Scope of Work of Oregon Agricultural College Broadens and More Practical Courses Are Added

Experimental Station Work, Instruction in Residence and Through Extension Channels Form Three Important Divisions—Agricultural and Engineering Training Especially Provided.

THE scope of the work of the Oregon Agricultural College is comprised within the three grand divisions that characterize the activities of land-grant colleges throughout the country. Experiment station work, instruction in residence and instruction through extension channels—these are the peculiar fields of work of the agricultural and mechanical colleges found in nearly all the states of the Union, a distinctive feature of public education in America.

This three-fold field of work, as it is exemplified in the state college of Oregon, is exactly the same field that has made great the state institutions of the Middle West. These institutions, that are today attracting the attention of the agricultural and industrial world and find an annual income of $2,000,000 barely adequate to carry on their large undertakings, were young once, like the Oregon Agricultural College, serving a sparsely-settled state, and content to struggle forward with an undue burden of enrollment and administrative routine, as so many hundred thousands as they now have millions.

They went through the same pioneering experiences—and made history as they went, like the State Agricultural College that has revolutionized the poultry industry, evolved horticultural practices universally productive, discovered insecticides of inestimable value, contributed to commercial science an improved system of farm records, taken the initiative in rural economics and introduced dry-farming practices that in many instances have increased production four-fold.

Range of Study Wide.

Even to outline the work of the Oregon Agricultural College in all departments of its three fields of work would be impossible in a short sketch. It will be the purpose of this article, therefore, merely to show how wide a range of study the youths of Oregon have open to them at the state college located at Corvallis, leaving out of account the work of the experiment station and that of the extension service.

While six schools, besides the department of pharmacy, offer the student baccalaureate degrees equal to the best in the country upon the completion of a course of four years of college work, based upon an entrance requirement of four years of standard high school scholarship, the student has a much wider range of opportunity for special study than the naming of these schools would suggest. Agriculture, forestry, home economics, engineering, mining and commerce are the six schools offering widely different training for the vocations of life; but within each of these schools specialization is possible in many important subdivisions. Moreover, as part of the policy of the administration of the college, liberalizing studies that make for efficiency and citizenship are made accessible to every youth in college. Hence, the instruction in modern languages, in English, public speaking and dramatics, in art and library practice; hence, also the affiliated school of music.

Farming Course Complete.

In the school of agriculture there are 13 major courses leading to degrees, the names of which are sufficiently descriptive to suggest the character of the work. These courses include: 1, general agriculture; 2, agronomy; 3, animal husbandry; 4, dairy husbandry; 5, horticulture; 6, poultry husbandry; 7, agricultural chemistry; 8, agricultural bacteriology; 9, botany and plant pathology; 10, economic entomology; 11, economic zoology; 12, agricultural education. These 12-degree courses in turn offer opportunities for specialization that still further extend the field of study and inquiry open to the student. In agronomy, for instance, the student may specialize in soils, in field crops, in irrigation farming, or in farm management. In animal husbandry he has the advantage of studying under one or more of the four specialists in this department, depending on whether he wishes to emphasize his acquaintance with horses, beef cattle, sheep or swine. In dairy husbandry, he may undertake a course in dairy production, leading to the skillful development of the dairy herd and the production, under economic and scientific management, of milk and butter, or he may engage in the study and practice of dairy manufacture, learning the principles underlying the expert making of butter, cheese, ice cream and similar manufactures.

In horticulture, naturally, since Oregon is conspicuously a fruit-raising state, he has an even wider choice for specialization. He may take pomology under instructors recognized the country over as experts; he may take vegetable gardening, landscape gardening, or floriculture, and have exceptional facilities for becoming master of these fields of science under Western conditions; he may do intensive work in by-products, a phase of horticulture that is rapidly adding to the profits of the industry; or he may engage in horticultural research under conditions that, for the right type of student, are surer of ultimate success and recognition than perhaps elsewhere in America today.

Special Training Provided.

In addition to the large types of agricultural instruction which have just been outlined, and which may roughly be called the farm practice groups, there is another group of studies open for specialization that may be termed the agricultural science group. While the farm practice group of studies is based as fully on scientific principles as the agricultural science group, the latter, being designed chiefly to prepare students for positions in agricultural colleges, experiment stations and similar institutions, is devoted more exclusively to theory, and is less obliged to engage in the immediate practical application of scientific principles to local field conditions. Here, instead, the student specializes in the fundamentals of such a science as bacteriology, botany, chemistry, entomology, or zoology, and disciplines his work toward the invention of new or more accurate processes of work, the fulfillment of some chain of scientific data, or the discovery of new truths. Finally, there are the new courses in farm business and rural leadership, involving the challenging new questions of rural finance, co-operation and rural sociology, and the course in agriculture for teachers, a course that is imperatively needed by all teachers who are attempting to give agricultural instruction in secondary schools.

In the school of home economics, which has almost kept pace with the rapid strides of the school of agriculture, in absolute enrollment and in comparative increase, the young women have opportunity to specialize in distinctive lines of study. Domestic science and domestic art, the two original departments, have now been supplemented by strong departments in home administration, institutional management, education and applied design. These courses aim to prepare women to be not only good managers of the household, discriminating, resourceful, efficient, but competent superintendents of hospitals, asylums and similar institutions; managers of cafeterias, dietitians, teachers of home economics, and designers of costumes, household furnishings, etc. The courses, though comparatively new, have already been tried out under practical conditions, and have met every reasonable test in the fullest and most gratifying manner.

Engineering Is Important.

In engineering, a phase of the land-grant college work co-ordinate with agriculture, since the founding of these institutions, and developing parallel with it, the college has enlarged its field of study and intensified its opportunities for specialization as rapidly as the demands of the Pacific Northwest would warrant. Civil, mechanical, and electrical engineering have for many years been the fundamental departments of the engineering school. They have always maintained a severe standard of scholarship. More recently the department of experimental engineering has made remarkable progress. Its work as a service department for all other departments of the school, and for the schools of forestry and mines, as well as its work with students specializing in experimental work, has been such as to win the recognition and approval of other schools of engineering, besides rendering economic service of great benefit to the state.

Mechanic arts, the newest and most immediately popular of the engineering departments, co-operating with the departments of industrial arts and industrial education, on the one hand, and with all the structural departments of the engineering school on the other, is utilizing all the resources of the engineering equipment. It employs, in its tasks of building college machinery and equipment, the services of the draughting rooms, the pattern-making department, the foundry, the forge-room, machine shop, the electrical department and the experimental department.

The school of mines still further broadens the opportunities for engineering study and research at the college. Three fields of work that are fundamental to the development of Oregon's mineral resources are now organized as distinct departments in this school, namely: Mining engineering, ceramics and chemical engineering. In connection with the class and laboratory work in mining engineering, extensive field work, chiefly in co-operation with the State Bureau of Mines and Geology, which is centered at the college, is being carried out with a view to determine the location and extent of the state's mineral wealth. The department of ceramics is similarly engaged to promoting the clay industries of the state, which in time are sure to be of vast commercial importance.

The school of commerce, always popular and always in close touch with public movements, commercial and social, has done such conspicuous service to the country in the field of farm accounting and rural economics as to bring repeated honors to the college and the commonwealth. Its facilities for instruction in business administration, including accounting, auditing, organizing, managing, advertising and salesmanship, in stenography and typewriting and other secretarial duties, are recognized throughout the country as among the best of that kind.

The bureau of organization and markets, established at the college in 1914 by act of the board of regents, has proved a valuable factor in gathering and distributing data on this work.

In pharmacy, one of the independent departments of the college, the student has the choice of taking a regular four years' course, leading to the degree of bachelor of science in pharmacy, or a two years' course, which wins him the lesser degree of graduate in pharmacy. This degree, however, fulfills the scholastic requirements that the State Board of Pharmacy lays down as preparation for taking the examination as a candidate for registered pharmacist. For work of this kind the department is not only adequately equipped, but most fortunately situated in the midst of a scientific and technical college, all the resources of which, in fundamental sciences especially, are at the disposal of students of pharmacy.

In addition to the standard degree courses outlined above, the student also has superior facilities for specializing in physical education, including coaching for both men and women, and for military tactics. With such a wealth of choice among the great industrial professions, and with such facilities for enriching the technical work by courses that make for a larger outlook and for liberal citizenship, the Oregon youth, whether man or woman, has little occasion to seek beyond his own state for "a strong, sensible, inspirational scheme of education."