

Want to Be A Soils Man?

Agriculture Students Prepare for Jobs In Soils Science and Soils Technology

By T. F. Buehrer

A wise man once said that soil is the foundation of agriculture. Because the soil is closely bound up with all phases of agriculture, a wide variety of jobs and opportunities is open to men well trained in soil science and technology.

The soils man may be confronted with problems relating to bringing new land under cultivation, reclaiming alkali land, or maintaining the productivity of good land, and it is desirable for him to have a wide range of information and experience to draw upon. He must therefore be well trained in all phases of soil science and have a background knowledge of chemistry, physics and plant physiology, field and vegetable crops, entomology and irrigation.

The positions open to graduates in soils may be classed under (1) Soil Science and (2) Soil Technology, (shown in the accompanying chart). Soil science seeks to "learn the reasons why", to study the cause and correction of soil conditions unfavorable to crop production. Soil technology is concerned with field operations such as are met with in soil survey, farm management and soil conservation field work.

The amount of training required by these jobs depends upon the type of work involved. Positions open to graduates with the bachelor's degree are usually limited both as to salary and chances for advancement. It is definitely to the student's advantage to secure at least a master's degree

before attempting to qualify for a research position. It is very improbable at the present time, except under most unusual circumstances, that anyone would rise to a top position in the soils field without a doctor's degree or training equivalent to it.

Positions with state institutions and government agencies may involve both the science and technology of soils. Modern soils research requires an ability to apply the new tools of science such as X-ray, spectrophotometry and radioactive tracer methods to the solution of soil fertility problems. For this reason a high level of technical training in the fundamental sciences is necessary.

Many Jobs

Positions in the commercial field such as fertilizer and insecticide sales, farm management, etc., call for a high type of native ability and resourcefulness in addition to thorough technical training. Analytical jobs involving routine testing of soils, irrigation waters, feed and fertilizers provide much variety and good experience, but the chances for advancement are relatively small. Extension work of county agents and soils specialists often involves soils problems in which the agent is called upon to assist the individual farmer.

The policy of the federal government of tremendous agricultural expansion, to bring new land under irrigation cultivation in the Middle West and Far West, has created a large number of jobs for graduates in soils. Increase in cultivated acreage means an increase in fertilizer and insecticide sales, in the number of workers needed by state and federal experiment stations, and other lines of work calling for soils men.

The Department of Agricultural Chemistry and Soils at the University of Arizona is frequently called upon to recommend men for certain jobs. It has set up its course of study to meet the requirements of a varied group of positions.

Students interested in this field should look ahead and arrange, in consultation with the department, a closely coordinated course of study which includes the necessary subjects in proper sequence, and then resolve to do the best work possible in order to qualify for the opportunities open to them upon graduation.

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Job Opportunities In Soils

SOIL SCIENCE		SOIL TECHNOLOGY
Universities and Agricultural Colleges	U.S. Government Bureaus	1. Commercial Work
1. Teaching	1. Bureau of Plant Industry Soils and Agricultural Engineering	Farm Management Fertilizer and Insecticide Sales
Courses in Soils Supervision of graduate research	Soil Management and Irrigation Soil Survey Fertilizers and lime	2. Field Research
2. Experiment Station Research	2. Reclamation Service	Chilean Nitrate Corp. DuPont de Nemours & Co. Amer. Potash Inst. Monsanto Chemical Co. Shell Chemical Corp.
Soils research Analytical work	3. Forest Service	3. Land Appraisal
Field testing of fertilizers for different crops	4. Production and Marketing Adminis.	For banks and loan agencies
3. Extension Service	5. Soil Conservation Service	4. Consulting Service to growers
County agents Soil specialists	Conservation surveys Research Operations	5. Analytical Work:
	6. Regional Salinity Laboratory	Routine analysis of soils, irrigation water, feeds, ferti- lizers, crops, etc.