UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 30, 2017

Dr. Matthew Brooks
Ag-Chem Consulting, LLC
Agent for AG Nubio, Inc.
12644 Chapel Road
Clifton, VA 20124

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – adding corn, soybeans, and peanuts and updating application rate to grapes, and lettuces
Product Name: BioRend
EPA Registration Number: 91664-1
Application Date: 05/31/2017
OPP Decision Number: 530129

Dear Dr. Brooks:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is 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.

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 (EPA). 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 the 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 the EPA find or if it is brought to our attention that a website contains false

or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the 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 Cody Kendrick by phone at (703) 347-0468 or via email at kendrick.cody@epa.gov.

Sincerely,

Andrew Bryceland, Team Leader
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

BIOREND®

Plant Defense Booster

ACCEPTED
06/30/2017
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 91664-1

BIOREND® is a registered trademark of BioAgro, SA

ACTIVE INGREDIENT:
Chitosan (poly-D-glucosamine)*……..2.5%
OTHER INGREDIENT:……97.5%
Total……100.0%
*Contains 0.22 pounds of active ingredient per gallon of product (equivalent to 26 grams of active ingredient per liter of product)

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 91664-1
EPA Est. No.

Net Contents
Ag NuBio, Inc.
11125 N. Ambassador Dr. Ste. 120
Kansas City, MO 64153

See side/back panels for additional precautionary statements

PRECAUTIONARY STATEMENTS

HAZARDS, TO HUMANS AND DOMESTIC ANIMALS
CAUTION: Wear the appropriate Personal Protective Equipment (PPE)

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Applicators, mixers, loaders and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.

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
Users should:

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS
Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate. Do not allow runoff into lakes, streams, ponds or public waterways.

PHYSICAL OR CHEMICAL HAZARDS
For spill, leak, fire, exposure, or accident call CHEMTREC at 1-800-424-9300.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

BIOREND® is a Plant Defense Booster. The active ingredient in BIOREND® is derived from basic carbohydrate source. Application of BIOREND® elicits phytoalexins in the plant's defense system protecting against certain plant pathogens.

BIOREND® stimulates the growing of roots and culms by using the SAR (Systemic Acquired Resistance) mechanism, which allows plants to explore a greater volume of soil and, therefore, to absorb more water and nutrients, to become stronger and

healthier, less susceptible to attacks on the root system, to allow the healing of wounds, to reduce post-transplanting dehydration in sowing and transplanting species

When used as directed on this label BIOREND® can boost seed germination and vitality, stimulate emergence and sprouting, enhance plant vigor, promote root growth, promote foliar growth, increase crop yields, improve crop vigor and quality, suppress diseases and pathogens, activate plant resistance to environmental stress, drought and disease pressure, including the suppression of plant parasitic nematodes**.**

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, and greenhouses.

Do not enter treated area without protective clothing until sprays have dried.

MIXING AND APPLICATION INSTRUCTIONS

Preparation of sprays: Fill the application container up to 1/3 of its capacity. Add BIOREND® according to the recommended dose with the agitation system on and make up to volume with water. To improve solution of water and BIOREND®, use water of pH 6.5 or lower. If pH of the water is over 6.5, use a buffer to reduce pH to 6.5.

Compatibility: To determine the physical compatibility of BIOREND® with any other product, use a small container to mix a small amount (e.g. 1 pint) of spray solution, containing all ingredients in the same order and ratio as the anticipated use. If any indication of physical incompatibility develops, do not use this mixture for spraying. Indications of incompatibility usually appear within 5-15 minutes after mixing. Read and follow all directions and precautions on this label and on the other labels of any products for which a tank mixture is being considered. To improve compatibility, use water of pH 6.5 or lower. If pH of the water is over 6.5, use a buffer to reduce pH to 6.5. When mixing with other products, add the other product(s) to water of pH 6.5 or lower and add the BIOREND® to the mixture last.

Phytotoxicity: BIOREND® is not phytotoxic in the labeled application doses and crops.

Chemigation Directions:

"The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow."

"The pesticide injection pipeline must contain a functional, automatic, quick-closing 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 inter-locking controls to automatically shut off the pesticide injection pump when the water pump motor stops."

"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 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."

Use a pesticide supply tank for the mixing and application of BIOREND® in chemigation systems.

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

First prepare a suspension of BIOREND® in the supply tank by filling the tank with ½ to ¾ the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of BIOREND® and then the remaining volume of water. When mixing with other products, add the other product(s) to water of pH 6.5 or lower and add the BIOREND to the mixture last. The suspension of BIOREND® must be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

Maintain continuous agitation in the supply tank during mixing and application to assure a uniform suspension.

For center pivot and other continuously moving sprinkler systems, set system to apply 0.1 to 0.3 inches of water with the required amount of mixture evenly and continuously throughout the irrigation cycle.

For solid set, wheel-line, drip, micro sprinkler or other stationary system applications, introduce the correct amount of BIOREND® mixture from the supply tank into the irrigation water during the middle one-third of the irrigation cycle.

Cleaning Application Equipment

To prevent contamination of the dilute solution of BIOREND® by possible pesticides or other chemical residues in the spraying equipment, make sure that the equipment is thoroughly clean before and after use.

Use Rates, Crops, Application Timing and Method

Crop	BIOREND® Use Rate	Number of Applications	Application Time	Application Methods
Corn, Soybeans, Peanuts	0.5 Gallons/Acre (0.11 lbs. ai./acre)	4-6	In-furrow at planting followed by foliar sprays every 7 to 14 days beginning at V3 on corn, R2 on soybean and pegging on peanuts	Foliar Spray and/or In-furrow
Grapes, Kiwi, Lemons, Oranges, Clementine, Grapefruit, Limes, Tangerines, Peaches, Apricot, Nectarines, Cherry, Apple, Pear, Olive, Blueberry, Raspberry, Blackberry, Avocado, Walnut, Almond, Hazelnut	New Plantings 1.1 gallons/acre (0.24 lbs. ai./acre) Mature Plantings 2.1 gallons/acre (0.46 lbs. ai./acre)	1-2 depending on the general condition of the plants	At peak activity in the roots	Inject into drip or sprinkler irrigation system
Strawberry	½ gallon/acre (0.11 lbs. ai./acre)	2-4	At peak activity in the roots	Inject into drip or sprinkler irrigation system
Potato	0.8 gallons/acre (0.19 lbs. ai./acre)	4	Every 10 days, starting 30 days after planting	Inject into drip or sprinkler irrigation system

Crop	BIOREND® Use Rate	Number of Applications	Application Time	Application Methods
Garlic	5% by volume mixture (64 fluid ounces/10 gallons mixture) (0.11 lbs. ai./10 gallons mixture)	1	Seed	Immerse seed in solution for 15 minutes prior to planting
Onion Transplant production	1% by volume mixture (12.8 fluid ounces/10 gallons mixture) (0.022 lbs. ai./10 gallons)	3	Make weekly applications starting 30 days prior to transplanting.	Sprinkle soil to wet surface or seedlings to point of runoff
Onion Transplanting	3% by volume mixture (38.4 fluid ounces/10 gallons mixture) (0.066 lbs. ai./10 gallons)	1	Transplanting	Immerse roots in mixture for 30 seconds prior to transplanting
Greenhouse Tomato	1.5% by volume mixture (19.2 fluid ounces/10 gallons mixture) (0.033 lbs. ai./10 gallons)	1	Seed	Immerse seeds in mixture for 30-second prior to planting
	0.54 to 1.1 gallons/acre (0.12 to 0.24 lbs. ai/acre)	4	Apply every 7 days starting 10 days after planting	Inject into drip or sprinkler irrigation system
	1.1 to 1.6 gallons/acre (0.24 to 0.35 lbs. ai/acre)	4	Apply every 7 days starting at beginning of physiological maturity	Inject into drip or sprinkler irrigation system

Crop	BIOREND® Use Rate	Number of Applications	Application Time	Application Methods
Grapes,	0.55 to 1.41 Gallons/Acre (0.12 to 0.31 lbs. ai./acre)	5 – 6	2 apps at 20 cm shoots then 3 to 4 apps from fruit set up to 20 days before harvest	Foliar spray
Kiwi	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	5 – 6	2 apps at 20 cm shoots then 3 to 4 apps from fruit set up to 20 days before harvest	Foliar spray
Lemon, Orange, Clementine, Grapefruit, Lime, Tangerine	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	3 - 4	Spring - Summer	Foliar Spray
Peach, Apricot, Nectarine, Cherry, Plum, Prune, Olive	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	3 – 4	Starting at Bloom and every 7 days, up to 4 applications	Foliar Spray
Apple, Pear	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	3 – 4	One application at fruit set. Then starting in mid-June every 10 days up to 4 applications	Foliar Spray
Blueberry, Raspberry, Blackberry	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	3-4	From sprouting up to fruit-set	Foliar Spray
Walnut, Almond, Hazelnut	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	4-6	Start in bloom with female flower exposed Repeat every 7 to 10 days	Foliar Spray

Crop	BIOREND® Use Rate	Number of Applications	Application Time	Application Methods
Beans, Carrots, Celery, Cucumbers, Eggplant, Garlic, Ginseng, Herbs, Leek, Lentils, Lettuce, Melons, Onions, Peas, Peppers, Potatoes, Pumpkins, Squash, Strawberries, Sweet Potatoe Tomatoes	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	4 - 6	Start 25 days after transplanting. Repeat every 10 days up to 6 applications	Foliar Spray
Lettuce, including leaf and head lettuce	0.55 to 1.41 Gallons/Acre (0.12 to 0.31 lbs. ai./acre)	4-6	Start 25 days after transplanting. Repeat every 10 days up to 6 applications	Foliar Spray
<u>Greenhouse and Nursery Plant</u>: Potted plants Flowers (roses, etc) Vegetables Herbs Shrubs, Fruit trees Vines, Avocado	1% by volume mixture (12.8 fluid ounces/10 gallons mixture) (0.022 lbs. ai./10 gallons)	4 - 6	Apply every 7 days up to 6 applications	Foliar spray to run-off (25 to 200 gallons / acre).(0.06 to 0.44 lbs. ai./acre)

Crop	BIOREND® Use Rate	Number of Applications	Application Time	Application Methods
Nurseries Eucalyptus and Pine Trees	5 % by volume mixture (0.5 gallons /10 gallons mixture) (0.11 lbs. ai./10 gallons)	2	30 and 60 days after emergence	Foliar spray 0.35 fluid ounces of 5% mixture/plant
Eucalyptus transplants	15% by volume mixture (1.5 gallons/10 gallons mixture) (0.33 lbs. ai./10 gallons)	1	Transplanting	Dip roots of seedlings in mixture prior to transplanting
Pine tree transplants	20% by volume mixture (2 gallons/10 gallons mixture) (0.44 lbs. ai./10 gallons)	1	Transplanting	Dip roots of seedlings in mixture prior to transplanting
Turf: Bent grass Bermuda grass Bluegrass Centipede grass Dichondra Fescue Rye grass Wheat grass Zoysia grass St. Augustine	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	4 - 6	When grass Is actively growing Repeat applications on 7 day intervals as needed	Inject into irrigation line or apply as a Foliar Spray
Cereal Grains: Barley Oats Rice Wheat	0.55 to 1.1 Gallons/Acre (0.12 to 0.24 lbs. ai./acre)	4 - 6	Begin prior to period of normal disease development Repeat on 7 day intervals as needed	Inject into irrigation line or apply as a Foliar Spray

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool dry place. Avoid freezing.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Do not contaminate water when disposing of equipment wash water or rinsate. Pesticide wastes may be toxic. Improper disposal of unused pesticide, wash water or rinse water is a violation of federal law.

Container Handling: **Nonrefillable Container (five gallons or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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 1/4 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Warranty Statement

Ag NuBio warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used

in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials or the manner of use or application, all of which are beyond the control of Ag NuBio To the extent consistent with applicable law, Ag NuBio shall not be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. To the extent consistent with applicable law, the exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or at Ag NuBio election, the replacement of this product. Ag NuBio MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.