.

### **GENERAL INFORMATION**

PROBLAD VERDE is a broad spectrum, preventive biofungicide formulated as a suspension concentrate containing 2.1 lbs active ingredient per gallon extracted from germinated seeds of *Lupinus albus* plants. It is a contact product with translaminar properties which presents a multisite Mode of Action (MOA) with a very low probability of resistance developing over time. This MOA is an excellent fit into current, standard fungicide programs as an effective, resistance management tool for use in IPM programs. PROBLAD VERDE stands apart from existing products with its own biological mode of action FRAC Group, BM 01, as a truly novel MOA.

PROBLAD VERDE is a biofungicide for the control of Coffee Leaf Rust (*Hemileia vastatrix*) disease in coffee and may be used according to the pattern described in the table under "USE DIRECTIONS". In order to optimize its use, PROBLAD VERDE should be integrated into adapted programs, with application preferably made prior to onset of disease development for preventative control. All spray applications must be made with suitable equipment that is in good working order and correctly calibrated and appropriate spray volume to give the desired coverage for that particular method of application.

**Preparation of the Spray Solution:** Insure the spray tank is clean and free of residues from previous spray treatments. Fill the spray tank ¾ full with clean water. Shake the container and pour the required amount of PROBLAD VERDE into the sprayer tank while the tank agitation system is operating. Add specified amount of PROBLAD VERDE while filling with the

<sup>\*</sup>BLAD is a naturally-occurring seed storage protein in sweet lupines; it is a 20 kDa polypeptide of β-conglutin, or characterized as a fragment of the amino acid sequence of β-conglutin.

1 gallon of PROBLAD VERDE contains 2.1 lbs of BLAD protein.

appropriate amount of water into the spray tank. Maintain agitation. Do not store the mixture overnight.

**Spray Volume:** Make applications of PROBLAD VERDE by conventional sprayers that are calibrated to deliver no less than 50 gallons of spray solution per acre. Maintain the rate per acre regardless of spray volume or tree size, except as noted under "GENERAL". Increase spray volume as crop growth increases to ensure thorough coverage of the foliage and fruit. Check equipment calibration frequently. Complete coverage and uniform application are essential for the most effective results, especially when lower spray volumes are applied. Increase spray volume as crop growth increases to ensure thorough coverage of the foliage and fruit.

When using an airblast sprayer, the equipment should be operated at proper ground speeds, adequate spray pressures and spray volumes to assure that the air volume within the tree canopy is completely replaced by the output from the airblast sprayer resulting in proper coverage of the target crop. Alternate row middle application patterns should be avoided since this application method may result in less than satisfactory coverage and poor performance in conditions of high pest infestation levels, extremely large trees and/or dense foliage.

Compatibility: Do not tank mix with products containing a prohibition against tank mixing. PROBLAD VERDE may be mixed with foliar fertilizers, provided that the fertilizer is added after PROBLAD VERDE has been diluted to the recommended field application. Follow the most restrictive labelling requirements of any tank mix product. To determine the physical compatibility of PROBLAD VERDE with other products use a jar test. The following procedure should be followed: Pour the specified proportions of the products into a suitable container of one quart of water; mix thoroughly and allow to stand for at least 15 minutes. If the combination remains mixed or can be re-mixed readily, the mixture is considered a homogeneous solution and physically compatible. If separation occurs (e.g. oils float to top, clumps of solids form, etc.), the combination is incompatible and cannot be used. For further information, contact your local CEV representative.

**Pre-Harvest Interval:** Do not harvest until 1 day after last application.

**Integrated Pest Management (IPM):** Integrate PROBLAD VERDE into a disease management strategy that follows practices known to reduce disease development and prevent fungicide resistance. Consult local agricultural advisors for specific IPM strategies meeting the specific crop and location.

## **USE DIRECTIONS (Applications, Rates, Timings)**

### **COFFEE**

APPLICATION INSTRUCTIONS		
CROP	DISEASE	RATE OF PROBLAD VERDE
Coffee	Coffee Leaf Rust (CLR) (Hemileia vastatrix)	45.7 fl oz/A (0.75 lb ai/A)

**GENERAL:** Apply PROBLAD VERDE in the adequate spray volume to achieve thorough coverage of leaves and berries up to the point of run-off.

PROBLAD VERDE is most effective when applied before or around the onset of disease development. Apply at critical timings for disease control. Begin treatments prior to

extensive rain season and or when environmental conditions are conducive for disease development and reproduction.

If disease symptoms are evident, spray the leaves and the orange color spores directly. Apply to the top and bottom surface of all coffee leaves.

PROBLAD VERDE requires two to four hours drying time on plant foliage for the active ingredient to be fixed into the plant tissue before rain or irrigation occurs. If, during the next 12 hours it rains significantly, a new application will be needed during the next 4 days.

- Do not make more than five foliar applications of PROBLAD VERDE per crop season.
- Do not make more than two sequential applications of PROBLAD VERDE before alternating or tank mixing with a labeled fungicide with a different mode of action.
- Do not harvest until 1 day after last application.

24(c) Registrant: CEV, S.A.

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