

This brings us to the general question of concentration of research. For each University college to provide all the facilities necessary for higher research in all specialized branches of science would, of course, be wasteful, and we think that advanced research courses at least might be given different direction in the various colleges. Even when this rationalization has been achieved, there will still remain some fields of inquiry where the college may not possess facilities equal to those of highly specialized branches of industry and some research organizations. While we appreciate the desire of University authorities to ensure that work submitted for a University degree should be the work of the student himself and should be carried out under University supervision, we consider that this is not incompatible with the judicious use of the facilities of research institutions. We think that it is sound practice to encourage students to "cut their teeth" on suitable research projects connected with the welfare of our basic industries.

To achieve this object we envisage a kind of two-way traffic between the University and the research organizations. We recommend that the University should devise a way of enabling research work in specialized branches to be concentrated in the colleges according to facilities available and of enabling specialized research institutions, including those of Government Departments and industry, to be used, with proper safeguards, for the training of senior students. To this end a system of honorary lectureships might be introduced. We also recommend that research institutions be encouraged to "contract out" suitable research projects to the University colleges. These recommendations, if accepted, may do much to bring the University into closer touch with scientific problems outside the University and may indirectly serve to encourage students to return to New Zealand after a period of advanced study overseas.

For somewhat similar reasons we think that selected students should be encouraged to accept vacation work in industry or in the scientific branches of Government Departments. Here they would learn to apply the principles studied in the University and would be assisted in discovering fields of research and possible future employment. Money spent by Government Departments in engaging such students as temporary staff would in the long run return a dividend.

Concerning the content of courses for the degree of master of science, we wish to make two suggestions. The first is that provision should be made for an honours degree in a group of sciences, or in say, mathematics and physics. While more intense specialization may be desirable for the graduate entering industry or some special branch of scientific work, post-primary teaching often calls for the graduate with high qualifications in more than one branch of science.

Our second suggestion is that physiology, bacteriology, and bio-chemistry should be added to the subjects which a student may offer for the degree of master of science. All three subjects are of increasing importance, and there is at present a shortage of good research workers in these fields.

We were informed that there was a danger that University courses might grow out of touch with the scientific needs of industry and the research organizations. We consider that there should be adequate provision for representatives of the teaching institutions and the "working" institutions to meet together frequently to discuss their problems. We therefore suggest the setting-up of some standing body such as a Council of Scientific Education.

3. TECHNOLOGICAL TRAINING

There are some kinds of scientific training that do not naturally come within the sphere of the University, and up to the present little attention has been paid to them. The development of secondary industries calls, however, for the supply of technicians as well as research workers in a number of advanced branches of applied science. Among these may be mentioned textiles, ceramics, printing, food technology, refrigeration,