NEWS AND NOTES

FIELD NOTES

*By Cam Place*¹

Few people have the opportunity to vent their opinions and prejudices on an unsuspecting public and therefore I was pleased when Mr. K. F. Harris, the editor, asked me to resume this column. Having spent the last two years on the faculty of the University of Wisconsin, I now have a brand new set of prejudices to air.

The forestry set-up in research and teaching in Wisconsin is unusual. Certain aspects of it are instructive and at the risk of sounding like a Chamber of Commerce spokesman, I intend to devote this issue's comments to it.

The University of Wisconsin has no school of forestry and only the beginnings of a forestry department. Instead, the need for research on local forestry problems has given birth to a growing research organization which in turn has attracted graduate students to assist it. Thirteen or fourteen faculty members scattered among the Departments of Plant Pathology, Entomology, Soils, and Genetics are devoting most of their time to research and graduate teaching in the biological aspects of forestry. Their efforts are seconded by 20 to 30 graduate students working as research assistants. Few universities with forestry schools can boast such a program.

This program is supported by a yearly grant of more than \$125,000 from the Wisconsin Conservation Department (the local equivalent of a provincial department of lands and forests) which conducts no research in forestry itself. Contributions from the University, private industry, and the federal government raise the total budget to more than \$200,000 a year.

By concentrating on graduate teaching only, the faculty avoids being overloaded with courses and yet for a nominal sum can attract research assistants of a calibre that no government or industrial agency can afford. The presence on the campus of the U.S. Forest Products Laboratory and of strong departments in the natural sciences such as physics, biochemistry, and botany, make a wealth of specialized advice available to the individual research man. This, combined with independence in the choice of problems and lack of red tape, allows the research man to conduct a program of a flexibility and standard that his government counterpart finds difficult to match.

The result of this co-operation between the University, the Wisconsin Conservation Department, and industry is a forestry research organization which, for its size, is probably the most productive on the continent. Amazingly enough, apart from those in the Lake States, few foresters or would-be graduate students in forestry on this continent seem to be aware of it. I really believe that it has a wider reputation in European forestry circles than in America.

This ignorance is probably owing to the lack of a formal school of forestry

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and to the fact that most of the staff's research contributions appear in technical periodicals such as *Phytopathology*, the *Proceedings of the Soil Science Society of America*, etc., which the average forester does not read. This is unfortunate, not only because many a good student wishing to do graduate study has never connected the University of Wisconsin with forestry, but because the wood using industries and government agencies would do well to study the Wisconsin example if they want good forestry research done at a minimum cost.

Undoubtedly, there are those "practical foresters" who will scoff at the idea of university professors doing anything really useful in the woods. A few examples are worth mentioning.

The Wisconsin Conservation Department has been growing about thirty million trees a year for planting and plans to expand production to nearly one hundred million in the near future. Despite being established on infertile sandy soils, the state nurseries are the best I have seen. Much of the credit is owing to their efficient direction by the Conservation Department staff. But without the contributions of the University research teams, the trees would have been prohibitively expensive.

Professor S. A. Wilde and his students of the Soils Department have put the maintenance of nursery soil fertility on a scientific basis with their studies of mycorrhizae, seedling nutrition, and fertilization. Professor A. J. Riker and his co-workers have maintained a continuing study of control methods for damping-off which has kept the nursery men one step ahead of the fungi. White grub damage was threatening to close some of the nurseries until Professor Shenefelt devised control methods using chlordane and aldrin.

Professor Shenefelt, incidentally, has just completed directing an investigation results of which may have considerable application in Canada. The study indicated that during a summer that was not conducive to high insect populations, pulpwood storage in yards may lose from 5 to 14 per cent in dry weight owing to insect activity. This loss can be virtually eliminated by the following measures. First, very susceptible species such as aspen should be cut during the fall and winter when insect activity is low. Second, during summer operations, wood should be sprayed on the day it is cut with a water suspension of 12 per cent BHC wettable powder applied at the rate of ½ lb. of the powder in a gallon of water to the cord. The cost of this treatment was about 30c a cord. Since wood delivered at the mill may cost \$20 or more a cord, the potential saving is considerable.

Another example worth mentioning is the work of the pathologists on oak wilt. This disease threatens to be serious throughout the oak-growing region of eastern United States. Dr. Riker and his associates isolated and identified the casual fungus, *Endoconidiophora fagacearum* Bretz. They showed that it spread through naturally grafted roots from an infected oak to healthy oaks and demonstrated that breaking all live root connections between naturally root-grafted trees prevented further local spread of the oak wilt. This could be done by severing the roots mechanically or chemically with methyl bromide, or by making "barriers" of trees poisoned by sodium arsenite injections into the root collars.

These are only a few of the achievements of this group of research men, but they speak for themselves.

Another aspect of forestry that impressed me during my sojourn in the Lake States was the size of the planting programs. Wisconsin alone has more than 600,000 acres of plantations and expects to be adding to these at the rate of 70,000 to 80,000 acres a year. This effort is being currently matched in Ontario, but Wisconsin is only about a seventh the size of Ontario.

The Lake States are well into the era of plantation forestry and are finding to their sorrow that it is not all beer and skittles. A large percentage of the plantations are red pine. Not many years ago, red pine was regarded as being almost insect proof. There are now fourteen or fifteen insects attacking it in Wisconsin and at least half of them threaten to be serious. Much of the planting has been done on worn out, abandoned fields with sandy soil. In plantations 20 to 30 years old, nutrient deficiencies and symptoms of root rot are appearing.

This planting program was not encouraged by State authorities, but grew in response to the demand of private landowners for trees. It was probably stimulated in part by the owners of planting machines which they wished to keep busy. In any event, individuals who have planted large acreages to one species regardless of the soil are likely to be in for much grief. The lesson for Canadians is obvious.

B.C. STUDENTS TAKE TOP INTERNATIONAL POSTER AWARDS

Five out of 12 awards in the international poster contest staged in Seattle on December 12, 1957 by the Western Forestry and Conservation Association, including the grand prize, were won by British Columbia students.

In competition with the work of elementary and high school pupils of the western United States, the nine B.C. entries were chosen from the work of over 3,000 boys and girls who took part in the Canadian Forestry Association's annual forest fire prevention poster contest earlier this year.

California entries won three awards, while Washington and Idaho had two each.

THE TREE FARMER IN CANADA

The widespread appreciation of the Tree Farm movement in British Columbia is "one of the most impressive signs of real public acceptance of that business of growing continuous wood crops on privately-owned forest lands which we call Tree Farming," said J. L. Van Camp, general manager, Canadian Forestry Association, Montreal, when addressing the annual meeting of the Western Forestry and Conservation Association in Seattle, December 11, 1957.

"Seven of 10 provinces in Canada are now active in this work," he continued, "and we hope to have Tree Farms from coast to coast." As of November 15th, Canada's Tree Farm statistics showed a total of 482 farms