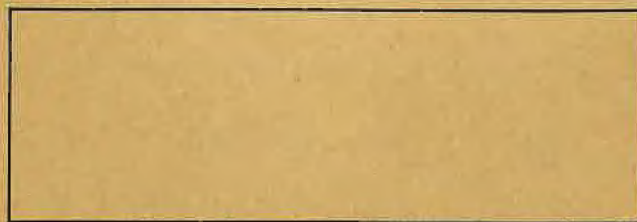


UNIVERSITY OF MINNESOTA  
DEPARTMENT OF AGRICULTURE  
DIVISION OF FORESTRY



Circular 1935-36  
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### The Cloquet Forest Experiment Station

The Cloquet Forest Experiment Station was established in 1909. Today it is one of the oldest and most highly developed experimental forest in North America.

The work of the Cloquet Forest Experiment Station falls into three divisions - Research, Education and Demonstration.

Forestry problems for the most part are long time studies; not spectacular either in methods or results. It is obviously difficult to discuss briefly both the problems and results. Experiments carried out in the early days of the Station laid the foundation for seed extraction practices, for standard nursery practices, and for planting practices. Planting experiments, involving almost 500 plots, have been under observation for a period of twenty years. It is worth while mentioning that the results secured here were at variance with common practices in other forestry organizations. The past two years, however, has seen a complete acceptance of the methods and practices advocated by the Station. Thinning experiments have been established in jack pine and Norway pine stands, and these have been studied critically every five years during the past twenty years. Current growth plots have a like history.

An arboretum for testing native and exotic trees was established in 1922. It now contains about 80 species and is being extended as rapidly as suitable species are found.

In the course of the regular management of the Cloquet Forest,

opportunity is provided to study various types of intermediate and final cuttings.

In cooperation with the Division of Horticulture, a small testing orchard is maintained. The Division of Soils is cooperating in studying the effect of various combinations of fertilizers on the development of seedling and transplant stock. The effect of fertilizers on various legumes has been tried during the past two seasons. The Division of Agricultural Engineering is conducting an extensive test of the life of various kinds of fence posts at the Station. The Division of Economic Entomology and Zoology has been carrying on intensive studies of grouse and other wild life problems at the Station Forest for the past several years. It is hoped that this cooperation will in time extend to other Divisions, so that full use may be made of all of the facilities found here.

The educational work of the Station is varied. Interested visitors are numerous during the summer and through their visits receive much information about forestry. During the past year, several non-credit extension courses in forestry were given at the Station and in Duluth. The most important educational work is the field courses given the junior forestry students during the spring quarter. This spring 60 students received field training in Forest Management, Silviculture, Game Management and Wild Life, and in Forest Soils. During the summer months various graduate students work on field problems in silviculture. This summer there will be four or five students here. Undoubtedly the number will increase as our equipment is built up and the facilities available become better known.

The demonstration of the practice of forestry is an extremely important phase of the work. In time it should serve as the catalyst to bring about the practice of these measures on private forest lands, particularly on the farmers' woodlots in the North. A detailed plan of the management has been worked out and put into operation. The intensive market at Cloquet and the fact that the Station has its own sawmill makes it possible to carry out very intensive forestry practices. A well developed road system through the forest makes the area readily accessible, thereby facilitating protection and utilization.

During the past three years, progress has been rapid in cultural work in spite of greatly curtailed budgets. This is because a large amount of C.C.C. labor has been available. The accompanying map shows some of the work accomplished by this organization. Areas colored yellow have received some form of cultural treatment, such as thinning, cleaning, liberation, improvement and accretion cuttings. Areas colored green have been planted or received treatment designed to stimulate natural reproduction. Roads, trails, ditches and buildings constructed by C.C.C. labor are shown in red. All roads have been brushed out and maintained, the entire area has been covered in a clean-up of dead and down material to make the forest safer and more sanitary. Permanent forty corners have been established and the lines cut out to make the administration of the forest easier. It must be remembered that the Civilian Conservation Corps work under certain restrictions and their being here has not minimized the effect of a reduced budget on the research and educa-

tional work of the Station. It has instead meant the carrying of a much greater load of work by a reduced personnel.

No statement would be complete without a mention of the future needs of the Station. If the area of the Station could be increased to 5000 acres, it would be of an ideal size for demonstration purposes. This goal can not be attained here without an excessive expenditure of funds. However it could be increased to approximately 4000 acres at a reasonable cost. The areas to be acquired are shown in brown on the accompanying map. They are Numbers I, II, III in the order of importance.

To increase the technical output of the Station, a full time assistant should be provided. Many plots should be established to study the effect of the various cultural measures carried out by C.C.C. labor. The establishment of these plots, as most other work, requires the work of at least two men. Present funds do not permit the hiring of adequate stenographic help, or even part-time assistance.

Consideration should be given to the desirability of creating a permanent fund derived from the income of the forest to be used as working capital in the practice of forestry on the tract. At first this fund would probably have to be in the nature of a revolving fund; in time it could probably be built up so that the income could be used as a working capital.

At the present time the building program seems to be nearly complete. The bath house for the students should be completed. The cost is estimated at \$1200. The present equipment of two tubs, three washbowls, and two toilets is hardly adequate for sixty students doing

field work. Two more student cottages housing eight men each are needed. These can be built at a cost of \$500 each. If the wild life and game management work continue to develop, a building will be needed for laboratory purposes in this work and for housing wild life, insect fungi, and plant collections. A rough estimate places the cost of this building at \$4000. The total cost of the improvements would be about \$6200.

Some new equipment is needed for field work and the Station Library should be more extensive. It is planned to make these purchases gradually as needed from our regular funds. Several large pieces of equipment which can not be purchased from our regular funds are needed. These relate largely to work on the forest. A new tractor, preferably a Diesel powered caterpillar, a Killifer planting plow, and a planer and molder to make possible the finishing of lumber produced for our own use and ultimately to make the sale of it easier are all badly needed.



CLOQUET FOREST EXPERIMENT STATION  
UNIVERSITY OF MINNESOTA  
CLOQUET MINNESOTA  
SCALE  
3.55" = 1 MILE



III

II

30

29

36

31

32

I

