AGRICULTURAL
EXTENSION WORK IN
HAWAII

Agricultural Extension Service
University of Hawaii, Honolulu, T. H.
WILLIAM A. LLOYD, DEAN

Cooperative Extension Work in Agriculture and Home Economics,
University of Hawaii and United States Department of Agriculture Cooperating. Act of May 8 and June 30, 1914.
UNIVERSITY OF HAWAII
DAVID L. CRAWFORD,
President

STAFF
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SERVICE

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Gladys M. Wood ..................................................Administrative Assistant

AGRICULTURE—
Frederick G. Krauss ............................................Assistant Director
Theodore C. Zschokke ..............................................Extension Forester
Hung Lum Chung ....................................................Extension Animal Husbandman
Robert Pahau ........................................................Extension Sugar Technologist

County Extension Agents (Farm)
Hong Chang Wong ..............................................Honolulu County
Roy A. Goff ........................................................Hawaii County
Yasuo Baron Goto .................................................Hawaii County
John C. Thompson ...............................................Kauai County
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HOME ECONOMICS—
M. Elmina White ..................................................Assistant Director

County Extension Agents (Home)
Mabel Greene ......................................................Honolulu County
J. Hazel Zimmerman ...............................................Hawaii County
Martha L. Eder ....................................................Kauai County
Gertrude M. Gage ................................................Maui County

Mercantile Press
Fig. 2—University of Hawaii from the Air
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To President David L. Crawford
and the Board of Regents,
University of Hawaii,
Honolulu, T. H.

Gentlemen:

I have the honor to submit herewith the First Annual Report of the Agricultural Extension Service of the University of Hawaii. This Report includes the financial statement for the fiscal year ending June 30th, 1929, and a summary of the activities of the Service from its organization November 1st, 1928, to October 1st, 1929.

I respectfully request that you transmit the same, in accordance with the law, to His Excellency, The Governor of Hawaii.

WILLIAM A. LLOYD, Dean.
It is interesting though hazardous to write of the beginning of things. Any date, name, or place set up as marking an initial effort becomes a mark for succeeding authors and investigators to "shoot at", as it were, and indicate a previous "beginning". This is particularly true in the field of agricultural extension, which so easily merges into that of agricultural history. Perhaps after all Solomon was not far wrong when he said, "There is nothing new under the sun".

It would seem reasonably safe to place the beginning of agricultural extension in the Hawaiian Islands with Captain Cook, the discoverer, when in 1788 on his second voyage he brought sheep, hogs, and cattle to the Islands; and yet the archeologist and antiquarian may easily establish the fact that more had been done in the way of agricultural improvement before the coming of the white man than has been done since. Certainly the Aborigines had done more to improve Indian corn from the original wild corn before the discovery of America than all that has been done since. Many plants were introduced into the Islands by missionaries, sailors, traders, and others, that have had a profound influence on the development of agriculture in Hawaii. Under the Monarchy the Royal Agricultural Society did some praiseworthy work. All of this is more properly in the interesting field of agricultural history.
The purpose of this introduction is to trace briefly the conscious, purposeful effort of governmental agencies or, more strictly, of organized public educational institutions toward the improvement of agriculture and home life. The College of Hawaii was established as a Land-Grant Institution in 1908. An Extension Department was organized in 1909. In the report of the President of the University to the Board of Regents for 1909-1910 the work of the Extension Department is mentioned as follows:

“During the present year the College has outlined the courses of correspondence study in the subjects of soils and crops, plant life, poultry husbandry, domestic science, and zoology. This is only the beginning of an activity that should increase in importance. There are those in the community who, through the exigencies of employment or residence, cannot attend the College in person for either its regular or special courses. To these the Correspondence Study Department is appealing. The Department will also be enlarged to include movable schools, extension lectures, and demonstrations on all subjects pertaining to rural affairs and individual activities. During the biennium the College has through lectures, demonstrations, and correspondence on subjects pertaining to its lines of work, reached more than six hundred people in Honolulu, Hilo, Wailuku, and other parts of the Islands. The movable schools conducted in Hilo and Wailuku during the summer of 1909 were not repeated because of a lack of funds, though requests were made for them”.

In the “Hawaiian Forester and Agriculturist” for July 1911 there is an article entitled “The Extension Work of the College of Hawaii 1908-1911” by Vaughan MacCaughey, in charge of Extension Work. The following quotation from this article is significant:

“There is perhaps no other institution of collegiate rank in existence that at so early a stage in its history took an active interest in the dissemination of collegiate advantages through the various channels of extension work. The College of Hawaii has made rapid use of the experiences of our sister institutions on the mainland. The privilege of carrying the ‘Gospel of Education’ directly to all the people has been considered from the very incipiency of the institution as one of its fundamental duties”.

President Gilmore in an article, “Correspondence Study” in the “Hawaiian Collegian” for June 1910 writes as follows:

“One characteristic that distinguishes our system of education in America from that of other nations is its democracy. We look upon our system of common schools as fundamental to the welfare of the nation, and upon the Colleges that have been established under the direction of national law as institutions that render large returns to the nation in the form of increased efficiency for its citizens. However, up to the present time our system of education has one element lacking in rendering its democratic application complete and that is, it does not reach all the people all the time.
Everyone now recognizes that the acquirement of an education does not consist of a certain number of years spent in school or college, or of absorbing facts during a stated period of time that relate to certain specified subjects. The acquirement of an education is closely correlated with the life activities of his environment, and is independent of age, sex, or the period of acquirement.

Correspondence study was the principal method employed in achieving the ideals of President Gilmore, but, as mentioned in the Annual Report above referred to, "demonstrations and movable schools" were also used.

It is apparent that the extension work of the newly established College was very closely paralleling that of mainland institutions at that time. In the Annual Report for 1915 President Gilmore calls attention to the Extension activities such as Short Courses, Movable Schools, Demonstrations, Correspondence Courses, Traveling Libraries, and the publication of a monthly journal. The demonstration work and movable schools were discontinued because of the "expense involved".

In the annual report for the biennium 1913-1914, President Dean says under the title "Extension Work":

"The restrictions under which money is annually appropriated to the College of Hawaii by Congress expressly forbids the use of any of the money for extension or correspondence work and the Territory of Hawaii has never made any appropriation therefor. The work which has been carried on in the past had been a voluntary contribution on the part of certain members of the faculty. The last Congress passed the Smith-Lever Bill which appropriated $10,000 to each one of the Land-Grant colleges on the mainland for extension work and provided for increasing this amount. As the bill passed the House, Hawaii was also included. For some unexplained reason Hawaii was ultimately eliminated because of strong opposition from some unrevealed source. One half the above amount, that is $5,000, was added to the appropriation to the Experiment Station where it might be expended strictly under Federal control".

In the estimate of requirements of the University for 1919-1921, there is an item of $45,000 for the employment of county extension agents. This request failed to receive legislative approval, but $5,000 was made available for the biennium and David Crawford, Professor of Entomology, began an effort to popularize the work of agricultural extension. The Legislature of 1923 appropriated $10,000 for the two-year period 1923-1925 and Professor Crawford was designated as Director of Extension. A slogan was adopted, "THE TERRITORY OF HAWAII OUR CAMPUS".

In the annual report Professor Crawford says:

"The extension service department of the University of Hawaii
is directing its work along service lines as follows: extension classes, correspondence instruction, lectures and informal talks, and public service. Somewhat in the nature of correspondence classes is the weekly circular letter being sent out free to subscribers, called the Extension Letter. This carries agricultural information and news of local interest throughout the territory. A program of informal lectures by faculty members has been given throughout the islands. Under the head of public service are included such forms of public service as labor and field investigations, expert consultations, demonstrations, information through the press and otherwise, special correspondence, assistance in marketing, etc.”

In 1923-1925 the weekly Extension Letter was continued and printed and mimeographed circulars were issued. A bulletin on “Vegetable Growing in Hawaii” by Professor F. G. Krauss was the first extension bulletin. The Hawaii Egg Laying Contest was inaugurated in 1922 in co-operation with the Poultry Division. Publication of the Extension Letter was the principal agricultural extension activity from 1922 to 1928. There was no agricultural paper published in the Territory, and the Extension Letter to a considerable degree filled this field. Its subscription list was expanded to reach 1700 subscribers at its maximum. In addition to giving agricultural information, marketing quotations were also published. The requests for funds to establish a county agent system along mainland lines was renewed in the annual report to the Legislature for 1925 and again failed to receive legislative approval. But the appropriation for extension work was increased to $26,000 for the biennium, including special appropriation for marketing work. For 1927-1928 this was further increased to $27,100 for the biennium. With the election of Professor Crawford to the Presidency of the University on the retirement of Dr. Dean, Merlyn Forbes was made Director of Extension. With the increased funds available a marketing assistant, Hong Chang Wong, was employed, and a resident assistant agent, Y. Baron Goto, was appointed on a part-time basis to work with the Japanese coffee growers at Kona, Hawaii. The appropriations for extension work were for both University and agricultural extension, Director Crawford having charge of both lines of work. The amount devoted to strictly agricultural work was very small.

EXTENSION WORK BY THE TERRITORIAL FOOD COMMISSION

The Legislature of 1917 created a Territorial Food Commission and appropriated $25,000 for its use. Dr. A. L. Dean, President of the University, was made Executive Secretary, and special agents were appointed to encourage home production and conservation of food as a
war measure. These agents were appointed in the spring of 1917 as follows: J. H. Midkiff, West Hawaii; W. W. G. Moir, East Hawaii; F. G. Krauss and John O'Brien, Maui; A. H. Case, Kauai; John M. Watt, Oahu.

In October of the same year, J. P. Childs was made Federal Food Commissioner and took over the work of the Territorial Commission. There were some changes in the personnel of the special food agents employed, but the county work continued until December 30, 1918, when the offices were closed. The program was one of emergency food production: seeds were distributed, and instruction and demonstration given in methods of production. The work closely parallels the war work of the county extension agents on the mainland.

The Star-Bulletin (Honolulu) Home and School Garden Contest was inaugurated during the war by Wallace R. Farrington, then editor of the paper and afterwards Governor of the Territory, and has been continued uninterruptedly since. This work has been instrumental in encouraging the growing and use of vegetables by the country population generally. Thousands of young people have been taught to grow vegetable gardens and many families have definitely changed their food habits to include the greater use of vegetables.

EXTENSION WORK BY THE U. S. EXPERIMENT STATION

In 1914 the U. S. Experiment Station at Honolulu received a special appropriation from the Federal Congress of $5,000 for agricultural extension work. This was in part to compensate for the failure of Congress to include Hawaii in the provisions of the Smith-Lever Act passed in that year. F. G. Krauss was appointed Superintendent of Extension on November 1st, 1914. Commencing in 1912 extension work of a general advisory character had been conducted with the adjacent homesteaders through the superintendent of the substation at Glenwood. This work was considerably expanded during the next few years. The Superintendent of Extension made periodic trips to each of the islands. Meetings were held, farms were visited, and advice was given. Demonstration farms were established at Haiku, Maui; and many crops were tested and their adaptability to local conditions established. Additional demonstration farms were established on the other islands. Encouragement was given to the organization of county fairs on Maui and Hawaii. During the period of the World War the Experiment
Station cooperated in the home food production and conservation campaigns.

Collaborators were appointed on each of the islands and on April 1st, 1918, R. A. Goff was appointed as Director of Extension for the island of Hawaii. In the same year extension work with boys and girls was started on Maui through the organization of a Pig Club with 31 members. In the report of Agricultural Experiment Station for 1919, Director J. M. Westgate says:

“For the ultimate good of the islands, steps should be taken to increase such various organized projects as boys' and girls' pig clubs, potato clubs, corn clubs, etc. This class of work has heretofore been confined almost exclusively to school-garden work, and as a result of having received a great deal of attention from a number of different agencies throughout the islands, has been an unqualified success. It is felt, however, that the work should be made to embrace more than the production of vegetables; in fact, it should include the systematic raising of farm crops and animals as well.

Throughout the islands the ready responses to the home economics demonstrations occasionally made possible by various local agencies clearly prove the desirability of and the need for additional attention to this line of extension work. An efficient home demonstration agent visiting the more or less isolated homes of the islands would impart a great deal of up-to-date information and, as an outside influence, serve to increase the happiness and efficiency characteristic of the average individual American home. Each county should have a county agent or full-time representative of the extension division”.

The Federal appropriation for extension work to the Experiment Station was increased to $10,000 in 1920. The Haleakala Demonstration Farm was established “for the express purpose of assisting homesteaders on the Haleakala homestead tract which was recently opened to settlers”. Home demonstration work was started on a small scale through the appointment on July 1, 1920, of Mrs. Nellie Russell as collaborator in home demonstration. Meetings were held in Honolulu and also on the plantations. Demonstrations were given in the cooking and preservation of home-grown foods. This work was continued until July 30th, 1923.

Dr. Krauss resigned as Superintendent of Extension on November 1st, 1921. In this report of his seven years of service he says:

“Through the efforts of the Superintendent of Extension the farmer has been given every assistance in the establishment of better markets for crops and in the development of standard grades of products to meet the demands of the best buyers. Farmers' associations have been formed for the benefit of those living in remote agricultural districts and careful attention has been given
to the marketing and utilization of local crops and to the wisest expenditure of the profits accruing from them. A number of demonstrations have been made in agricultural communities having the greatest need of them. In various localities the work has included efficient systems of rotation of crops that are beneficial to the island; cooperative experiments in dynamiting and in treating soils antiseptically in pineapple culture; forage-crop and pasture-grass experiments; a great number of comparative tests of field crops; leguminous crop demonstrations; the development of diversified agriculture on the islands; the working out of satisfactory methods of storage, grading, and marketing, fertilizing, green manuring, and drainage. Various groups of farmers have been shown how to draw up contracts with the pineapple canneries and the sugar mills for the disposal of their products”.

The general character of county agent work being conducted by the single agent on the island of Hawaii is indicated by the following quotation from the annual report of the Hawaii Agricultural Experiment Station for 1922:

“The extension agent for the Island of Hawaii devoted the major part of his time to orchard work and to the improvement of pastures on the various cattle ranches. During the year he traveled 11,200 miles, mostly by automobile, and visited 1,500 farmers, in addition to distributing bulletins, vegetable and fruit seed, young nursery stock, and cuttings and suckers to homesteaders, ranchmen, and plantation managers. Much assistance was given in ordering varieties of seed, in selecting seed in the field, and in applying the right amount of fertilizer to the different soils of the various localities”.

Miss Mabel Greene was appointed in charge of Boys’ and Girls’ Clubs April 14th, 1923. In the annual report of the Hawaii Agricultural Experiment Station for 1923 Miss Greene says:

“As soon as the club leader arrived in Hawaii in April 1923, efforts were made to have the boys’ and girls’ club work correlated with the work of the public schools under the direction of teachers who are trained in agriculture and home economics”.

The club work enrolled 582 members in 1924 and was in progress on Oahu, Maui, and Hawaii. The number enrolled increased to 1460 when it reached its maximum in 1925. In 1926 the work was extended to Kauai, and boys’ and girls’ exhibits were made at the Territorial Fair. The enrollment remained approximately constant after 1924, and the work continued to be conducted in close cooperation with the public schools. From 1924 to 1928 H. F. Willey acted as part-time county agent for Maui in connection with his work as Superintendent of Haleakala Demonstration Farm.

The above is a brief outline of the agricultural extension work of the University of Hawaii and the Federal Agricultural Experiment Station previous to 1928. To this must be added the extension phases of the work of
the Commission of Agriculture and Forestry, which at times has been important; the activities of the various welfare associations; the work of the agriculturists of the large sugar and pineapple companies; the work of the extension agent of the Hawaiian Homes Commission on Molokai; that of the nutrition workers of the Public Health Service; and the work of such institutions as the Kamehameha Schools. Agricultural extension is therefore not new in Hawaii. It started at approximately the same time as in the States. It was contrary to the wishes of the Territory that Hawaii was not included in the Smith-Lever Act as originally passed, and Hawaii constantly tried to supply this deficiency through its own resources but failed to secure legislative approval. Within the limits of funds and personnel available both the University and the Experiment Station did good extension work. The funds were always meager and the personnel for the most part primarily engaged in other activities demanding the major portion of their time. Both institutions deserve much credit for what was accomplished under these adverse circumstances.

The spring of 1928 marked the culmination of long years of effort. The U. S. Congress amended the Smith-Lever Act of 1914 (see Appendix) to include Hawaii in its provisions, and also included the Territory in the new Capper-Ketchem Extension Act (see Appendix) passed by the same Congress. Thus Hawaii came into possession of its rights under the Fundamental Act, although fourteen years late. It is more populated, more important agriculturally, and pays more Federal taxes than many of the states. Whether the delay of Congress was justified is not a matter for discussion here, and whether the tardy recognition is warranted will remain for the future to determine.

AGRICULTURAL EXTENSION: WHAT IT IS

Agricultural extension on the mainland preceded the Smith-Lever Act. This act simply made provision for systematic organization, permanent financing, and further development of work already under way. The first county extension agent was appointed in Texas in 1904. The great agricultural philosopher, Dr. Seeman A. Knapp, had blazed a trail, particularly in the Southern states, for a new system of adult education based on the demonstration idea with the individual farmer as the demonstrator. It was, of course, the old idea of learning to do by doing. The work grew immediately out of an attempt to control a threatened calamity: the devastation of the
Fig. 3—Staff Agricultural Extension Service First Territorial Conference August 22, 1929
cotton boll weevil. Work similar to that inaugurated by Dr. Knapp also developed in many of the northern states to help overcome what was thought to be a decadence of agriculture and of country life. The whole effort was based on belief that agriculture is a fundamental major industry, and that a prosperous, contented people dwelling on the land is an essential to national prosperity, permanency, and greatness. Agricultural extension work celebrated its quarter centennial at Houston, Texas, in February, 1929. From one agent it had increased to more than four thousand. There is now a total of more than five thousand men and women employed, cooperating with the U. S. Department of Agriculture and with state agricultural colleges. Extension work has established itself in the affections of the people and is as accepted and secure as the public school system itself. It is a part of the great national effort to maintain individual freedom, independence, and democracy through universal education without which Thomas Jefferson said, “Our great experiment will fail”.

The DEMONSTRATION is the keystone of the Extension arch. It is that which chiefly differentiates it from other forms of education. This was the philosophy of the great founder.

Congressman Lever, the author of the Federal Extension Act, said in his speech submitting the report of the Agricultural Committee to the House, “This bill provides for simple practical demonstrations, under the farmer’s own vine and fig tree, as it were, that there are better methods than those he has been following”. If one gets that thought clearly in mind, it is about all the extension theory one needs to know. If the DEMONSTRATION is the keystone of the extension arch, then the COUNTY EXTENSION AGENT is the key person in the extension organization. The idea of Congress as indicated by the debates in both the Senate and the House was to have in each county at least one agent of the Department and state college who would work in that county and demonstrate with the people to be served. He would bring to them and help them test out on farms and in homes the application of experiments as determined in the laboratory and test plats, and he would spread information concerning the results of good farm practice which he observed in his immediate community.

The Extension Act included the whole family in its perspective. The contended, convenient, cultured country home is quite as important as the economically prosperous
farm. The end product of all extension work is the satisfactory home. The Act contemplates work with young people as well as with adults, although the positive objective is to give help here and now rather than in the future. Its field is as much that of assisting in the development of economic marketing of farm products as it is in the field of increased production. It touches agriculture and home life at almost every point. It has been to crystallize this ideal for Hawaii as part of the national system that the last year has been dedicated. Only eleven months are covered by this report, so it is impossible to show much in the way of completed results of demonstration. The results of all educational effort are slow in becoming apparent. Results in agricultural education are particularly slow and may be an accumulation of decades rather than years. This report concerns itself primarily with an account of setting up an extension organization, development of a personnel, inaugurating extension policies and, to a degree, methods of procedure. It has been an attempt to lay a foundation for a definite program of improvement in agriculture and home economics in the years to come.

The present Dean of the Agricultural Extension Service of the University of Hawaii arrived in Honolulu on October 24, 1928, on a year's leave of absence from the U. S. Department of Agriculture for the above purpose and entered immediately upon his duties. The extension work of the Federal Station and the University had been largely suspended on July 1st previous to his arrival. He therefore began with a clean slate. The first few months were spent in a study of conditions, inventory of means and agencies, and a general appraisal of the situation. Conditions in Hawaii differ greatly from those of the agricultural states on the mainland. At first these differences were almost appalling, both socially and industrially. Not only were the crops grown different but the whole system of land tenure, industrial organization, social life, management, and method were unlike the settled procedure in the states. In a community almost wholly agricultural there is a seeming paradox of no farms, at least none in the mainland sense of that word. There are huge sugar and pineapple plantations owned by corporations with thousands of laborers living for the most part in plantation camps. There are a few homesteads, but these are usually operated as a part of the plantation. There is a mere fringe of small vegetable producers, poultry producers, etc., but even these are often "part time farmers". With soil and climatic conditions permitting of the pro-
duction of almost anything that is grown in either the temperate or tropic zones, sugar cane and pineapples compose 95 percent of the production. There is a great diversity of races speaking a multitude of tongues. Orientals predominate, Japanese leading in numbers; but there are Chinese, Portuguese, Hawaiian, Korean, Porto Rican, South Sea Islanders, Filipino, Spanish, and a few others. There are almost no "haole" (white) small farmers from the States. It seemed difficult and complex, but a closer study tended to show that most of the difficulties were more apparent than real, and that the complexities were often but vain imaginings. Most situations are less complex than they seem and people of all races are tremendously alike. They are motivated by much the same influences and respond to much the same stimuli. This is not the place for any expression of social or economic theories as applied to Hawaii. The conditions exist. They are to be dealt with. After a careful appraisal of all the facts, one must believe that there is considerable place in Hawaii for an agricultural extension service somewhat along the line of similar mainland organizations and that, rightly directed, such an organization can contribute much toward the common good.

The immediate and big field for Agricultural Extension is with the gradually expanding number of small producers; to help them in their production and marketing problems; to bring about a larger production of home products; to improve the quality of products and to help the territory more nearly to feed itself and so decrease the weight of the bread basket that comes from the mainland; to encourage the use of island products at home; to supply the growing demands of the city and the plantation camps; to help feed the army; to establish the small farmer on a secure and self-respecting basis; to dignify labor with the hands and to turn the youth from the lure of the city; to help make homes that hold the family together. If to do these things is desirable in Hawaii, then in spite of difficulties and complexities, there is a considerable place for the work of the Agricultural Extension Service.

On February 1st, 1929, a plan of organization was submitted to President Crawford and approved by him and the Board of Regents. The plan which has now been brought into being calls for an Agricultural Extension Service as one of the three divisions of the University, co-ordinate with the College of Liberal Arts and the College of Applied Science. At its head is a Dean who is a member of the faculty council. It is in reality a College
of Agricultural Extension. All of the professional employees of the Agricultural Extension Service are members of the faculty. The county extension agents are simply non-resident members of the faculty, and the county offices on the various islands are a part of the University plant. Each employee is paid his entire salary and all expenses from Territorial and Federal funds. There are no county, corporate, organization, or private funds entering into the extension budget. It is wholly a public enterprise publicly directed. If Hawaii was fourteen years late in getting started it has its compensation in its ability to profit by the experience of the States. The above plan has received the enthusiastic approval of many experienced state extension administrative officers but no state has been able to institute such an organization, owing partly to insufficient funds, partly to state laws, and partly to precedent and an unfortunate beginning. All professional extension employees have sabbatical leave provisions as members of the faculty of the University, and have insurance and retirement benefits. The diagram below shows the organization of the Agricultural Extension Service:
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<td>William A. Lloyd</td>
<td>Director</td>
<td>Oct. 25, 1928</td>
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<td>Dean</td>
<td>Feb. 1, 1929</td>
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<td>Gladys M. Wood</td>
<td>Secretary to Director</td>
<td>Oct. 29, 1928</td>
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<td>Administrative Assistant</td>
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<td>Yasuo B. Goto</td>
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<td>July 1, 1929</td>
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<td>Mabel Greene</td>
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<td>Hong Chang Wong</td>
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<td>Harvey F. Willey</td>
<td>County Extension Agent, Maui County (Half Time)</td>
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<td>Roy A. Goff</td>
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<td>County Extension Agent, Hawaii County</td>
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<td>M. Elmina White</td>
<td>Assistant Director for Home Economics</td>
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<td>Margaret Simms</td>
<td>Stenographer, University Office</td>
<td>Feb. 11, 1929</td>
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<td>Frederick G. Krauss</td>
<td>Assistant Director for Agriculture</td>
<td>May 1, 1929</td>
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<td>Ellen Newton</td>
<td>Stenographer, University Office</td>
<td>May 1, 1929</td>
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<td>John C. Thompson</td>
<td>County Extension Agent, Kauai County</td>
<td>May 15, 1929</td>
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<td>Miriam Breckwedel</td>
<td>Stenographer, University Office</td>
<td>May 29, 1929</td>
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<td>M. Oka</td>
<td>Stenographer, East Hawaii County</td>
<td>June 1, 1929</td>
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<td>Theodore C. Zschokke</td>
<td>Extension Forester</td>
<td>June 1, 1929</td>
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<td>Martha L. Eder</td>
<td>County Extension Agent, Kauai County</td>
<td>July 1, 1929</td>
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<td>Clifford C. Davis</td>
<td>County Extension Agent, Maui County</td>
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<td>Isao Sakoda</td>
<td>Stenographer, Kauai County</td>
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<td>Hung Lum Chung</td>
<td>Extension Animal Husbandman</td>
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<td>Robert Pahau</td>
<td>Extension Sugar Technologist</td>
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<td>Gertrude M. Gage</td>
<td>County Extension Agent, Maui County</td>
<td>Aug. 1, 1929</td>
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<td>Muriel Tsuda</td>
<td>Stenographer, Honolulu County</td>
<td>Aug. 6, 1929</td>
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<td>James Shigeta</td>
<td>Stenographer, Maui County</td>
<td>Aug. 14, 1929</td>
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DEVELOPMENT OF THE STAFF

The plan of organization called for a man and a woman extension agent in each of the four counties with the provision for two men and two women agents in Hawaii county; an administrative assistant; an assistant director for agriculture and assistant director for home economics; a territorial agent in animal husbandry; one in farm economics and marketing; and one in forestry. So far as funds have permitted, this staff has been developed. The appointments and resignations during the year are given in Table No. 1.

In all there have been 24 appointments and 2 resignations. Mr. Harvey F. Willey was appointed temporarily as a part-time Assistant County agent for Maui in cooperation with the Hawaii Experiment Station, and devoted half his time as Superintendent of Haleakala Demonstration Farm. He resigned on July 1st and a full-time agent, C. C. Davis, was appointed. The Agricultural Extension Service is a cosmopolitan group representative in part of the various racial elements of island population. It is composed of two island-born Chinese, six island-born Japanese, one pure Hawaiian, one part Hawaiian and thirteen Caucasians. Five employees were secured from the mainland, nineteen from the islands. Of the scientific or professional group all but two have college degrees and all have some college training. The following institutions have furnished the personnel: University of Hawaii, Washington State College, Stanford, University of California, Yale, University of Oklahoma, University of Illinois, Iowa State College, Missouri College of Agriculture, University of Texas, and Columbia. Seven have had ten or more years of experience in extension work. There is an organized chapter, Alpha-Omega, of the National Honorary Extension Fraternity, Epsilon Sigma Phi, composed of those who have had ten or more years of extension experience. In the development of the personnel the men agricultural workers have all been recruited from the islands because of their familiarity with the island agriculture and conditions. A part of the women have been brought from the States because of their experience in extension work. Moreover, home problems do not differ materially the world over. The combination of a man county Extension agent with a good island background, and a woman county Extension agent with a broad knowledge of extension work in the States and extensive practical experience in it has proved a fine combination. The two workers mutually reinforce and
help each other. From the standpoint of training for and experience in the extension work, the personnel is on a par with the best in the States and the salary scale necessarily somewhat higher. It would be poor economy to attempt to do the work here with anything short of the best men and women obtainable. The personnel is now completely developed so far as the budget will permit. There is much need of an additional woman agent for West Hawaii. The Big Island is too large for one worker to do the most economic or effective work. This agent should be the first additional employee to be secured. A part-time Territorial Agent in Agricultural Economics and Marketing is needed. This person might devote part of his time to research economics or teaching. Such an arrangement is in contemplation as soon as funds are available. Each of the county extension offices has a full-time extension secretary; three of these are Japanese young men and one a Japanese girl. In addition to clerical duties, their familiarity with the Japanese language makes it possible for them to perform an extremely valuable service as interpreters. The office on West Hawaii (Kona) with only one county extension agent has a part-time clerical assistant at present. A clerical staff of two takes care of the University office personnel numbering six professional people.

PHYSICAL EQUIPMENT

The University office and each of the five county offices are equipped with high-class steel office furniture, including desks, filing cabinets, tables, etc. There is need of some additional demonstration equipment in the county offices, particularly mimeograph outfits, lantern slide, film strip, and moving picture projectors. The office quarters are fairly satisfactory. The Hilo office is in the Federal building. The county office for Honolulu is at present at the University, which is poorly located from the standpoint of accessibility. This office will be moved to the new City and County building upon its completion. The Wailuku (Maui) office and the Lihue (Kauai) offices are in rented quarters. These will be transferred to the territorial buildings provided for by the last Legislature. The West Hawaii office is in the Kealakekua School building. Provision is made for offices in the new Coffee Experiment Station to be erected soon at Kona. With the above adjustments, all of which should materialize within the present year, there will be a saving in rent of $50.00 per month, and there will be much more convenient office accommodation.
FINANCES

The following table shows receipts and disbursements for the fiscal year closing June 30th, 1929:

**TABLE NO. 2**

**FINANCIAL STATEMENT**

November 1, 1928—June 30, 1929

**RECEIPTS**

Balance Territorial funds appropriated by 1927

Legislature available Nov. 1, 1928....................$ 7,150.00

Federal Smith-Lever funds ................................ 17,150.00

Federal Capper-Ketcham funds ......................... 20,000.00

TOTAL ..................................................................$ 44,300.00

**EXPENSES**

Salaries .................................................... $ 16,678.97

Supplies and Materials ................................... 1,358.22

Communication Service ................................... 314.85

Travel Expense ........................................... 4,377.15

Transportation of things (freight & express) ........ 79.08

Printing of publications .................................. 890.32

Equipment .................................................. 4,984.76

Miscellaneous (Rent, etc.) ............................... 158.32

TOTAL ....................................................... $ 28,841.67

Unexpended balance June 30, 1929 on Federal

Smith-Lever and Federal Capper-Ketcham

funds .................................................................. $ 15,458.33

Accounts examined July 19th to 27th, 1929

by T. Weed Harvey, Federal Examiner.

The unexpended balance of the Federal funds was made possible by economic administration and in part was due to the fact that the extension personnel was largely developed in the last half of the year. The overhead cost was proportionately high because of the purchase of complete equipment for all offices both at the University and in the counties. This is all in the nature of permanent equipment and should last for decades and it is therefore improper to consider it as a yearly charge. A budget system has been inaugurated for both the University and county offices. County extension agents own their own automobiles and are compensated at the rate of 8 cents per mile for not to exceed 8000 miles of official travel per year. The women extension agent on Hawaii has a 12000 mile travel allowance because of the long distance to be traversed going around the island. Accounts for the county
offices are kept by the Administrative Assistant in the University office, and the county extension agents are in­formed periodically of their balances. All furniture, equipment, and supplies in county offices is inventoried once a year and its condition noted. The furniture in the Hilo office is provided by the U. S. Treasury and in other offices is the property of the Agricultural Extension Ser­vice. County extension agents make monthly financial reports and the headquarters staff trip reports. All mem­bers make monthly time reports on forms provided by the University office. Experience is showing that additional expense money is needed by the county extension agents and most rigid economies are necessary for the remainder of this fiscal year if the extension service is to live within the budgets. This is not a particularly unfortunate condition though it will to a degree limit the amount and character of the work done. Expense accounts should be increased another year. The Administrative Assistant Gladys M. Wood was sent to California, Nevada, Oregon and Washington to make a detailed study of office organi­zation records and reports.

Fig. 4—Governor Wallace R. Farrington signing the Territorial Extension Act. April 13, 1929

Governor Farrington made tentative approval of the Federal Extension Act in vacation of the Legislature. This executive act was confirmed by the Legislature at its last session (1929); and the Territorial Extension Act,
(see Appendix) introduced by Senator Akina, passed April 13th and was signed by the Governor at a ceremony staged at the Governor's office. The pen used in signing the act was presented to the Dean of Extension by Governor Farrington. The Extension budget, which provided for complete offset to all Federal funds from the Smith-Lever, Supplementary, and the Capper-Ketcham Acts, was passed by the Legislature without a dissenting vote. $71,955.46 per year is available for each year of the next biennium. The friendly attitude of the Governor and the Legislature is much appreciated.

PROJECTS AND PROGRAMS OF WORK

All work by territorial and county extension agents is on the basis of written and approved projects and plans. County extension projects are determined as follows: the county extension agent makes a careful field study of local conditions, after which, in conference with the Assistant Directors for Agriculture and Home Economics, the projects most applicable are determined and plans for carrying on the work are elaborated. Copies of these are filed in the University office, and on succeeding field trips of the Assistant Directors progress of the work is noted and needed help is extended or provided for. In determining projects the following procedure is followed:

(1) All the agricultural and home economics enterprises carried on in the county are inventoried, such as sugar cane, pineapples, rice, coffee, avocados, papayas, vegetables, poultry, pigs, foods, clothing, etc.

(2) The "problems" in connection with each of these are listed, as for instance under the "poultry enterprise": diseases, insects, housing, breeding, marketing, baby chicks, etc.

(3) The "remedies" for each of the above "problems" are listed, if any are known.

(4) The relative importance of the various enterprises is then considered in connection with the seriousness of the "problems" and the availability of effective "remedies". A program of work is then developed made up of three or more projects, and a work calendar is prepared. Farm and home visits, demonstrations, tours, meetings, exhibits, club work, and publicity are considered in the development of a plan of work for each project. Goals are set for accomplishment in each project phase. County agents make out at least a month in advance work itineraries which are sent to the University office. One
day each week and at least one hour each day are allotted to office work. Regular office hours are from 8 A. M. to 4 P. M. but the field work is less easily defined. It frequently begins at 6 A. M. and lasts until 11 P. M. Reports of the work by projects are made each month by the county extension agents. The project reports are cumulative and so tell the history and progress of each phase of the work. Many projects are continued over several years, a few may be completed in a single season.

A COMMON PROGRAM FOR ONE PIECE JOB

Farm and home extension work are "inextricably interwoven" and the program of the men and women county extension agents is a united program. They each have their individual projects for which each is personally responsible, but these reinforce each other, as for example, food production by the man county agent and the nutrition project of the woman agent. Work with boys and girls is not considered a separate project but a part of the various projects in home economics and agriculture. The volume and kind of club work is determined by the county extension agent and the assistant directors. The programs with men, women, and young people all contribute toward definite long time objectives or goals. Each county extension agent makes a separate report to either the Assistant Director for Agriculture or the Assistant Director for Home Economics who are both directly responsible to the Dean of Extension for all work in their respective fields.

BOYS' AND GIRLS' EXTENSION CLUBS

This important phase of extension work is a very definite part of the work of each county extension agent. The amount of time devoted to it in the different counties varies from not less than one-third to more than one-half. 250 boys and girls enrolled by each county extension agent with 90 percent completions is the goal. This goal has been already substantially achieved by at least one agent during the past year. Most of the agents have had only from one to two months’ service at the time of the preparation of this report. Approximately 700 have been enrolled during the past year. On account of Hawaii's perpetual summer—all-year-round growing season—the equivalent of two or more years’ club work is possible in a single year by each boy and girl. To receive an achievement award a club member must have at least six months' club work and have completed at least one project satisfactorily. All reports must be in by November 1st; pro-
jects may be started at any time. If not completed by November 1st they appear in the report for the succeeding year. All clubs are "standard" clubs and usually hold monthly meetings. Some, however, meet every two weeks. Each club has an adult local leader or adviser, as it is preferred they be called. At the outset it appears necessary for the county extension agent to be present at each club meeting; as the club adviser becomes better trained this should not be necessary. Club projects under way are food, clothing, poultry, coffee, gardens, and rabbits. Club meetings are usually held at the homes of members, sometimes at schoolhouses. The former practice is preferred. Local club advisers are secured by the county extension agent and are fathers and mothers of the

![Fig. 5—Boys' Poultry Club at Kona, Hawaii](image)

club young people whenever possible. School teachers sometimes act in that capacity. People grow by doing things themselves, not by having things done for them and better community development is possible where local responsibility is assumed. This is the more difficult procedure but the better way, and is the policy of the Agricultural Extension Service. Any boy or girl from 10 to 20 years of age may enroll, within the ability of the service to care for them. A boy or girl engaged in vocational or home economics classes may enroll in club work with the approval of his parents and teacher but must carry on a separate project. Vocational teachers in agriculture or home economics and county extension agents re-inforce each other but do not duplicate each other's work. In only a very few instances is the same boy or girl involved
A BOY WITH A HOE—AND A VISION

He stands, and leaning on his hoe he looks ahead,
He sees a glorious sunburst and a rainbow blue and red,
And a dream of a tomorrow that will surely come to pass,
For the boy who works; whose vision is above the rooted grass.

—WILLIAM A. LLOYD.
in both lines of work. With 35,000 young people and with less than 1500 in both lines of work at present, there is plenty of room for expansion and no occasion for duplication.

The first county club camp in the territory was held at the Haleakala Demonstration Farm in June. 123 boys and girls were present for two days, 9 clubs participating. A balanced program of study, demonstration, games, hikes, contests, etc., was provided. The camp was a big success and the young people unanimously voted that it be made an annual affair. The county extension agent, Mr. Willey, and his wife, Mrs. Willey, deserve much credit for the success of this first county boys' and girls' camp to be held in the territory. Other camps are to be held on Oahu and Hawaii.
MOTHERS' VACATION CAMP

A Mothers' Vacation Camp, the first in Hawaii, was held at Kokokahi, Oahu, in July. This activity was patterned after the Farm Women's Camp, which is a feature of home demonstration work in many of the states. The program was made up of a combination of demonstration work and play. The women participating were members of home demonstration clubs on Oahu. Two days were spent in camp. A chef was employed so the women had no meals to prepare or serve and no dishes to wash; no husbands or babies to care for for two whole days. It was a new and novel experience. For some of them it was the first night they had ever spent away from home. It was marvelous how quickly these mothers responded to an atmosphere of play and relaxation and became girls again. The camp expenses were paid by the women participating. This first camp was considered so successful and satisfactory by the women involved that it is planned to hold additional camps another year, possibly on all of the islands.

Fig. 7—Mothers' Vacation Camp on Oahu
HAWAII AT THE NATIONAL CLUB CAMP

Hawaii sent as its delegate to the National 4 H Boys' and Girls' Club Camp at Washington, D. C. Koichi Ito, a four year Japanese club boy from Makawao, Maui. He was accompanied on the 5,000 mile journey by Hong Chang Wong, County Extension Agent in Honolulu County. The delegates were the recipients of much attention on the mainland. It was their first trip to the continental United States. Koichi is already taking up the work of caring for a club. Mr. Wong has profited much from

Fig. 8—Delegate of Hawaii, Koichi Ito, and County Extension Agent Hong Chang Wong on arrival at National Boys and Girls Club Camp, Washington, D. C.
his contacts with the extension workers in the States. The trip was made possible through the generosity of the Maui Chamber of Commerce which contributed $300 and the Honolulu Chamber of Commerce which contributed $100. The balance of money needed was made up by members of the University extension staff and other individual contributors in Honolulu.

At the Kona Fair a club exhibit was made of canned products and sewing which attracted much favorable comment. All the jams and jellies were sold at the end of the fair and many of the club members made considerable sums of money. Economic aspects of club work are encouraged. Boys' and girls' extension clubs have made excellent progress during the year and have much promise for the future. They should ultimately enroll approximately 2500 boys and girls.

EXTENSION HIBISCUS

The Agricultural Extension Service has adopted an official extension flower. This is a beautiful yellow hibiscus with a pink throat, a hybrid originated by Mr. A. M. Bush. It is a cross between the beautiful and well-known Agnes Galt and one of the common yellow varieties. Arrangements have been made for its propagation at the University farm and also on the various islands by the Board of Agriculture and Forestry. A growing rooted specimen is awarded to each boy and girl who completes one year of work satisfactorily. It is also given to boys' and girls' club and adult club advisers who have served a year. With the hibiscus is given a certificate signed by the County Extension Agent and the Dean, which mentions the work for which the award is made.

A beautiful growing bush of the Extension hibiscus was officially planted on the University campus, at the time of the annual territorial extension conference August 22nd. An interesting planting ceremony was arranged. The Royal Hawaiian Band furnished the music; and Governor Lawrence M. Judd turned the first spadeful of earth, President Crawford representing the University the second, and Miss Madge J. Reese from Washington, D. C. representing the United States Department of Agriculture the third. Mr. Bush, the originator, named the variety for the wife and the daughter of the Dean of the Agricultural Extension Service, the "Minnie Lee". At the conclusion of the ceremony, Governor Judd delivered an address. About 1000 plants are being rooted to be ready for distribution at achievement day programs. Hawaii's
The rural population comes from artistic stock, loves beauty, and particularly loves flowers. The distribution of this beautiful hibiscus will give an added charm to the Islands which will gratify our mainland visitors but most of all it will gratify a longing desire, sometimes a starved sense for something that is not useful but only beautiful.

Fig. 9—The Extension Hibiscus—Minnie Lee
AIR AGRICULTURAL RECONNAISSANCE

As a personal project of the Dean, an air agricultural reconnaissance of the islands was undertaken in cooperation with the Air Corps of the U. S. Army. Commanding General Fox Conner, Colonel Howard of the Air Corps at Fort Shafter, and Major Van Nostrand, Commanding Officer at Luke Field, kindly made planes and pilots available. Flights were made from both Luke Field and Wheeler Field. This project was undertaken with the belief that only from the air can a comprehensive and correct estimate be secured of ground conditions. The survey established the truth of this belief. It is only from the air that any accurate idea can be obtained of the location, size, and relative importance of agricultural enterprises. New problems are discovered and the relative importance of preconceived ideas established from the air. One gets above his troubles and looks down upon them; some that loom large in the office look small from the air, and some that could not be seen at all from the ground take on a vast importance when looked at from above. Ground vision often “cannot see the forest for the trees”. Before starting the air reconnaissance, each large island had been visited and most of the roads traversable by auto covered; relief and topographical maps studied; statistical and general descriptive matter carefully considered. It is an accepted conclusion of this reconnaissance that more can be learned from the air in an hour than from months of ground travel, although to get the most out of air observation a background of information is desirable, even necessary. A few air observations are illustrative of the benefits obtained through this survey:

1. The startling variations in irrigated and non-irrigated areas of sugar-cane.
2. The effect of fertilizer and weed control.
3. The enormous loss due to gullying.
4. The need of water conservation.
5. The need of reforestation and particularly of small wood lots on scars, washes, and waste lands.
6. Extensive barren lava flows that might be converted into economic pastures by air seeding.
7. The depletion of pastures and the need of re-seeding.
8. Additional available land for such crops as coffee, cotton, tobacco, taro, macadamia nut, etc.
9. Need of roads to open up new agricultural lands.
10. The very small part that “small farming” really plays at present in the Territory.
11. Marginal lands that ought to go out of crop production.
12. Where crop replacement should take place.
13. Advantages and disadvantages of various irrigation systems.
14. Housing conditions on plantations.
15. Need of beautification.
16. Elimination of ugly spots in city and country.

Most of all it gives one a consciousness of having really seen things that it is wholly impossible for the person with ground vision only to understand. It is like having poor vision for forty years without knowing it and suddenly having one's eyes opened. Truly may the flyer say, "Once I was blind but now I see; once I saw as through a glass darkly but now face to face".

Every extension organization in the United States should get up in the air and get a new grasp on things. It helps to get one out of the rut, out of routine, gives a new perspective, gets away from moth-eaten methods, and best of all it stirs up the lazy brain cells to new constructive thinking. The air reconnaissance was only possible in Hawaii because of the fine cooperation of the Army; otherwise the cost would have been prohibitive. Expanding commercial aviation will help solve this difficulty for others. Extension has found a new vehicle farther in advance of the automobile than the automobile was in advance of "footwork" and the horse and buggy of early extension days. In the future county extension agents will be conducting air tours, and farmers will be getting out from between the rows of cabbages and for the first time seeing their own farms. Field work will be done by plane, programs will be planned from the air. Demonstrations will be conducted and seeding and spraying will be done by the use of planes. A new field has been discovered for aviation, a new help for extension and the farmer. The way to keep one's feet on the ground in extension is to get up in the air. In all, eighteen flights were made, thirty-one hours were spent in the air, approximately 2500 miles covered. The islands of Oahu, Kauai, Niihau, Maui, Molokai, Lanai, Kahoolawe, and Hawaii were covered by one or more flights. Flights were made at various altitudes, 1000 feet, 3000 feet, and 6000 feet. The following members of the Agricultural Extension staff, in addition to President Crawford of the University, accompanied the Dean on one or more flights: Hong Chang Wong, F. G. Krauss, John Thompson, R. A.
Goff, Y. B. Goto, and Hazel Zimmerman. To Mr. Thomp­son goes the distinction of being the first county extension agent to report for duty in his county by air, and to Miss Hazel Zimmerman of being the first home demonstration agent to take a look at home problems from the chimney tops. The Agricultural Extension Service expresses its deep sense of appreciation to General Fox Conner, Colonel Howard, Major Van Nostrand, and the splendid corps of pilots who, as is the way of the army, prefer to be nameless, but who made the agricultural reconnaissance possible. There are no finer, cleaner, more courteous, or more competent men anywhere than these friends of the air and blood brothers of the clouds.

EXTENSION CONFERENCES

A county program-making conference was held in Ha­waii County, one session at Hilo, and one session at Cap­tain Cook, Kona. The first territorial extension confer­ence was held at the University in August in which all extension employees participated. The existing work was given a general review and extension policies established. In addition to the extension employees, the following per­sons participated in the conference:

Governor Lawrence M. Judd
Ex-Governor Wallace R. Farrington
President David L. Crawford, University of Hawaii
James R. Coxen, Vocational Director
J. M. Westgate, Director Hawaii Experiment Station
Miss Madge J. Reese, U. S. Department of Agriculture
Dr. A. L. Dean, Director Experiment Station, Ha­waiian Pineapple Canners Association.
Glenn W. Russ, Assistant, Territorial Board of Agri­culture and Forestry.
Riley H. Allen, President Honolulu Chamber of Com­merce.
Fig. 11—Agricultural Extension Exhibit at the Kona Fair
FAIR EXHIBITS

The county extension agents on the Big Island made an effective extension exhibit at the Kona Fair. The exhibit consisted of fruits, display of jams, jellies, etc., the work of the boys' and girls' food clubs; and dresses, sewing, etc., the work of the clothing clubs; and coffee demonstrations showing effect of good or poor pruning and range grasses. Congressional Delegate Houston spent some time in the extension booth and expressed surprise and pleasure that so much had been accomplished in so short a time. An extension exhibit is being prepared for the Maui Fair. These are the only two fairs held in the Territory.

PUBLICATIONS

During the year the Extension Letter has been published monthly and mailed to a selected list of about 1000 names. With the organization of the Agricultural Extension Service it was changed in character from the former weekly Extension Letter which was "Hawaii's Agricultural Paper" to a monthly house organ of the Agricultural Extension Service. Its general purpose has been to acquaint a section of the public with the character of the work. The following extension bulletins have either been issued or are in course of publication:
EXAMPLES OF EXTENSION WORK

As before stated, no summary of results is possible in this Report (1) because the report year has not closed and (2) even if the county reports were available, the time has been too brief to make any statement that would be significant. The average period of service for the nine agents now employed is but five months.

Forty-one boys' and girls' clubs have been organized, and about 700 members are enrolled; and twelve home demonstration clubs organized with 130 women participating. The agricultural projects include home fruits and vegetables, dairy improvement, poultry raising, farm forestry, coffee pruning, coffee fertilization, control of rice borer, rat control, and miscellaneous farm advice.

Two examples are illustrative of certain phases of work in agriculture:

(1) In Kona as a result of a rat killing campaign as a part of the coffee project, a total of 2,956 tails were turned in, for which the rat catchers received 2½ cents each from a fund raised to finance the work. It is estimated that not to exceed one tail in four was turned in,
as many farmers felt they should not receive pay for work for which they received so great a benefit. Based on this estimate there are some ten to twelve thousand less of these destructive rodents in Kona than before the campaign started. The Public Health Service estimates that it costs one-half cent a day to maintain a rat. If this is true under average conditions, it is much in excess of this in an intensive coffee district. On this basis, however, these rats would have cost Kona $5,394.70 and even then but one rat in four killed was counted, so the saving would amount to the total of $21,578.80 which, on the present basis, is enough to maintain the extension service in Kona for approximately ten years. The best part of this work is that the people have become awakened to the seriousness of the rat problem and the killing goes merrily on after the campaign has closed. It has been decided to put on another campaign later.

(2) On Kauai in connection with the rice project, in cooperation with D. T. Fullaway, Territorial Entomologist, Board of Agriculture and Forestry, the county extension agent has been active in distributing the parasite of the rice borer. The rice borer first appeared in 1917 and spread rapidly. The parasites secured by Mr. Fullaway and Mr. F. C. Hadden, entomologist of the Hawaiian Sugar Planters Association, on a special trip to Japan and China for that purpose, have proved effective in controlling the borer on Oahu where the yields this year are reported as above normal. On Kauai but few parasites were released last year and the situation early in the season was reported by the county extension agent as very serious. Shipments of both larval and egg parasites were secured which were released in the infected fields. Acting on the advice of the agent, lanterns and light traps have been put out and trash burned. It now seems that this intensive extension work is having a most beneficial effect. Fields that looked like failure six weeks ago give promise of at least an average crop.

FORESTRY AND ANIMAL HUSBANDRY EXTENSION

The territorial agents in Forestry and Animal Husbandry have been only recently appointed. They are surveying the field with the county extension agents and preparing projects.

AGRICULTURAL CENSUS

Agriculture in the Territory has long needed an ac-
curate, fundamental, statistical background upon which to base conclusions and forecast possible future development. The large plantations, to a considerable degree, have provided this through their own resources so far as their own particular industries are concerned, but not for the Territory as a whole. The decennial Federal census does not give the help that it does on the mainland. The schedules for the Territory have been heretofore developed closely following those used in the States. The differences in the crop and industrial organization, and the fact that the major crops of the Islands take from eighteen months to two years to mature, while many of the minor crops either produce continuously or two or three crops a year, combine to make a situation so unlike that in the States as to render the system of compiling statistics heretofore used by the census bureau inapplicable to Hawaii.

The Agricultural Extension Service suggested to President Crawford the appointment of a census committee to make a study of the agricultural schedules of the last Federal census and to make recommendations to the Bureau of the Census for 1930 compilation. This committee was appointed. It did not undertake to make revolutionary changes, but to revise the schedules to meet more accurately Hawaii's peculiar agricultural situation. The Federal Bureau of the Census accepted practically every one of the committee's recommendations. As a result the 1930 census should give a much better picture of the Territory's agriculture than ever before.

Hawaii was not included in the special 1925 agricultural census. It should be included in 1935 and these data should be supplemented by the work of local investigators in agricultural economics. Accurate knowledge of the past, of possible causes of success and failure, are needed before any plan of procedure for the future can be trustworthy or command public recognition and support. Y. B. Goto, county extension agent at Kona, Hawaii, was sent as a delegate to the Economic Outlook Conference at Washington, D. C.

CONCLUSION

The extension organization is completed. The machine is new and in high gear. It is manned by a competent crew. It is "all set, ready to go". Yes, better than that, it is going. It has given a small earnest of what it can do, but in a large way its work is in the future. Adjustments will doubtless have to be made. Patience, tolerance, and good-will on the part of the public will be required. Hard work on the part of the extension staff will be
necessary. Inspiration and enthusiasm tempered by a saving common sense must abound. The Agricultural Extension Service has no economic revolution to propose, no social reorganization to preach. It hopes to play a modest part at least in some of the large questions that so much concern all thoughtful people in the territory and to do its part in making Hawaii Nei great. Its work for the most part will be unspectacular: the doing of a number of comparatively little things; the extending of immediate present help to a considerable number of people. These are the things that must be done if progress is to be made in any line. It is easy to get so lost in the maze of elaborate program making for the future as to forget the problems of today.

Hawaii needs no social perambulator, economic jin-rikisha, or industrial incinerator. It needs everyone doing the work at hand just a little better than it is now being done. It is possible, of course, that some crop not now grown extensively may force a division with it of the land which is now occupied by sugar and pines, just as pines did with sugar some years ago. This is possible but not immediately probable. It is possible also that livestock—beef cattle, dairy cattle, hogs, and poultry combined—might develop into a really major agricultural industry, but the matter of freight rates, shipping facilities, economic marketing, and mainland, New Zealand, and Australian competition are lions in the way. It is hardly a probability.

What seems most likely is a gradual increase in the number of small diversified farms producing a variety of food crops primarily for consumption in the Territory. Before this can be an expansion that will put it in the class of a respected, sizeable, major industry that can pay its own way, it must have available a portion of the best land in the Territory. Good farmers, good farming, and good land go together. This is a world-wide, age-old combination. A prosperous, small farming industry with progressive intelligent farmers living in comfortable attractive homes cannot be developed on left-over, poor, or marginal land. This development, the most probable and the most needed "third great industry", must have as a condition precedent to success, good land properly evaluated and properly located upon which to operate. Such conditions may not come at once, but it is the belief that such conditions are for the best interest of all, and that this fact will be ultimately recognized and finally work itself out that makes Agricultural Extension Work worthwhile. After all, the county extension agent is a "teacher"
and one of the greatest Teachers of all time went about doing good". He "healed the sick, cleansed the leper, cast out devils". Later centuries elaborated obscure dogmatic creeds around his simple life. The extension work job is not obscure, intricate, involved, or necessarily difficult. It is simple and full of the joy of doing things that give immediate help. It is this that needs doing first: to produce at home more of the food needed for the population; to make possible a comfortable, convenient, country home; to make farming a profitable business and socially respectable life and so to help in leading a portion of our youth to work on the farm—this is its immediate big job.

A two legged Stool can't stand upright

W. A. L.

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APPENDIX

COOPERATIVE EXTENSION WORK

Act of 1914 Providing for Cooperative Extension Work
(Smith-Lever Act)*

AN ACT to provide for cooperative agricultural extension work between the agricultural colleges in the several States receiving the benefits of an act of Congress approved July second, eighteen hundred and sixty-two, and of acts supplementary thereto, and the United States Department of Agriculture.

Be it enacted by the Senate and House of Representa­tives of the United States of America in Congress assembled. That in order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same, there may be inaugurated in connection with the college or colleges in each State now receiving, or which may here­after receive, the benefits of the act of Congress approved July second, eighteen hundred and sixty-two, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts" (Twelfth Statutes at Large, page five hundred and three), and of the act of Congress approved August thirtieth, eighteen hundred and ninety (Twenty-sixth Statutes at Large, page four hun­dred and seventeen and chapter eight hundred and forty-one, agricultural extension work which shall be carried on in cooperation with the United States Department of Agriculture: Provided, That in any State in which two or more such colleges have been or hereafter may be established the appropriations hereinafter made to such State shall be administered by such college or colleges as the legislature of such State may direct: Provided further, That, pending the inauguration and development of the cooperative extension work herein authorized, nothing in this act shall be construed to discontinue either the farm management work or the farmers' cooperative demon­stration work as now conducted by the Bureau of Plant Industry of the Department of Agriculture.

*Amended 1928 to include Hawaii.
SEC. 2. That cooperative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural colleges or colleges receiving the benefits of this act.

SEC. 3. That for the purpose of paying the expenses of said cooperative agricultural extension work and the necessary printing and distributing of information in connection with the same, there is permanently appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $480,000 for each year, $10,000 of which shall be paid annually, in the manner hereinafter provided, to each State which shall by action of its legislature assent to the provisions of this act: Provided, That payment of such installments of the appropriation hereinbefore made as shall become due to any State before the adjournment of the regular session of the legislature meeting next after the passage of this act may, in the absence of prior legislative assent, be made upon the assent of the governor thereof, duly certified to the Secretary of the Treasury: Provided further, That there is also appropriated an additional sum of $600,000 for the fiscal year following that in which the foregoing appropriation first becomes available, and for each year thereafter for seven years a sum exceeding by $500,000 the sum appropriated for each preceding year, and for each year thereafter there is permanently appropriated for each year the sum of $4,100,000 in addition to the sum of $480,000 hereinbefore provided: Provided further, That before the funds herein appropriated shall become available to any college for any fiscal year plans for the work to be carried on under this act shall be submitted by the proper officials of each college and approved by the Secretary of Agriculture. Such additional sums shall be used only for the purposes hereinbefore stated, and shall be allotted annually to each State by the Secretary of Agriculture and paid in the manner hereinbefore provided, in the proportion which the rural population of each State bears to the total rural population of all the States as determined by the next preceding Federal census: Provided further, That no payment out of the additional appropriations herein provided shall be made in any year to any State until an equal sum has been appropriated for that
year by the legislature of such State, or provided by State, county, college, local authority, or individual contributions from within the State, for the maintenance of the cooperative agricultural extension work provided for in this act.

SEC. 4. That the sums hereby appropriated for extension work shall be paid in equal semi-annual payments on the first day of January and July of each year by the Secretary of the Treasury upon the warrant of the Secretary of Agriculture, out of the Treasury of the United States, to the treasurer or other officer of the State duly authorized by the laws of the State to receive the same; and such officer shall be required to report to the Secretary of Agriculture, on or before the first day of September of each year, a detailed statement of the amount so received during the previous fiscal year, and of its disbursement, on forms prescribed by the Secretary of Agriculture.

SEC. 5. That if any portion of the moneys received by the designated officer of any State for the support and maintenance of cooperative agricultural extension work, as provided in this act, shall by any action or contingency be diminished or lost or be misapplied, it shall be replaced by said State to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to said State, and no portion of said moneys shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building or buildings, or the purchase or rental of land, or in college-course teaching, lectures in colleges, promoting agricultural trains, or any other purpose not specified in this act, and not more than five per centum of each annual appropriation shall be applied to the printing and distribution of publications. It shall be the duty of each of said colleges annually, on or before the first day of January, to make to the Governor of the State in which it is located a full and detailed report of its operations in the direction of extension work as defined in this act, including a detailed statement of receipts and expenditures from all sources for this purpose, a copy of which report shall be sent to the Secretary of Agriculture and to the Secretary of the Treasury of the United States.

SEC. 6. That on or before the first day of July in each year after the passage of this act the Secretary of Agriculture shall ascertain and certify to the Secretary of the Treasury as to each State whether it is entitled to receive its share of the annual appropriation for cooperative agricultural extension work under this act, and the
amount which it is entitled to receive. If the Secretary of Agriculture shall withhold a certificate from any State of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the expiration of the Congress next succeeding a session of the legislature of any State from which a certificate has been withheld, in order that the State may, if it should so desire, appeal to Congress from the determination of the Secretary of Agriculture. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury.

SEC. 7. That the Secretary of Agriculture shall make an annual report to Congress of the receipts, expenditures, and results of the cooperative agricultural extension work in all of the States receiving the benefits of this act, and also whether the appropriation of any state has been withheld, and if so, the reasons therefor.

SEC. 8. That Congress may at any time alter, amend, or repeal any or all of the provisions of this act.


APPROPRIATIONS FOR EXTENSION WORK, 1925-26

Extract from an act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1926, and for other purposes:

For farmers' cooperative demonstration work, including special suggestions of plans and methods for more effective dissemination of the results of the work of the Department of Agriculture and the agricultural experiment stations and of improved methods of agricultural practice at farmers' institutes and in agricultural instruction, and for the employment of labor in the city of Washington and elsewhere, supplies, and all other necessary expenses, $1,308,540: Provided, That the expense of such service shall be defrayed from this appropriation and such cooperative funds as may be voluntarily contributed by State, county, and municipal agencies, associations of farmers, and individual farmers, universities, colleges, boards of trade, chambers of commerce, other local associations of business men, business organizations, and individuals within the State.

For cooperative agricultural extension work, to be allotted, paid, and expended in the same manner, upon the same terms and conditions, and under the same supervision as the additional appropriations made by the act of May 8, 1914 (Thirty-eighth Statutes at Large, page
AN ACT—To provide for the further development of agricultural extension work between the agricultural colleges in the several States receiving the benefits of the Act entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts", approved July 2, 1862, and all Acts supplementary thereto, and the United States Department of Agriculture, "approved May 8, 1914, there is hereby authorized to be appropriated out of any money in the Treasury not otherwise appropriated, for the purpose of paying the expenses of the cooperative extension work in agriculture and home economics, and the necessary printing and distributing of information in connection with the same, the sum of $980,000 for each year, $20,000 of which shall be paid annually, in the manner hereinafter provided, to each State and the Territory of Hawaii which shall by action of its legislature assent to the provisions of this Act. The payment of such installments of the appropriations hereinbefore made as shall become due to any State or Territory before the adjournment of the regular session of the legislature meeting next after the passage of this
Act may, in the absence of prior legislative assent be made upon the assent of the governor hereof, duly certified to the Secretary of the Treasury. There is hereby authorized to be appropriated for the fiscal year following that in which the foregoing appropriation first becomes available, and for each year thereafter, the sum of $500,000. The additional sums appropriated under the provisions of this Act shall be subject to the same conditions and limitations as the additional sums appropriated under such Act May 8, 1914, except that (1) at least 80 per centum of all appropriations under this Act shall be utilized for the payment of salaries of extension agents in counties of the several States to further develop the cooperative extension system in agriculture and home economics with men, women, boys, and girls; (2) funds available to the several States and the Territory of Hawaii under the terms of this Act shall be so expended that the extension agents appointed under its provisions shall be men and women in fair and just proportions; (3) the restriction on the use of these funds for the promotion of agricultural trains shall not apply.

SEC. 2. The sums appropriated under the provisions of this Act shall be in addition to and not in substitution for, sums appropriated under such Act of May 8, 1914, or sums otherwise annually appropriated for cooperative agricultural extension work. Approved May 22, 1928.

(H. R. 4830.)—EXCERPT CLARKE-McNARY ACT

68TH CONGRESS APPROVED, JUNE 7, 1924.

SEC. 5. That the Secretary of Agriculture is hereby authorized and directed, in cooperation with appropriate officials of the various States or, in his discretion, with other suitable agencies, to assist the owners of farms in establishing, improving, and renewing woodlots, shelter belts, windbreaks, and other valuable forest growth, and in growing and renewing useful timber crops: PROVIDED, That except for preliminary investigations, the amount expended by the Federal Government under this section in cooperation with any State or other cooperating agency during any fiscal year shall not exceed the amount expended by the State or other cooperating agency for the same purpose during the same fiscal year. There is hereby authorized to be appropriated annually out of any money in the Treasury not otherwise appropriated, not more than $100,000, to enable the Secretary of Agriculture to carry out the provisions of this section.

WHEREAS, the Congress of the United States has passed an Act approved by the President May 8, 1914, entitled: "An Act to provide for cooperative agricultural extension work between the agricultural colleges in the several States receiving the benefits of the Act of Congress approved July 2, 1862, and of Acts supplementary thereto, and the United States Department of Agriculture"; and

WHEREAS, the Congress of the United States has passed an Act approved by the President May 22, 1928, entitled: "An Act to provide for the further development of agricultural extension work between the agricultural colleges in the several States receiving the benefits of the Act entitled: 'An Act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and mechanic arts', approved July 2, 1862, and all Acts supplementary thereto, and the United States Department of Agriculture"; and

WHEREAS, it is provided in Section 3 of the aforesaid Extension Act of Congress approved May 8, 1914, that grants of money authorized by said Act shall be paid annually to each State whose Legislature shall assent to the provisions of said Act; and

WHEREAS, the provisions of the aforesaid Extension Act of May 8, 1914, are extended to the Territory of Hawaii by the Act of Congress approved May 16, 1928; and

WHEREAS, it is provided in Section 1 of the aforesaid Extension Act of Congress approved May 22, 1928, that grants of money authorized by said Act shall be paid annually to States and the Territory of Hawaii whose Legislatures shall assent to the provisions of said Act, therefore,

Be it Enacted by the Legislature of the Territory of Hawaii:

SECTION 1. That the assent of the Legislature of the Territory of Hawaii be and hereby is given to the provisions and requirements of said Act of May 8, 1914,
as supplemented by said Act of May 16, 1928, and to the provisions and requirements of said Act of May 22, 1928, and that the Board of Regents, University of Hawaii, be and they are hereby authorized and empowered to receive the grants of money appropriated under said Acts, and to organize and conduct agricultural extension work which shall be carried on in connection with the College of Applied Science of said University, in accordance with the terms and conditions expressed in the aforesaid Act of Congress.

SECTION 2. This Act shall take effect upon its approval.

Approved this 12th day of April A. D. 1929.

(Signed) W. R. FARRINGTON,
Governor of the Territory of Hawaii.
1. The University of Hawaii agrees:

(a) To organize and maintain a definite and distinct administrative division for the management and conduct of extension work in agriculture and home economics, with a responsible leader selected by the University and satisfactory to the United States Department of Agriculture;

(b) To administer through such Extension Division thus organized any and all funds it has or may hereafter receive for such work from appropriations made by Congress or the Legislature, by allotment from its Board of Regents or from any other source;

(c) To cooperate with the United States Department of Agriculture in all extension work in agriculture and home economics which said Department is or shall be authorized by Congress to conduct in the Territory of Hawaii.

2. The United States Department of Agriculture agrees:

(a) To maintain in the Department of Agriculture an Extension Service, which shall represent the Department in the general supervision of all cooperative extension work in agriculture and home economics in which the Department shall participate in the Territory of Hawaii, and shall have charge of the Department's business connected with the administration of all funds provided to the States and Hawaii under the Smith-Lever and Capper-Ketcham Acts.

(b) To conduct in cooperation with The University of Hawaii all demonstration and other forms of extension work in agriculture and home economics which the Department is authorized by Congress to conduct in the Territory of Hawaii.

3. The University of Hawaii and the United States Department of Agriculture mutually agree:

(a) That, subject to the approval of the President of The University of Hawaii and the Secretary of Agriculture, or their duly appointed representatives, the cooperative extension work in agriculture and home economics in the Territory of Hawaii involving the use of direct Congressional appropriations to the Department of Agriculture shall be planned under the joint supervision of the Director of Extension Work of The University of Hawaii and the Chief of the Office of Cooperative Ex-
tension Work of the United States Department of Agriculture; and that the approved plans for such cooperative extension work in the Territory of Hawaii shall be executed through the Extension Division of The University of Hawaii in accordance with the terms of the individual project agreements;

(b) That all agents appointed for cooperative extension work in agriculture and home economics in the Territory of Hawaii under this memorandum and subsequent project agreements, involving the use of direct Congressional appropriations to the Department of Agriculture, shall be joint representatives of The University of Hawaii and the United States Department of Agriculture, unless otherwise expressly provided in the project agreements; and the cooperation shall be plainly set forth in all publications or other printed matter issued and used in connection with said cooperative extension by either The University of Hawaii or the United States Department of Agriculture;

(c) That the plans for the use of the Smith-Lever and supplemental funds, except so far as these funds are employed in cooperative projects involving the use of Department funds, shall be made by the Extension Division of the University but shall be subject to the approval of the Secretary of Agriculture in accordance with the terms of the Smith-Lever Act and acts supplementary thereto, and when so approved shall be executed by the Extension Division of said University;

(d) That the headquarters of the organization contemplated in this memorandum shall be at the University of Hawaii.

4. This memorandum shall take effect when it is approved by the President of the University of Hawaii and the Secretary of Agriculture of the United States and shall remain in force until it is expressly abrogated in writing by either one of the signers or his successor in office.

(Signed) DAVID L. CRAWFORD
President, University of Hawaii
Date August 14, 1928

(Signed) C. F. MARVIN
Acting Secretary of Agriculture
Date September 27, 1928