The Prairie Sprouts Its Foresters

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The Prairie Sprouts Its Foresters

G. B. MacDonalD

Iowa State College was one of the first schools to give some organized training in forestry subjects. As far back as 1874 the college included a department of Horticulture and Forestry. Although sketchy from the 1948 viewpoint, the forestry instructional program, at that early date, "embraced seedbeds, hedging, economical aboriculture, (practical forestry) and shelterbelts," which made up a part of the four year course for the department. This early instructional work at the college was an outgrowth of unusual activity of the state in tree planting, shelterbelts and fruit trees. At that early date Iowa was probably more active in this general field than any of the other states. This came about through federal and state legislation and state organizations, especially the Iowa Horticultural Society. A number of both practical and scientific men seemed to foresee the needs for protective tree planting in a prairie state like Iowa.

PROFESSOR G. B. MACDONALD—1910. On learning that he was to become a professor he grew a beard to play the part.
Soon after 1900, when the need for technical training in forestry was beginning to be felt more definitely, Iowa State College launched an instructional program, which, over the years, resulted in a full training curriculum for technical foresters. At this time (1903) the college employed its first technically trained forester, Dr. Hugh P. Baker, to organize and develop technical instruction in this field. By 1905 four subjects in forestry were given to the few students who wished to secure technical forestry training. The four subjects offered were elementary forestry, silviculture, forest management and policy, and wood technology, a total of 12 semester credit hours.

By 1909-1910 the technical forestry subjects offered were essentially the same as in 1905, with Assistant Professor Charles A. Scott directing the work during the period 1908 to 1910.

Soon after 1910 it was apparent that if the colleges were to keep pace with the developments in forestry over the country it would be necessary to greatly expand the subject matter courses in the new field of forestry. This was especially important if Iowa State College foresters were to compete successfully for federal Civil Service and other technical positions.

By 1912-1913 the forestry curriculum included one course each in farm forestry, camp technique, history and policy, forest economics, lumbering, forest protection, administration, wood technology, wood utilization, and forest development; and two courses each in silviculture, forest mensuration, and forest management. At that time a total of 38 semester credit hours were included in the foresters' training program at Iowa State College. These subjects were in addition to 34 semester credit hours in technical courses given in other departments, including forest economics, dendrology, civil engineering, soils, forest entomology, geology, forest pathology, and range ecology. At this period the basis in subject matter was laid, which, with some adjustments and additions makes up the present forestry curriculum. In this same year, 1912-1913, the forestry training program was made a separate curriculum except for the common freshman year for all departments in the Agricultural Division.

Over the years an effort has been made to adjust the forestry curriculum to meet the needs in the rapidly developing professional field. For a number of years the only outlet of any consequence for trained foresters was in government service and as a result most of the graduates had Civil Service positions as their objective. However, for the past 20 or more years the employment objectives have been quite different. Rapidly increasing numbers of positions became available in state work and with
lumber companies as well as in many other branches of the forest industries.

Iowa State College was one of the first forest schools to initiate the summer training camp as an adjunct of the resident school training program. Possibly it was the fact that Iowa lacked extensive forest areas which launched the school on its program of supervised field instruction at the first camp held on the Minnesota National Forest (now the Chippewa) in 1914. These training programs have been carried out in 20 states of the West, North and South in the past 34 years. The program has been continuous each summer except for a break of 3 years during the last world war. The camp programs have included from 16 to 127 forestry students. It has been the means of giving the beginning foresters valuable training in both technical and practical problems in the different forest regions. No small value has also come to the camp instructors who were given opportunity to acquire added experience and make observations under varying forest conditions.

The technical student enrollment at the college has, in general, kept pace with the growing demands for men with a sound technical training. From an enrollment of 6 technical foresters
in 1904 the numbers have increased gradually, except for unusual economic periods resulting from the two recent wars and the depression period during the thirties. Each of these abnormal periods caused rapid increases in technical enrollment at Iowa State College as well as at other forest schools. By the college year 1947-48 the enrollment of forestry students had reached an all-time high of 387. During the period from 1904 to 1948, 635 technicalmen have been graduated with the bachelors degrees and 53 with masters degrees.

During the recent years it has been necessary for the Department to meet the impacts which have been caused by a disorganized economy. The first of these during the depressed thirties, caused a definite uptrend in enrollment at the forest schools. This was the result of students electing to go to college during the slack times of the depression and also because of the increasing demand for trained foresters for directing many federal and state conservation work projects. This resulted in the enrollment nearly trebling in a short period which presented problems involving additional instructors, class rooms, laboratories as well as the placement of graduates. This heavy enrollment from 1936 to 1940 culminated in 63 foresters graduating in 1940 at a time

Priest River Summer Camp. This is summer camp 1948 style. (Photo courtesy Prof. MacDonald)
(Graph courtesy Forestry Dept.)

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when employment possibilities were not too favorable, but the demands of the war eased the employment situation materially.

Another critical enrollment period for foresters came with the close of the war. Iowa State College, like many other forest schools, found it necessary to restrict enrollment due to the unprecedented number of requests for admission from war veterans whose schooling was being subsidized by the Veteran's Administration. The Forestry Department, with a total enrollment of technical students of 31 and 36 respectively for the years 1945 and 1946, was confronted with between 600 and 700 admission requests within approximately a year's time. Institutional policy, finances, limited staff members, class rooms and other physical equipment made it necessary to deny admission to most of the "out-of-state" requests. Even with the restricted admissions the Department had an enrollment in 1947 of 387 technical students, the highest in the history of the Department. The enrollment for the school year 1948 will probably be almost identical with the 1947 figure.

Enrollment predictions are rather tricky without advanced knowledge of economic conditions, however, the trend of technical forestry enrollment should be downward and should stabilize, over the years, at a point which will provide technical men for the expanding employment field.

The impacts of the war have had their effects upon the entire educational field in forestry. Additional four-year forestry schools have sprung up and which, by some, are considered unnecessary and illadvised. These new schools are, in fact, the result of the inability of existing forest schools to enroll the backlog of students at the conclusion of the war, especially from those states which do not have technical forest schools. This problem is being eased by the existing forest schools accepting students from pre-forestry courses. Iowa State College now has enrolled a considerable number of students who have taken from one to two years of foundation work at some other school. The Department is endeavoring to make such transfers easier and with less loss of credits. More standardization of the first and second years work at the forest schools will make this type of training more acceptable to the transfer students and may assist in avoiding the establishment of additional technical forest schools.

One of the most pressing problems of the Forestry Department over the years has been the adjustments in the curriculum between the basic general educational courses, the rapidly expanding technical subjects in forestry and the supporting scientific work in the allied fields. The trained forester of today is more
than a technician, he must meet people and should be prepared for administrative or executive positions. The average forestry department has usually neglected this field. This perhaps is understandable, even if not entirely excusable, since the four-year courses have only a limited stretching capacity. Too often fundamental or general educational subjects have given way to the apparent immediate needs in trying to keep up with technical advancements in a rapidly expanding field. A partial answer to the above problems may be found in the five-year course or in graduate study.

The first half century in technical forestry education has reached the point where some important decisions must be made. Will the forestry field of the future involve only the silvicultural, management and marketing phases which have been emphasized in the past? Or will the forester’s training include the broad field of wildland management with its increasing diversification involving recreation, wildlife, range management and soil and water management? It is well recognized that the present day foresters must have a working understanding of the several fields involved in wildland administration, if he is going to serve in the best public interest.

The problem which confronts Iowa State College, and other schools, is the extent to which a forest school should develop either separate curricula or groups in the present curriculum to meet the definitely increasing demands for training in these specialized fields. Surely the answer is not in the regulation four-year course which is now crowded close to the elastic limit.

Other technical lines which must get more adequate treatment, at least at some schools, are forest products and farm forestry. Highly specialized curricula for the former will no doubt center in some of the states where this field of training might logically be emphasized. The second, farm forestry, is a field which is just now being recognized as one with a promising future if the hundreds of millions of acres of smaller woodland areas are to contribute their potential output into the economic hopper. This field of farm forestry specialization should be a logical development at Iowa State College.

This problem of the expanding field or diversification in forestry education will probably not be met in any uniform manner by the schools. The more specialized curricula will probably gravitate to the regions where such specialization is most important and where adequate state support can be secured.

Whatever the intensity this specialization may take, it would seem desirable not to divorce the work entirely from a background

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of technical training which has evolved at the forest schools during
the past half century.

Another perennial question which the forest schools hear
is, "What are you going to do with those foresters when they gradu-
ate"? This question has been bouncing over the years since
1910, when the principal outlet for foresters was government
work, and when the total enrollment at the forest schools was
only a small fraction of present enrollment. Over the years, the
percentage of trained foresters, who secure employment in their
field or those closely allied, will compare favorably with the stu-
dents who are trained in other lines. The employment of for-
esters is not essentially different from the employment in other
fields. There probably will be slack periods when competition
for positions will be much keener than at other periods like the
present. If these periods are severe and of continued duration a
drop in enrollment of technical students will in time compensate.

By the above statement I do not intimate that forest schools,
or any others, should blindly make preparations in faculties,
physical equipment and financial support without making an
analysis as accurately as possible to anticipate future needs. This
is the economical approach not only for the schools but also for
prospective students. I have a feeling, however, that we may
be inclined to underestimate employment possibilities for trained
foresters due in part to three things: (1) the public is becoming
more forestry and conservation conscious; (2) the war has brought
into focus the need and necessity for adequate forest resources for
defense as well as for peacetime programs; and (3) the rapid
development in many fields in which a training in forestry would
give a good foundation for efficient technical service.

A recent survey of the 626, forestry graduates from Iowa
State College indicates a wide spread of employment in forestry
and the allied fields and a surprisingly low percentage of men who
are not now engaged in work for which their college training pre-
pared them. The following gives a rough breakdown into groups
of employment for the Iowa State College forestry graduates and
indicates a spread of employment possibilities which is not too
well understood by the average person:

Private forest industries .....................  26.4%
U. S. Forest Service, administrative and research  18.0%
State forestry, extension and farm forestry .....  6.9%
Teaching forestry, college ........................  4.3%
Soil Conservation Service .....................  6.5%
Farming, fruit growing, etc. ....................  5.6%

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Graduate study, wildlife, and public organizations .................. 5.1%
Other federal agencies not listed above ................ 4.0%
Positions other than above
   (outside forestry and allied fields) ........ 15.6%
No reply, address unknown or retired .......... 7.6%

TOTAL .................. 100.0%

A detailed analysis of positions held by the Iowa State College graduates shows a record of which the college is proud.

The Forestry Department has gone through some rough waters in the past, but the Department has always had the effective cooperation of the college administration which has sensed the importance of forestry in the conservation field. Without this understanding it would have been impossible, in a farming and prairie state, to develop a forest school to take its place along with the several institutions which have laid the groundwork for forestry education and which will have large responsibilities in this field for the future.

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