

April 4, 2000

Verdant Brands, Inc.
7501 Harps Mill Road
Raleigh, NC 27615-5422

Attention: Stacy S. Hartis

Subject: Powdered Cube
EPA Registration No. 769-414
Your letter of January 18 and February 22, 2000

We have reviewed your revised label and Confidential Statement of Formula (CSF) and have the following comments.

A. Revised Labeling

The labeling submitted with the above letter under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable provided that you make the following change and submit one (1) copy to us before you ship your product:

1. Revise your "Statement of Practical Treatment" as follows:

FIRST AID	
Have label with you when obtaining treatment advice.	
If swallowed	<ul style="list-style-type: none"> •Call a poison control center, doctor, or 1-800-xxx-xxxx (toll free number optional) immediately for treatment advice. •Have person sip a glass of water if able to swallow. •Do not induce vomiting unless told to do so by the poison control center or doctor.
If on skin or clothing	<ul style="list-style-type: none"> •Take off contaminated clothing. •Rinse skin immediately with plenty of water for 15-20 minutes. •Call a poison control center, doctor, or 1-800-xxx-xxxx immediately for treatment advice.

If inhaled	<ul style="list-style-type: none"> •Move person to fresh air. •If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. •Call a poison control center, doctor, or 1-800-xxx-xxxx immediately for treatment advice.
If in eyes	<ul style="list-style-type: none"> •Hold eye 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 eye. •Call a poison control center, doctor, or 1-800-xxx-xxxx immediately for treatment advice.

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of this condition.

A copy of the stamped label is enclosed for you records.

B. Revised CSF

The revised CSF is acceptable provide you change you the upper and lower certified limits to "5.25" and "4.75", the values used on your CSF of April 6, 1999. All other versions of your CSF are obsolete. Submit a copy of your revised CSF.

If you have any questions about this letter, please contact me by phone (703-305-5407), fax (703-305-6596), or E-Mail (peacock.dan@epa.gov).

Sincerely,



Daniel B. Peacock, Biologist
 Insecticide-Rodenticide Branch
 Registration Division (7504C)

- Enclosure: 1. Stamped Label
 2. Minimum Type Size Requirements

RESTRICTED USE PESTICIDE
Due to Aquatic Toxicity, Acute Oral and Inhalation Toxicity

For retail sale to, and use only by, Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

POWDERED CUBE'
 Contains 5% Rotenone

For Control of Fish in Lakes and Ponds

ACCEPTED
 with **COMMENTS**
 in EPA Letter Dated:

APR 4 2000

ACTIVE INGREDIENTS:

Rotenone
 Other Associated Resins

INERT INGREDIENTS:

Total:

Under the Federal Insecticide,
 Fungicide, and Rodenticide Act
 as amended, for the pesticide
 registered under EPA Reg. No. 769-414

5.0%	7.5%
87.5%	100.0%

EPA Reg. No. 769-414

EPA Est. No. 769-GA-1

KEEP OUT OF REACH OF CHILDREN

DANGER/POISON

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Fatal if inhaled or swallowed. Harmful if absorbed through the skin. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not breath dust. Use a dust filtering respirator (MSHA/NIOSH approval number prefix TC-21C). Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

If Inhaled: Remove victim to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. Get medical attention.

If Swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious do not give anything by mouth and do not induce vomiting.

If On Skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish. Fish kills are expected at recommended rates. Consult your State Fish and Game Agency before applying this product to public waters to determine if a permit is needed for such an application. Do not contaminate untreated water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS:

Use against fish in lakes, ponds, and streams (immediately above lakes and ponds).

Since such factors as pH, temperature, depth, and turbidity will change effectiveness, use this product only at locations, rates, and times authorized and approved by appropriate state and Federal fish and wildlife agencies. Rates must be within the range specified in the labeling.

Properly dispose of dead fish and unused product. Do not use dead fish as food or feed.

Do not use water treated with rotenone to irrigate crops or release within 1/2 mile upstream of a potable water or irrigation water intake in a standing body of water such as a lake, pond, or reservoir.

APPLICATION DIRECTIONS

Treatment of Lakes and Ponds

1. Application Rates and Concentration of Rotenone

The actual application rates and concentrations of rotenone needed to control fish will vary widely, depending on the type of use (e.g., selective treatment, normal pond treatment, etc.) and the factors listed above. The table below is a general guide for the proper rates and concentrations.

2. Total Amount of Powdered Cube' needed for treatment for treatment

To determine the total number of pounds needed for treatment, divide the number of acre-feet covered by one pound for a specific type of use (e.g., selective treatment, etc.) as indicated in the table below, into the number of acre-feet in the body of water.

General Guide to the Application Rates and Concentrations of Rotenone Needed to Control Fish in Lakes and Ponds¹

<u>Type of Use</u>	<u>Number of Acre-Feet Covered by one pound</u>	<u>Parts per Million</u>	
		<u>Active Rotenone</u>	<u>Powdered Cube</u>
Selective Treatment	3.7 to 2.8	0.005 - 0.007	0.10 - 0.13
Normal Pond Use	0.74 to 0.37	0.025 - 0.050	0.5 - 1.0
Remove Bullheads or Carp	.37 to .185	0.050 - 0.100	1.0 - 2.0
Remove Bullheads or Carp in Rich Organic Ponds	.185 to 0.093	0.100 - 0.200	2.0 - 4.0
Pre-impoundment	.123 to 0.074	0.150 - 0.250	3.0 - 5.0

¹ Adapted from Kinney, Edward 1965. Rotenone in Fish Pond Management. USDI. Washington, D.C. Leaflet FL-576.

Computation of acre feet for lake or pond: An acre-foot is a unit of water volume having a surface area of one acre and a depth of one foot. Make a series of transects across the surface, taking depths with a measured pole or weighted line. Add the measurements and divide by the number made to determine the average depth. To compute total acre-feet, multiply this average depth by the number of surface acres, which can be determined from an aerial photograph or plat drawn to scale.

3. Method of Application

Distribute Powdered Cube' evenly over the surface of the water and agitate to mix thoroughly. This may be accomplished by spraying on the surface and running back and forth with an outboard motor boat or a slurry of the Powdered Cube' can be prepared and poured directly behind the outboard motor or put material in a burlap sack and trail behind motor boat. Frequent kneading of bag is necessary. In small ponds distribution may be accomplished by pouring a slurry directly behind the outboard motor while the boat is pulled up on the bank. It may be necessary to move the boat to several different locations to get thorough distribution. Where ponds have been partially drained, small ponds and muck areas should also be treated.

4. Restocking

Waters treated with this product detoxify within 2 to 4 weeks, depending on pH, temperature, water hardness, and depth. To determine if detoxification has occurred, place live boxes containing samples of fish to be stocked in the treated waters. More rapid detoxification can be accomplished by adding chlorine or potassium permanganate to the water at the same rate as Powdered Cube' in parts per million plus enough additional to meet the chlorine demand of the untreated water.

Treatment of Streams Immediately Above Lakes and Ponds

The purpose of treating streams immediately above lakes and ponds is to improve the effectiveness of lake and pond treatments and not to control fish in streams per se. The term "immediately" means the first available site above the lake or pond where treatment is practical.

In order to treat a stream immediately above a lake or pond, you must select a concentration of active rotenone, compute the flow rate of the stream, calculate the application rate, select an exposure time, estimate the amount of product needed, and follow the method of application.

1. Concentration of Active Rotenone:

Select the "Concentration of Active Rotenone" based on the type of use from those on the table. For example, if you select "Normal Pond Use" you could select a concentration of "0.025 Parts per Million"

2. Computation of Flow Rate for Stream:

Select a cross section of the stream where the banks and bottom are relatively smooth and free of obstacles. Divide the surface width into 3 equal sections and determine the water depth and surface velocity at the center of each section. In slowly moving streams, determine the velocity by dropping a float attached to 5 feet of loose, monofilament fishing line. Measure the time required for the float to move 5 feet. For fast-moving streams, use a longer distance. Take at least three readings at each point. To calculate the flow rate from the information obtained above, use the following formula:

$$F = \frac{W_s \times D \times L \times C}{T}$$

Where F = flow rate (cu. ft./sec.), W_s = surface width (ft.), D = mean depth (ft.), L = mean distance traveled by float (ft.), and T = mean time for float (sec.).

For example, after using the above formula, you might have computed the stream's flow rate to be "10 cu ft per sec"

3. Calculation of Application Rate:

In order to calculate the application rate (expressed as pound per sec"), you convert the rate in the table (expressed as "pound per acre-foot"), to "pound per cu feet" and multiply by the flow rate (expressed as "cu ft per sec") Depending on the size of the stream and the type of equipment, the rate could be expressed in other units, such as "ounce per hr".

The application rate for the stream is calculated as follows:

$$R_s = R_p \times C \times F$$

where R_s = Application Rate for Stream (lb/sec), R_p = Application Rate for Pond (lb/acre feet), C = 1 acre foot/43560 cu. ft., and F = Flow Rate (cu ft/sec).

In the example, the Application Rate for Stream would be:

$$R_s = 1 \text{ lb}/0.74 \text{ acre-foot} \times 1 \text{ acre-foot}/43560 \text{ cu ft} \times 10 \text{ cu ft/sec}$$

$$R_s = .00031 \text{ lb/sec or } 17.9 \text{ oz/hr.}$$

4. Exposure Time

The "Exposure Time" would be the period of time (expressed in hours or seconds) during which target fish should not enter the lake or pond under treatment. In the example, this period of time could be 4 hours.

5. Amount of Product

Calculate the "Amount of Product" for a stream by multiplying the "Application Rate for Stream" by the "Exposure Time". In the example, the "Amount of Product" would be 71.6 oz (17.9 oz/hr x 4 hr) or 4.5 lb.

6. Method of Application

Prepare a slurry of Powdered Cube and pour directly into center of stream with the amount of product and at the application rate as calculated in the above instructions.

RE-ENTRY STATEMENT

Do not allow swimming in rotenone-treated water until the application has been completed and all pesticide has been thoroughly mixed into the water according to labeling instructions.

STORAGE AND DISPOSAL

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

Storage: Store only in original container, in a dry place inaccessible to children and pets.

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

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

IMPORTANT: Read these entire Directions and Conditions of Sale before using this product. **DISCLAIMER:** SureCo warrants that this product conforms to the chemical description on the label and is reasonably fit for the specific purposes referred to in the Directions For Use, subject to the inherent risks referred to above. SureCo makes no other express or implied warranty of fitness or merchantability nor any other express or implied warranty. In no case shall SureCo be liable for consequential, special, or indirect damages resulting from the use, handling or application of this product.

NOTICE: Buyer assumes all risks of use, storage, or handling of this material not in strict accordance with directions given herewith.

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per EPA stamped label dated 1/3/00