

CONE AND SEED INSECT NEWSLETTER^{1/}

February 1983

1. General

(Cameron, TFS, Lufkin, TX)

The size of this year's Cone and Seed Insect Newsletter is not representative of the activity concerning cone and seed insects which occurred during 1982. However, it may well represent a trend, in part due to budget cuts. Since this is a compilation of voluntary contributions, I have not included information or recent publications which were not submitted to me as a result of the call for contributions. Based on this year's response, there appears to be little use in continuing to compile and distribute the Cone and Seed Insect Newsletter.

Most of you are members of the International Union of Forestry Research Organizations (IUFRO) Cone and Seed Insects Working Party and receive the newsletter compiled and distributed by Dr. Harry O. Yates III, chairman of the working party. The IUFRO Newsletter has been distributed every 6 months (January and June) from 1978 through the present; it has an extensive world-wide distribution and its content is similar to that of the Cone and Seed Insect Newsletter, however, it may lack some of the informality and free exchange of information characteristic of the original newsletter.

It might be best to discontinue this newsletter and in the future send items of interest to Harry Yates for inclusion in the IUFRO Cone and Seed Insects Working Party Newsletter. Harry is in favor of this proposition. However, if it is the consensus of the group to continue the Cone and Seed Insect Newsletter in its present form, I will be happy to serve as compiler for another year to complete my 3 year term.

Please express your opinion on this matter by checking the appropriate box and/or writing your comments on the attached sheet and returning it to me. The results of this survey will be sent to the people on the Cone and Seed Insect Newsletter mailing list in April, and if necessary the matter could be discussed at the IUFRO Cone and Seed Insects Working Party Conference to be held in Athens, GA, from July 31 through August 6, 1983.

^{1/} Contributions submitted by persons working with cone and seed insects and assembled by R. Scott Cameron, Texas Forest Service, Lufkin, TX. This unpublished information cannot be cited without the contributor's approval.

(Schenk, Univ. of Idaho, Moscow, ID)

I have nothing of great significance to report other than that budget crunches are taking a heavy toll on cone and seed insect work.

Russ Clausen hopefully will finish his PhD research on the bioenergetic relationships of the insects infesting Douglas-fir cones and seeds. We will be able to give details in the next newsletter.

A new project on the influence of time of nitrogen fertilization on cone (seed) production and losses to insects in a DF seed production area will be initiated in 1983, assuming the planned funding and graduate students are still available.

(Meso, USFS, FPM, Portland, OR)

A program is being developed in the Northwest to determine if pesticide use in seed orchards will cause tree seed chromosome damage. The Regional Geneticist, Region 6, is working with the Pacific Northwest Forest and Range Experiment Station's Genetic Improvement Group and the Oregon State Seed Testing Laboratory to develop a standard procedure for detecting genetic damage. This program will measure germination rate and seedling abnormality of selected seed lots. Root tip chromosome analysis will be made of suspected seed lots to confirm damage.

(Yates, USFS, SEFES, Athens, GA)

With the abolishment of 6 positions, a number of significant personnel changes have occurred in the USDA Forest Service's Cone and Seed Insects of Southern Forests Research Work Unit located at Athens, Georgia. Research entomologists Dr. Bernard H. Ebel transferred to Olustee, Florida, where he is assigned to the Integrated Pest Management Research Work Unit; and Dr. Jack C. Nord transferred to the Research Triangle Park in North Carolina where he is assigned to the Insecticide Evaluation Research Work Unit. Ms. Eunice B. Tshabalala, research biologist, has assumed a clerical position at Athens. Dr. Gerry Fedde, who headed up the Unit's biological control work, has left the USDA Forest Service. In addition, one clerical and one technician position were abolished.

Remaining members of the Research Work Unit include Harry O. Yates III, supervisory research entomologist; Gary L. DeBarr, research entomologist; William G. Lewis and Michael G. Cody, technicians; and Nan Cain, project secretary.

2. Biology

3. Damage

4. Control

(Meso, USFS, FPM, Portland, OR)

Orthene® is being field tested in Douglas-fir and western white pine seed orchards to increase viable seed yield by reducing cone and seed insect damage. Applications have been made annually at Dorena Seed Orchard since 1981 to determine if seed yield can be increased. Two target insects were the western conifer seedbug, Leptoglossus occidentalis, that becomes active in May and the fir coneworm, Dioryctria abietivorella, which oviposits from late June to early July. To determine spray timing and number of applications, the seed orchard was divided into four blocks. The early application was made about mid-May and the late one was made during late June.

Results of Orthene® Applications at Dorena Seed Orchard - 1981

Treatments	Filled Seed	Unfilled Seed	Seedbug Damage	Other Damage	Mean Viable Seed Yield
-----Percent-----					
Early-None	72.0	28.0	2.1	6.7	91.1 ns
Early-Late	79.9	20.1	0.3	2.1	96.0 **
None-Late	74.9	25.1	1.8	9.3	88.3 ns
None-None	78.0	22.0	1.1	11.5	88.1 ns

Two applications, early and late, significantly increased viable seed yield.

(Reardon, USFS, PSWFES, Davis, CA)

A cooperative study was initiated in 1982 to evaluate Medicaps and Mauget injectors in reducing populations of western spruce budworm and associated insects in Douglas-fir seed and cones. The study was conducted in two locations: Region 4 -- in cooperation with Donn Cahill and Ralph Thier (FPM, Boise, Idaho) and Payette and Boise National Forests, and in Region 2 -- with Jed Dewey and Larry Stipe (FPM, Missoula, Montana) and Tom Koerber (PSW, Berkeley, California).

The treatments were Maugets containing Metasystox at 2", 4" and 6" spacings; Maugets containing liquid acephate at 4" and 6" spacings; Medicaps containing acephate at 4" spacing, dimethoate at 4" spacing, and bendiocarb at 4" spacing. Cones were collected from approximately 20 trees per treatment, and processed at Lucky Peak Nursery. Results are not yet available. Plans are to evaluate the most efficacious treatment(s) on a larger number of trees in 1983.

5. Publications

Meso, SW. 1982. Acephate used at Dorena Tree Improvement Center to increase viable western white pine seed yield - 1981. USDA, Forest Service, Region 6. In press.