



Arizona Agricultural
Experiment Station.

Bulletin No. 1, Dec. 1, 1890.

TUCSON, ARIZONA.



Arizona Agricultural Experiment Station.

The Agricultural Experiment Station of the University of Arizona was organized temporarily, July 1st, 1889, and work begun on the equipment.

A permanent organization was made October 9th, 1890, and the general policy of the work of the station decided upon.

The experiment station was made an adjunct of the school of agriculture of the university, the members of the faculty of the school to comprise the staff of the station.

This plan was adopted for the purpose of utilizing experimental work in the station for practice, and means of illustration, for students pursuing the agricultural course in the university.

The question of what work the station should undertake, has received the careful consideration of the board of regents, who have been aided by the advice of persons from different sections of the Territory, who are interested in the development of the agricultural interests.

As fruit growing promises to be one of the leading industries, and as at present, and for some time to come, experimental knowledge of what to grow, and how to grow it, will be questions of great importance, it has been thought advisable, without neglecting other interests, to give the subject of fruit growing the special attention of the station.

In the organization of the station, the headquarters have been located at the university, in Tucson, to make use of the buildings, laboratories, and apparatus of various kinds, for both instruction and experimental work.

The university plant, which is being made as complete as possible for the work designed, and equal to the equipments of some of the leading colleges in the eastern States, is procured partly from the Experimental Station fund, and partly from the special appropriation made by Congress to equip and support agricultural colleges, in the States and Territories.

In like manner the salaries of the men engaged in station and in college work are paid from both funds. It is believed that in this way the money provided by the United States Government for experiments in the interest of agriculture, and for industrial training, may be most economically and judiciously expended.

The chemical work of the station, which requires an extensive

and complicated apparatus, will be carried on principally at the university; also the propagation of many plants, study of injurious insects, and such other work as will require buildings specially designed for the purpose.

The testing of trees, and plants of various kinds to determine their economic value, will be carried on in several places in the Territory, and for this purpose several auxiliary stations are being established in different localities and planting started.

So many requests have been received to have branch stations established in certain places, the station officials have given the matter no little study. To accede to all the demands made is an impossibility with the means at command.

The following policy has been thought best for all concerned in inaugurating the work :

FIRST: To have a well equipped station in connection with the university, for the prosecution of the special lines of work already referred to.

SECOND: To establish stations in other places to test local influences, as far as means and time will permit and at the same time give attention to certain problems that are of general interest.

In locating the stations to be started the first year the selection of places has been governed by the following considerations :

1. To place them where there is already some attention being paid to fruit growing and to improved agriculture, that they may be beneficial to the greatest number.

2. To have the stations near some railway depot, so as to be readily accessible to visitors, and convenient for the transportation of material, and so that the men employed in the station work may go and come with least expense and loss of time. The latter is important with so much to be done in a limited period.

3. To have the stations embrace a considerable portion of what promises to be the fruit belt of the Territory.

4. To test as far as possible certain peculiarities of soil common to considerable areas of certain formations.

5. To select places where work may be carried on with least expense to the station, to enable us to accomplish most with the means at our disposal.

In the beginning, with so much to do in getting started, it has been thought best not to undertake more than can be well done.

The foregoing considerations have determined the locations to the present time.

Four field stations have been located. The University station at Tucson, on the university grounds, soil a gravelly loam overlying a "caliche," soft limerock at a depth of from two to six feet; permanent water at 80 feet and a small tract of sandy land near by, no hard pan, water at 30 feet.

The Phoenix station, two miles northwest of the city, where 80 acres of land have been provided, soil varying from light sand to a rather close adobe, water at from 25 to 30 feet.

A station three miles south of Tempe, at a switch and flag station on the Phoenix and Maricopa railroad, mesa soil, water at about 12 feet.

Blaisdell station, at Blaisdell, nine miles east of Yuma, on the Southern Pacific railway, a fine sedimentary soil with water at about 15 feet.

The University station is representative of a large area of land in the central and eastern part of the Territory, and here we shall make the experiment of pumping water 85 feet for irrigation.

The Phoenix station and the one south of Tempe, represent a considerable part of the Salt River valley, and the Blaisdell station does the same for the lower Gila river. Having access to alkali lands in the immediate vicinity of the last named place, the question of how to reclaim such soils will at once be taken up for investigation.

A large number of varieties of fruits, including nearly all that have been found of value in California, will be planted at the four stations during the winter, as well as other plants of economic interest, including the sugar beet, sugar cane, cotton, grasses, forage plants, etc., etc., and the results obtained recorded and published from time to time.

As soon as the chemical laboratory is equipped, which will be about the last of January, we shall begin an examination of the waters of the several streams and of the wells in the Territory used for irrigation, and a chemical analysis of soils and of other materials.

Analysis of soils and of water of the Territory will be made free of cost when such examination is of public interest. Correspondence is solicited from persons interested in having such work done.

Samples for analysis must in all cases be collected under the

supervision or in accordance with the instructions of the chemist of the station, for such work necessitates the use of costly chemicals and consumes a good deal of time. It is important therefore, that the samples be judiciously selected.

It is the desire of the management of the station, to make the work of the greatest practical value to the residents of the Territory. We shall be pleased at all times to receive visitors at the stations and have our work inspected, and suggestions in regard to work in progress, or new lines of work, will receive our careful consideration.

We especially request to be informed of anything in the line of plant diseases, or insect depredations, and we shall be glad to have specimens of grasses or other plants that promise to be of value sent to us for identification and for testing on our grounds.

DISTRIBUTION OF PLANTS.

The experiment station will at once establish a nursery for propagating plants to be sent to different localities to be tested, to learn the effect of soil and climate. The object of such distribution is to secure information in regard to the adaptability of different places in the Territory for the growth of such plants, hence the distribution must be made with discrimination, and the plants grown under the supervision of the station and records kept.

ORES AND MINERALS.

While the experiment station is established primarily in the interest of agriculture, some time may be given to the examination of ores, minerals and other products, when such investigation will be of value to a community in the interest of the public at large.

The agricultural experiment station is a branch of the university that includes in its departments a school of mines where ample facilities will be provided for the examination and testing of minerals,

BULLETINS.

Bulletins giving the results of investigations made at the station and of those made by others in the Territory, as far as they may be collected, will be published and mailed free to any applicant.

Names forwarded to us will be entered on our mailing list and bulletins sent as soon as issued.

Correspondence of any kind will receive prompt attention.

F. A. GULLEY, Director.

M. P. FREEMAN, Chancellor.

J. M. ORMSBY, Secretary.