THE EMPLOYER'S NEEDS IN HIGHER FORESTRY EDUCATION

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In forestry terms, the employer is the forest owner, and forest owners come in a variety of categories. These are individuals, companies both public and private, local bodies, and of course the body politic. But whatever the category, they all own forests, practise forestry and employ help from the same motive: profit. Admittedly, the profit sought is not always sordid £ s d; but whether the activity be directed towards earning a dividend for a forestry company's shareholders or maintaining and improving a Crown-owned protection forest, the profit-motive — the aim towards human betterment — is still there. The only difference is that the type of ownership decides whether the profits (benefits) accrue to an individual, to a group of shareholders or ratepayers, or to the taxpayer at large. In New Zealand, the forest estate of economic significance — in both the production and the protection fields — is held in comparatively few types of ownership. Thus, forestry is a large-scale activity requiring much labour of all types. All large-scale enterprises are complex in their management demands. Soil-based enterprises are particularly so, needing as they do a thorough knowledge and intelligent evaluation of the dynamic forces which management seeks to harness and guide along the path leading to maximum human betterment. Forestry is in essence the management of land and its arboraceous cover, both soil and vegetation being capable of manipulation to suit human needs. But as a form of land use, forestry is unique in the long interregnum that occurs between sowing and reaping. Thus errors of management perpetrated today, be they the result of heresies, fads or plain misjudgement, may take generations to recognize and correct. And this dynamic business which is forestry, permanent but changing, is certain to increase in complexity as society expands and demands a greater volume and variety of the goods and services that only forests can produce. Also, increasing pressure will be encountered from the proponents of alternative forms of land use, leading to ultimate reduction of the area that can be devoted to forestry. Likewise, little change can be expected in the deeply-ingrained reluctance of those who hold the purse-strings to invest adequate capital in the long-term, unspectacular and vulnerable enterprise that forestry inevitably is. All this means that the foresters of the future will be subjected to greater and more diverse pressures than those of today, and the quality of their stewardship will undoubtedly be directly proportionate to the level of their education in their calling. It is also a good reason why forestry is accorded a place ranking equally with other arts and sciences in the higher-education system of virtually all enlightened countries.

What are the employers' needs in higher forestry education? There are plenty of examples in forestry of individuals who have progressed through ascending levels of management, who discharge

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their responsibilities with credit, whose equipment is average intelligence, zeal and ability, and whose academic qualifications were obtained wholly in the hard school of experience. These could be adduced as arguments against the need for higher education, but they would probably convince very few. A specialist for example, be he research worker, engineer, jurist, economist or such-like is not likely to be entrusted with professional matters unless he can produce evidence that he has followed the prescribed courses of study and satisfied the appropriate examination requirements. It can perhaps be taken as axiomatic that in any organization the better the education and training of the working force employed therein, the more efficient will that organization be. And forestry can scarcely stand aloof from today's trend towards greater emphasis on higher education as preparation for virtually all fields of human endeavour.

It could be said that, ideally, all those who work in forestry could with advantage be exposed to the influences of higher education. However, within the bounds of practical politics, only a comparatively minor proportion of the total can receive that privilege today; a position unlikely to change much in the foreseeable future. But every enterprise must have workers adequately educated at each level of activity; in forestry these could be listed in four broad groups, namely artisans, managers, specialists and what might be called, despite the somewhat unclean connotation attaching to the term, administrators.

Forestry, despite continuous advances in mechanization, involves a great deal of manual work and will undoubtedly always do so. The artisan is therefore the most numerous of the four groups. He works at the sharp operational end, hewing the wood, planting the trees; in short, doing all the tasks that are the very basis of forestry. But even the artisan, the man who does things, must have normal intelligence and manual dexterity better than average, as anyone who has ever used a chainsaw or poled a planting line over hill and dale will agree. However, his work makes no demands on higher forestry education in the accepted sense; appropriate vocational training will make him a competent worker.

In the managerial group, there are several levels of seniority, among the most numerous being that of the supervisors who work with the labour force, direct the latter's efforts, carry out the day-by-day planning and see to its execution. The supervisor, manager, forester, forest ranger, general practitioner or whatever he may be called, must not only do things; he must also get things done at the grass-roots—or perhaps more correctly, at the tree stump level. He must know all about the job being done, and be able to do it himself as well as any worker can; he must be enough of a psychologist to get his men to do their work cheerfully and well; and he must be sufficiently literate to interpret his own and his workmen's efforts intelligibly to his superiors. Thus managers are undoubtedly the flowers of the forest. They must have considerable technical knowhow and at least some of the attributes of Machiavelli, Simon Legree, Caesar's wife and Guy de Maupassant. It is their efficiency that largely decides the economic and social success of forestry. And it could be noted, in passing, that they are usually rewarded on a scale glaringly disproportionate to their importance.

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The specialist in forestry seems to arrive by one of two main channels. He may have done some undergraduate specialization in his chosen subject, probably followed by further postgraduate study, or he may have majored in a particular discipline, later adapting his training to the forestry field. The functions and usefulness of a specialist cannot be precisely defined; his ultimate value to forestry depends to a large extent on the individual's intelligence and ability but he is unlikely to realize his full potential without benefit of higher education.

The administrator is a comparatively rare species, usually operating far from the tranquilizing influences of the forest. He is beset above and below by all kinds of political, social and economic pressures making it difficult for him to see either the wood or the trees. He it is who must make the portentous decisions, persuade the employers — be these individuals, boards of directors, county councillors, or politicians — to produce the necessary money, inspire his subordinates with enthusiasm, and finally accept the responsibility for whatever good or ill attends his efforts. A super breed, it might be said — and correctly so. But both the administrator and the enterprise for which he is responsible will be really out of luck unless he has a sound knowledge of basic forestry principles. All have heard the theory about the "well-rounded administrator" needing no expertise beyond the ability to push people round and understand balance sheets, but one might wonder whether the originators of this widely-disseminated heresy really believe it themselves. Happy the forestry enterprise run by foresters, and the higher their education the better.

What can the employer expect from investing in higher forestry education and employing the product thereof? A newly-fledged graduate could normally be expected to have a knowledge of the basic sciences adequate for everyday needs, a more detailed knowledge of botany, plant ecology and pedology, and an appreciation of the foundations and implications of silviculture, protection, utilization, engineering, economics and law, policy and administration. In addition, the new recruit could be expected to express himself intelligibly and accurately, to rub along amicably with associates of all levels and to have some, though probably not much, experience in actual "dirt forestry".

Such an individual could be regarded as being both well and poorly equipped. He has in the short course of about four years studied the outlines of many widely unrelated subjects, but it has probably not been borne in on him that he will spend the greater part of his working life with varying degrees of responsibility for the work and wellbeing of other people.

One often reads the criticisms of foresters, usually eminent and elderly, who have probably long since forgotten the detail of their own formal training, deploring the shortcomings of forestry school curricula for their non-treatment of such subjects as the humanities, forest influences, recreation and the like. These are certainly desirable lines of enquiry, but surely the matter boils down to keeping the period of formal education to a conscionable limit. The new recruit is likely to learn the importance of the humanities at an early stage of his working life.

Let us follow the newly-recruited forestry graduate along the primrose path of his working career. It is at this early stage
that the product of higher forestry education will have ample opportunity to round out his learning with concentrated doses of what is probably the highest forestry education of all. The fortunate young man is at that indeterminate stage of being neither chief nor Indian and his associates in both these elite groups will probably keep him fully aware of his untouchable status. He will be working with many men who have had considerable forestry training both in the lecture room and in the woods; competent and confident practitioners who have little reverence for the belief that a university degree confers some mystique on its holder. In short, the young man is probably learning more of the humanities than can ever be formally taught in halls of learning. As the years roll on, the employer can expect his erstwhile recruit to undergo gradual and subtle changes in his professional attitudes and skills. One of these changes may well be the belief that, for all their prejudices and limitations, people are still more important than trees, something that earnest and dedicated souls are inclined to overlook. A further change is likely to be an appreciation of the ever-present need to compromise, not with forestry principles, but certainly between the ideal as called for by the textbook and the practicable as dictated by the limits of the employer's organization. And it is not unlikely that the young man will have developed ability in that highly important, albeit often mishandled, function — the integration and interpretation of his professional work to society as a whole. When the product of higher forestry education has arrived at this stage of professional development, the employer will no doubt have him in mind for greater responsibilities when the appropriate opening occurs.

In assessing the relative merits of those eligible to fill top managerial and administrative posts, the employer will almost certainly look for proven ability rather than high academic qualifications. But — and perhaps here is the rub — in choosing between two individuals of apparently equal ability and experience, most employers would almost certainly select the one with the higher educational qualifications. Nobody would cavil at this conclusion in the case of a specialist position; and it is really no less valid in the case of a position calling for both technical and administrative expertise — if it were not so, then higher education is obviously so much wasted effort.

The fact remains, however, and perhaps it is just as well for many of us that it does, that the graduate in forestry must remain a comparatively minor component of the total work-force for a long time to come. The tasks confronting him, and for which only he is particularly fitted, are innumerable and immense but they still leave untouched the major day-by-day business of forestry.

The employers' needs in higher forestry education are unlikely to be satisfied in the foreseeable future; they add up to high scarcity values and unlimited opportunities for this and future generations of graduates; and they still leave vast scope for the practical man whose basic knowledge of his profession was acquired informally.