

United States
Department of
Agriculture

Forest
Service

R-4

Reply to: 3450

Date: January 22, 1990

Subject: Western Bark Beetle Working Group--1990 Project Funding

To: Chief

The Western Bark Beetle Working Group met in Boise, Idaho, on October 16-19 at the Statehouse Inn. The purpose of the meeting was to: 1) review the results of the 1989 field projects, 2) discuss proposed projects for 1990, and 3) determine locations and funding needs for the 1990 field projects.

Several projects were identified as high priority studies for the 1990 field season. Narratives describing these projects are enclosed including the 1989 results and expected results for 1990; an estimate of the total project costs; project location; and the lead scientist for each project.

The total funding needs for the Western Regions to evaluate bark beetle semiochemicals in FY 1990 are \$153,000. This request represents only the projects needing additional funding to be completed. Several other semiochemical projects are being conducted by the Regions through existing funds within the Regions. Any questions or comments can be directed to the lead scientist for the specific project, or by contacting me (DG - D.HOLLAND:R04A or FTS 586-5257).

/s/ David G. Holland

DAVID G. HOLLAND
Group Leader, FPM
State and Private Forestry

Enclosure

cc:
Regions 1-6,10
WO-FPM(Weiss)
Beetle Work Group

DHOLLAND:clb:1/15/90

BARK BEETLE WORKING GROUP FUNDING REQUEST
SEMIOCHEMICAL PROJECTS - FY90

MOUNTAIN PINE BEETLE

VERBENONE

GROUND APPLICATION:

1) Bubble Caps a)

- Refine Amman Study - Lodgepole pine
- 20/40caps/acre
- Location: Sawtooth NRA, REGION 4 (WEATHERBY)
- Cost: \$30K - Region contribute \$12K NEEDED: \$18K

- Results from 1989 showed 40 caps/acre was successful in reducing tree mortality to an acceptable level. The 40 caps per acre rate is considered operational. The 1990 study will evaluate a reduced rate of 20 caps per acre. If 20 caps per acre is effective, it will significantly reduce treatment costs.

a) - Ponderosa Pine

- 40/68/80+ caps/acre
- Location: Region 4/2 (Munson, Raimo)
- Cost: \$25K NEEDED: \$25K

- This is an extension of the work completed in lodgepole pine. The technique would be evaluated using the same study design as the 1987 lodgepole study.

AERIAL: - Repeat 1989 Study in Lodgepole pine

- 525 Bead
- New Biodegradable Bead
1 lb. vs. 2 lbs./acre
- Contact PheroTech to extend Env. Use Permit
- Location: Region 1 (Gibson, Shea, Daterman)
- Cost: \$60K - Contributed: PSW-\$15K, R1-\$15K NEEDED: \$30K

- Results were inconclusive in 1989. This is a high priority project for the Western Regions because of the need to treat campgrounds, more remote administrative sites, and to develop the technology for using with MCH.

WESTERN PINE BEETLE

VERBENONE:

1) - Bubble Cap Application

- Location: Region 4 (Thier)
- Cost: \$30K No contribute NEEDED:\$30K

- This is a project that will use the study design for the 1987 MPB Verbenone study. WPB is a significant pest of old and second growth stands in Regions 3,4,& 5.

SPRAY & BAIT:

- Continue 1989 Project
- Location: Region 4 (Thier)
- Cost: \$30K Contributed-\$10K NEEDED:\$20K

- Results from 1989 indicated this technique was very successful in manipulating beetle pressure over small areas. Treatments need to be followed for two years.

BAIT & CUT:

- Evaluate the number of baits/acre
- Location: Region 4 (Thier)
- Cost: \$5K Contributed

- In 1989 a small field trial was conducted to evaluate baiting small areas to be clearcut. preliminary results are good. Additional works needs to be done to evaluate the number of baits per acre. Areawide effects will be evaluated using aerial photography.

PREVENTIVE SPRAY:

- Continue 1989 Pyrethroid Project
- Location: Region 4 (Hoffman, Shea)
- Cost: \$10K Contributed R4-\$5K NEEDED:\$5K

- Results from this study need to be followed through the 1990 field season to determine how many years the treatment is effective. Preliminary results indicated the high rate (.025%) of esfenvalerate demonstrated acceptable efficacy. All rates of cyfluthrin were effective for the entire season. In 1990, treated trees will be baited to "challenge" them for attack using pheromone baits.

DOUGLAS-FIR BEETLE

TRAP TREE EVALUATION:

- Evaluate baited trap trees for DFB suppression
- Location: Region 4 (Thier)
- Cost: \$10K NEEDED: \$10K

- Evaluate the use of baited lethal trap trees to suppress DFB
- This is a new project.

SPRUCE BEETLE

BAIT & CUT:

- Containment Strategy - Alaska
- Location : Region 10 (Holsten)
- Cost: \$15K NEEDED: \$15K

- Recent Canadian studies show frontalin & alpha-pinene in polyethylene vials places on 50m interval grid had significantly higher numbers of attacked spruce. The pattern of attacked trees indicated an effective range for the baits of 25 m. The effective range of these baits needs to be evaluated.