

## Training in Logging Engineering

The possibility of broadening the instruction in forestry to include the specialized field of logging engineering was under consideration by the staff of the School of Forestry even from the inception of the School.

The wide avenues for profitable employment open to University-trained logging or forest engineers in the solution of utilization problems not only in the Governmental Forest Services, but far more with private sawmilling companies, particularly in North America, but also in India, Africa, and South America, show definitely that scientific training has a definite contribution to make to this most important aspect of forestry. At the same time, the relatively low standard of efficiency of many New Zealand units and the difficult nature of the topography and of the bush would indicate that there is an ample margin in this country on which the trained man may demonstrate his value in reduction of production costs through careful planning and co-ordination of effort.

In drawing up the syllabus for the B.For.Sc. Degree, therefore, provision was made for specialized training along these lines by means of two optional courses. The first appears in the University Calendar under the name of Forest Engineering, and is taken in the Second Professional year (the third year of study). This course includes, first, an advanced study of forest surveying, and second, forest improvements, covering design and layout of tracks, roads, trams, bridges, etc. Although an optional subject so far as the University is concerned, this course is now required by the Canterbury School of Forestry to be taken by all forestry students, whether specializing in logging engineering or not.

The second subject appears as Logging Engineering in the list of subjects from which the special study in the Third Professional Year (fourth or final year of study) is to be chosen. No prescription for this course is given in the University Calendar, though a definition appears in the School of Forestry prospectus under this title as a subject for the Associate Course.

The courses were drawn up in 1926, and were then taught in the two following years, in the light of which experience a number of

modifications were made. By the end of 1929 it was considered that an adequate course, well balanced from the teaching point of view, and thought to cover the essentials of most importance to New Zealand had been evolved. The next step was to submit it to the criticism of those best qualified to judge its contents and the value of men who had undergone its training.

Draft copies of the course in forestry, including the special work in logging engineering, were made out, and through the co-operation of the Secretary of the Dominion Federated Sawmillers' Association, were sent to leading sawmillers in all parts of New Zealand, together with a letter requesting information on the following points:—Criticism of the course itself; an opinion as to the future in the sawmilling industry for men so trained; and third, whether or not the firm concerned had any immediate or likely opening for students having completed such a course.

Twenty-four letters were sent out, and thirteen replies received.

Criticism of the course outlined brought some very sound suggestions, mainly in the direction of strengthening the purely engineering side of the training, as the need for a knowledge of steam, and internal combustion engines, of earthwork, and of hydraulics. Some of these suggestions have already been incorporated into the course. For instance, through the co-operation of the School of Engineering, the subject of Elementary Steam has been added to the course. The possibility of fitting other matters suggested into an already heavily-loaded curriculum is being explored. One criticism was that the course contained subjects of no value to the logging engineer, which might be deleted leaving more time for engineering subjects or for practical experience in the bush. In some measure this is true. The course in forestry is intended to cover all phases of forest activity, not merely that of utilisation. Should a distinct field of opportunity open in utilisation problems alone, students would be justified in specialising in that branch to the exclusion of others. Until such a field is firmly established, however, a student

would run a risk in that by failing to include the whole scope of forestry in his study he jeopardized his chance of subsequent employment.

The imperative need of practical experience in the bush and mill, actually taking a hand in all the various operations, was stressed by all the writers. It was clearly stated that a young man with theoretical training alone was of no value until he had actually performed himself the work which as an executive he would be expected to control. This view is heartily concurred in. It is considered that the contribution of the logging engineer to the industry will be of the head, not of the hand—that his value will lie in his ability to co-ordinate and plan, not in his physique; but the brain, however highly trained theoretically, can make no concrete application until the hand has taught it the physical factors of time and space through personal experience. This need for practical experience is fully recognized, and every opportunity is taken to work it into the teaching syllabus at the University through field camps and tours of inspection. One direct result of the enquiry already has been the extension of possibilities in this direction by the offer of two or three firms to take students during their summer vacations, and give them a chance at all operations in progress under experienced supervision.

In general, however, the training outlined seemed to meet with considered approval. Most replies were to the effect that the writers considered there was room in the industry for training of this sort, though opinions differed as to the opportunities open to young men at the present moment. The restriction of activities due to exhaustion of the native bush was mentioned as applying particularly to the North, where a few of

the firms approached were contracting rather than expanding. The smallness of the average New Zealand unit, which makes it impossible for many firms to retain the services of a full-time highly-trained man, was also mentioned. Co-operative effort among a group of adjacent units was mentioned as a possible solution.

It was from the larger firms, naturally, that the affirmative replies to the third question were received. In one case such a man was required at once, and it was doubted that the firm could wait until a student might be available. In two other cases such a man could be placed at once, while in three further cases, while not feeling the need at the present time, the firm was sympathetic towards the idea and willing to take a graduate, and try out his capabilities. One or two other cases made a reference to possible future developments.

It would seem, therefore, that there is already in New Zealand a small but definite field for young men to enter logging engineering work with private firms. What the possibilities in such work might be would be governed by the qualities revealed by the first few students who go into such work, and by the extent to which co-operative effort supplants individual effort among the smaller firms. The School of Forestry has in the past been diffident about encouraging students to take up this special work, fearing that they might not be able to make use of it at the finish. It is now revealed that there are definitely places open at the present time for two or three such men, which the School is unable at the moment to supply. Encouragement can now be given to likely students of stamina and character to take up this work in the definite knowledge that scope for their capability can be found at the conclusion of the course.

### *Special Courses for Wood-Working Industries*

Following on the special course in timber drying given by the School last year to members of the North Canterbury Timber Merchants' Association, a request for a similar course was received this year from a

group of interested timber workers at Ongarue, one of the large King Country mills of the well-known firm of Ellis and Burnand. Sufficient support has been pledged to ensure its success, so that arrangements have been