

Reply to: 3400

Date: October 28, 1994

Subject: Bark Beetle Steering Committee TDP Priorities

To: Chief

Enclosed is the list of priority needs developed by the National Bark Beetle Steering Committee during their annual meeting. Because of the timing for our meeting, we were not able to provide a list of priority needs that could be submitted with the Technology Development Project call letter (your 9/27 3400 letter).

The purpose of our annual meeting was to review the bark beetle-related activities conducted in 1994 and to determine the 1995 needs and priorities. The needs were identified based on the results of the 1994 field season, results from research projects that were ready for technology development implementation, current issues and needs, and the "National Bark Beetle Five Year Strategy."

Generally, our needs can be categorized as: semiochemicals for monitoring and managing bark beetle populations; susceptibility and risk rating systems for bark beetles; management tools for introduced species; and defining the historic role of insects and diseases for ecosystem analysis and evaluation.

As soon as it is completed, you will receive a copy of the report of the annual meeting.

/S/ IRAL R. RAGENOVICH

IRAL R. RAGENOVICH  
Chair, National Bark Beetle Steering Committee

Enclosure

cc:  
FPM Directors/Group Leaders R 1-6, 8, and 10  
FPM Director, NA  
N.Lorimer, WO  
P.Janiga, MAG  
B.Eav, FHC  
D.Ross, OSU  
W.Webb, OSU  
Bark Beetle Steering Committee  
Jack Barry, Davis

1995 Technology Development Priority Needs  
National Bark Beetle Steering Committee

**WESTERN**

1. Continued development and validation of plume model for determining the distribution of eluted semiochemicals in the stand atmosphere, and to sample pheromone plumes emitted from standing attacked trees to estimate atmospheric concentrations effective in repelling bark beetles.
2. Test the efficacy of lower doses of MCH bubble capsules for protecting Douglas-fir from Douglas-fir beetle attack.
3. Develop mountain pine beetle susceptibility/risk rating in southwestern ponderosa pine.
4. Develop techniques for determining historical disturbance regimes in fir, pine, and spruce forests on the Colorado Plateau.
5. Test different semiochemicals for their ability to prevent attacks by Ips pini in ponderosa pine slash.
6. Evaluate new technologies in multispectral analysis/remote sensing (such as the Xybian camera) for determining signatures of bark beetle stressed trees.
7. Test reduced verbenone dosage rates for roundheaded pine beetle.
8. Develop a preliminary hazard rating system for Ips perturbatus in managed and unmanaged stands of white spruce.
9. Test the efficacy of host chemicals to repel Ips perturbatus in damaged and stressed stands of white spruce.
10. Determine the effects of applications of fertilizer and lime to thinned and unthinned stands of spruce to enhance resistance to spruce beetle.
11. Determine the ecological role of Ips pini under presettlement conditions in old growth situations and as a bioindicator of forest health.

**EASTERN**

1. Operational use of methyl chavicol and verbenone for southern pine beetle disruption.
2. Use of bolts for trapping *Tomicus*:
  - determine bolt size and species in relation to attack density
  - determine effective trapping range of alpha-pinene and trap logs
3. Inhibitory effect of methyl chavicol and verbenone for *Tomicus*.
4. Biological control agents for *Tomicus*.