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TO THE
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Board of Regents of the University of Hawaii

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Report of the University of Hawaii

To the Legislature of the Territory of Hawaii:

It is my privilege to transmit herewith the report of the President of the University of Hawaii for the biennial period from January 1, 1921, to December 31, 1922. The report covers so completely the work being done by the University and indicates so clearly its plans for future usefulness, that I hesitate to direct attention to any portion rather than any other.

During the past two years the growth of the institution has been so great that it has been difficult to meet the increasing demand in spite of the liberal appropriations made by the Legislature of 1921. The attendance chart and the statistics showing the present student registration should be carefully considered. The policy of the President and Board of Regents has been to maintain a standard of entrance requirements fully as high as those of any similar institution on the mainland. I believe this policy has been strictly observed. In spite of this, the number of students registered for degrees is now 297, while two years ago there were only 158 such students. During this two year period the number of students of Hawaiian and part Hawaiian blood has increased from 13 in 1920 to 35 in 1922, while the number classified racially as Caucasian has increased from 56 to 99.

To those closely in touch with the University, it is clearly evident that the past two years have brought a great change in the spirit among the students. There is a greater solidarity, greater loyalty, and an increasing sense of responsibility. This is not only evidenced by the fine sportsmanship shown in athletic contests, but by the insistence of the students that the Honor System be put in effect with regard to examinations and the present movement toward its extension to other fields. The Regents feel that the better spirit and higher moral standards in the student body are due to the high character and untiring efforts of

the President and Faculty members. The work being done by them in drawing together the different races represented among the students into a united student body cannot but help in bringing about a better understanding and feeling among the many races making up the population of the Territory.

In presenting its budget the University has kept in mind the necessity of rigid economy in view of the Territory's financial condition. The budget is as low as it can be made without seriously impairing efficiency. We believe that the Territory cannot afford to maintain a mediocre University. What the University undertakes must be done well or it should not be done at all. With a student body nearly 90 per cent larger than two years ago it is impossible for the standards of the University to be maintained and the duties given it to be properly performed without some increase in the funds made available for operating costs. However, the budget submitted shows an increase of but 4.2 per cent over the total appropriations made in 1921 from current revenues. It will be noted that this current revenue budget contains no items for any large building improvements in spite of the already obvious need for increased room. Nor has any provision been made for enlarging the grounds. I wish, however, to emphasize the importance of securing about twenty-eight acres of land adjoining and makai of the present campus, since in the near future this land will be required for University needs and it would be wise economy to anticipate this need. Attention should be especially directed to the need of the University for class-room and office space. Our present student body has already outgrown the room available. It is recommended that the Legislature meet this need by an appropriation from funds to be raised by the sale of Territorial bonds.

Respectfully submitted,

C. R. HEMENWAY,
Chairman, Board of Regents.

President's Report

To the Board of Regents of the University of Hawaii:

I have the honor to submit the following report of the University of Hawaii for the biennial period January 1, 1921, to December 31, 1922.

ORGANIZATION

In the last biennial report the reorganization of the College of Hawaii into the University of Hawaii in accordance with the provision of Act 203, Session Laws of 1919, was described. Two years' added experience with the new organization has indicated no reason for substantial changes. There have, indeed, been developments in certain lines of the University's work and the addition of new departments, but the fundamental organization has not been altered. A small beginning has been made with extension work without waiting for special appropriations from the Territorial or National Government for that purpose. By beginning in a tentative way we have been able to discover how much response there is likely to be in the community from the extension of the University's activities beyond the confines of the campus. Without entering into details at this time, it is sufficient to say that the response has been greater than we had anticipated, and has indicated that there is a real place for this class of University work in Hawaii.

The field of graduate study is slowly developing and the time will soon be at hand when it will be desirable to organize a definite division of graduate study with a director in charge.

The rapid increase in undergraduate enrollment which has been evident for a number of years past has continued so that there are nearly twice as many students in attendance as there were two years ago.

In accordance with acts of the last legislature, the Psy-

chological Clinic and the Waiakea Experiment Station have been organized and are already doing useful work.

For the immediate future it would appear that the University can best occupy itself with the further amplification of the departments already organized, both the resident undergraduate departments and the newly organized Extension Division. No radical changes of organization or plans seem to be called for at this time.

PLANT AND EQUIPMENT

LANDS

The lands under control of the University have been increased by the addition of the 94.17 acres belonging to the Waiakea Experiment Station. These lands, comprising three homestead tracts, were reserved for experimental purposes when the homesteads were laid out. There was some question as to whether they were the most suitable for experimental purposes in the Waiakea district, but after a careful consideration of the available lands and the characteristics of the lands at different elevations it seemed best to adhere to the original plan and use the lots which had been set aside.

The improvement of the campus and farm lands at the University has progressed in the last period until today the campus lands are practically all improved except a small area in front of Gartley Hall. This land requires only a little smoothing over and the planting of grass to complete the general clearing up of the campus lands. The contrast presented between the present condition and that of a few years ago is very striking.

BUILDINGS

Gartley Hall. At the time of the last report the contract had been let for the construction of the new laboratory building for physics and chemistry. The building was completed in the spring of 1922, and the Department of Chemistry moved into its quarters before the close of the aca-

demic year. The Physics Department was not moved until the summer vacation, due to the absence of Dr. Romberg on his sabbatical leave. The building has been named Gartley Hall in memory of Alonzo Gartley, a member of the Board of Regents of the College of Hawaii and of the University from the first organization of the Board until his death. As originally contemplated the building was to have no basement, but by the time the plans were drawn it became evident that the basement room would be quite necessary. As a matter of fact, this basement room is now being utilized by the Engineering Department for drafting rooms and also by the R.O.T.C. unit for a storeroom for equipment. The remaining basement space will be utilized for the installation of electrical machinery to be used in connection with the work in electrical measurements and electrical engineering.

The Swimming Tank. At the time of the last report mention was made of the campaign carried on by the students to raise a sum of \$20,000 for the construction of a swimming pool. The money raised by the students sufficed to build the swimming pool and one of the locker buildings. The other locker building was built out of Territorial appropriations for new buildings. We now have a concrete pool 25 yds. in length and locker buildings at either end, one for men and one for women. This equipment has proved of very great value in the physical education work of the students.

Dormitories. A small start was made on a dormitory system. A wooden dormitory for boys capable of housing 28 students and a proctor has been erected and is now in use. There was a larger demand for rooms in the dormitory this year than we were able to satisfy. With the increasing number of students from other islands, the present dormitory facilities are going to prove inadequate within the very near future.

During the summer of 1922 a dormitory for girls was erected. The plans called for three separate units grouped around a central court. The funds at our disposal, how-

ever, made it impossible to construct one of the units in which are located the matron's room, the general sitting room and the kitchenette and laundry. It is important that this third unit be constructed during the summer of 1923, to be ready for the opening of college in September.

The meals for the students in the dormitories and for the cafeteria service at noon are prepared and served in a small building which has been erected since the last report. This is just about large enough for our present needs, but will require an extension of the dining room space before long.

The Old Chemistry Building. It will be remembered that when the College of Hawaii was moved to Manoa Valley from its location in the rear of McKinley High School, one of the wooden buildings was taken down and re-erected on the new location. This building was utilized for a chemical laboratory and for shop purposes. Its inadequacy was one of the reasons for the construction of Gartley Hall. After the Chemistry Department had vacated this building, it was remodeled on the inside and made available for the Department of Botany. Botany and bacteriology were therefore taken out of Hawaii Hall and now have adequate space in this renovated wooden building. This, however, is only a makeshift, since the building is at best only a temporary one and will have to be discarded within a comparatively few years.

Library Building. At the last session of the legislature, an item of \$180,000 for new building projects at the University was included. We were unable to secure an allotment of this amount from the 1922 bond issue, but have been promised it from the sale of the 1923 issue. In order to be able to proceed with the construction as soon as money was available, arrangements were made through the Governor for the preparation of the plans by the Department of Public Works through the use of the revolving funds at the disposal of that department for the purpose of making plans. The superintendent of Public Works has secured the services of Mr. Arthur Reynolds, and the plans for the library are now well under way.

The librarian's report for the year ending June 30, 1922, showed 33,435 bound volumes and 62,475 pamphlets and unbound parts. A comparison of these figures with the report of two years ago will show that the library continues to grow at a rapid rate. Notable advances have been made in the organization and cataloguing of the library. We had the services of an expert cataloguer for something over a year, who went through the entire library of bound volumes re-cataloguing and re-shelving, so that the library has been put on an excellent basis. The regular library staff has also been increased, so that our library is not only increased in size but through better organization of its resources is of much greater value to the students and to the general public. Our greatest difficulties at present are physical ones of room, which will be met by the construction of the new building.

Aquarium. As indicated in the last report, substantial improvements and repairs to the aquarium building were carried out with the funds accumulated from the paid admissions. The entire roof was re-covered, new skylights installed, and a number of other repairs made to the building. The attendance at the aquarium during this last two years has not been as great as in the preceding period, so that there has been no surplus of income over current expense; in fact, there have been times when there was some difficulty in meeting the current expenses from the admissions. This slump in the attendance has been due primarily to the great decrease of the trans-Pacific travel. The chief income is derived from passengers stopping off in Honolulu for a few hours, who take in the Aquarium as one of the sights. The residents of the Territory and the tourists who are here for several weeks make use of the free admission on Saturdays rather than to pay the admission fee. In the last report the income for the 18 months, July, 1919, to December, 1920, was reported as \$12,132.80. As contrasted with that, the income from July, 1921, to December, 1922, was \$8,162.70. It has been necessary, therefore, to practice con-

siderable economy in recent months. It is hoped, however, that the depression in trans-Pacific travel has passed and that we shall see an increased income during the next two years.

INVENTORY

A summary of the inventory as of June 30, 1922, and the similar figures for 1920 are given below:

	1922	1920
Lands and Improvements	\$400,071	\$202,700
Buildings	341,208	72,622
Library	73,117	64,880
Apparatus, Machinery and Furniture	147,535	95,445
Live Stock	11,660	9,157
Totals.....	\$973,591	\$444,806

It will be noted that the value of the inventory has more than doubled in the last two years. This is partly due to a re-valuation of the campus lands, placing them more nearly at their market value. The greatest advance, however, is to be found in the buildings. There have been increases since June of 1922, so that the present value of the property under the control of the University is at least a million dollars. It is worth calling attention to the fact that all of the money which has been appropriated to the University has not vanished without leaving any physical assets. The facts are that the Territory has made available for the University \$946,973.37 for all purposes from the organization of the College of Hawaii in 1907 to June 30, 1923. It has also set aside lands which were valued at \$151,990.30 at the time they were turned over. Thus the total cost to the Territory of Hawaii has been \$1,098,963.67, a sum very little, if any, larger than the present value of the University property.

INSTRUCTION AND RESEARCH FACULTY

The Faculty of the University now consists of 22 professors, 5 assistant professors, 21 instructors, special lectur-

ers, and assistants. Three new professorships have been created since the last report, a professorship in Agronomy filled by Frederick G. Krauss, at one time professor of Agriculture here and now returning to our Faculty; a professorship of Military Science and Tactics, filled by Lieutenant Colonel Adna G. Clarke in charge of the R. O. T. C.; and a professorship of Clinical Psychology, filled by S. D. Porteus, Director of the Psychological Clinic. The holders of two other professorships have been changed,—Dr. Percival Symonds replacing Jesse K. Flanders as professor of Education, Shao Chang Lee replacing Tien Mu Wang as professor of Chinese Language and History. During the current academic year Professor James B. Pollock of the University of Michigan is filling the chair of Botany, and Dr. Bergman is taking Dr. Pollock's place at Michigan. This is the first instance of an exchange of professors with another institution and inaugurates a custom which is valuable both to the individuals concerned and to the institutions.

The assistant professorship of Household Science was allowed to remain vacant for a year, following the completion of Miss Wells' term of service. This hiatus of a year was not due to any lack of appreciation of the value of the work in Household Science, but rather to the opinion that it was desirable carefully to consider the field and decide upon the type of work which was needed here before making a new appointment. In September, 1922, Miss Carey D. Miller began work here as assistant professor of Household Science.

The English Department has been strengthened by the creation of a new assistant professorship which has been filled by Mr. Charles H. Neil.

The policy of availing ourselves of the services of instructors and special lecturers who are able to devote only a part of their time to University instruction has been continued. This often results in bringing to the University Faculty and making available for the students persons whose special experience in their fields of work make them of unusual value. In this way we have had the ser-

vices of Mr. W. R. McAllep of the Sugar Planters' Experiment Station, giving instruction in sugar manufacture; Dr. Edward S. Handy of the Bishop Museum, who gave a course in Polynesian Anthropology in the second semester of 1921-1922; Mr. Frederick W. Beckley, instructor in Hawaiian; Mr. J. T. Phillips of the Public Utilities Commission, who inaugurated our work in accounting; G. H. W. Barnhart of the American Factors Company, who is this year giving instruction in sugar mill engineering; Mr. Charles S. Judd and Mr. Charles J. Kraebel of the Board of Agriculture and Forestry, who are giving a course in forestry to the students in agriculture; Mr. Ralph Kuykendall of the History Commission; and Mr. S. S. Peck of Alexander & Baldwin, giving instruction in sugar technology. The services of Dr. Handy were made available to the University without cost through the co-operation of the Bishop Museum and his own interest and enthusiasm. In a similar way Mr. Judd and Mr. Kraebel have, with the permission of the Board of Agriculture and Forestry, inaugurated instruction in forestry at this institution. We cannot of course, expect to have the services of instructors without compensation; these occasional instances of co-operation are deserving of special notice.

New instructors on full time appointment include Theodore B. Hunt in English, Otto Klum in athletics, Miss Gladys H. Reutiman in English, Mr. Edward H. VanWinkle in commerce, and Miss Bernice Warner in chemistry. The associate librarian has been given Faculty rank as an instructor and the position filled by the appointment of Miss Mary P. Pringle.

STUDENTS

The statistics for student registration for the first semester of 1922-1923 are given below:—

Candidates for Degrees

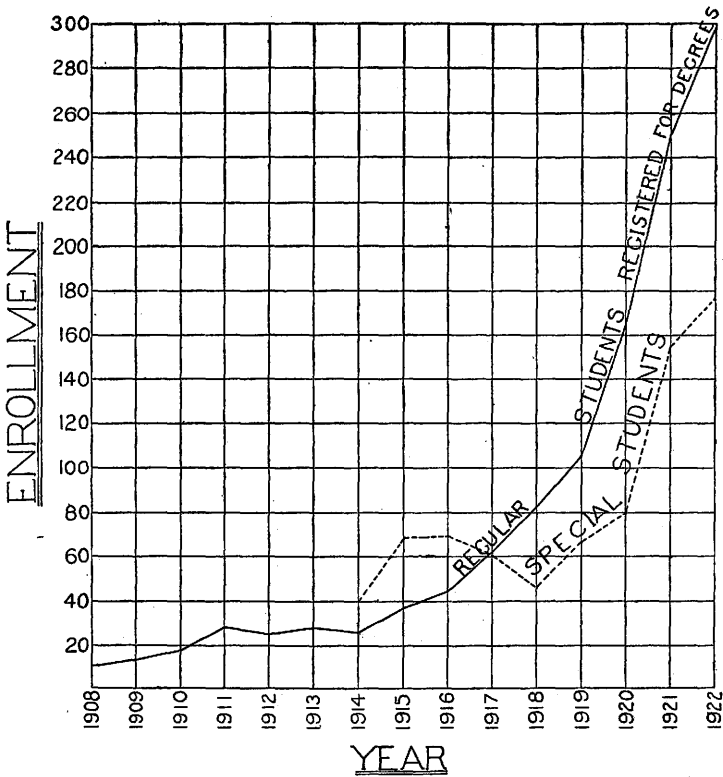
Graduates	14
College of Applied Science.	
Seniors	12
Juniors	25
Sophomores	32
Freshmen	62
	131
College of Arts and Sciences.	
Seniors	11
Juniors	35
Sophomores	41
Freshmen	65
	152
Total Candidates for Degrees.....	297

Not Candidates for Degrees

Graduates in Undergraduate Courses	25
Specials, College of Applied Science	60
Specials, College of Arts and Sciences	91
Extension Courses:—	
Millinery	15
Short Sugar Course	51
	242
TOTAL CANDIDATES FOR DEGREES.....	297
TOTAL NOT STUDYING FOR DEGREES	242
TOTAL REGISTRATION	539

Comparison of these figures with those given two years ago shows a rapid increase. The candidates for degrees have increased from 158 in the fall of 1920 to 297 in the fall of 1922, equivalent to an increase of 88 per cent. That there will be yet a larger enrollment during the next few years is altogether probable; that the enrolment will increase at quite such a rapid rate is somewhat unlikely although it is unsafe to make any dogmatic predictions. The increase this year was not quite as great as in the fall of 1921, due in part to the stiffening up on the entrance requirements. In making any estimates for the future, however, it is necessary to allow considerable margin because of the certainty that the student body will grow and there will be heavier demands on us for instruction and for physical plant and equipment. In the previous report a diagram was given showing the enrollment of students registered for degrees, and of special students. This diagram is reproduced with the addition of the last two years.

The most notable change in the nationality of the students is the relative increase of Japanese as compared with the Chinese. This change was to be expected because of the



numerical relationship of the races in the population of Hawaii. There is relatively larger proportion of Hawaiian and part-Hawaiian students than in former years.

	Degree Candidates	Not Degree Candidates	Total
Caucasian	99	134	233
Chinese	64	11	75
Hawaiian and part-Hawaiian	35	15	50
Japanese	87	10	97
Koreans	9	2	11
Polynesian	1	0	1
Portuguese	2	4	6
Total			473*

*66 Extension students not included.

The increase in student activities which was noted in the last report has continued. Evidence of this is to be found not only in the appearance of new student activities such as the weekly newspaper, *Ka Leo o Hawaii*, and new undergraduate clubs and other organizations, and the improvement in the athletic teams, but also in the feeling of student solidarity and responsibility for University affairs. Perhaps the most notable instance of the latter is the inauguration of the Honor System in the conduct of examinations. It was the policy of the Faculty not to relinquish the control of examinations until there should be such a strong sentiment for an Honor System on the part of the students as to make its success probable. As a result of continued agitation among the students, they finally voted by an overwhelming majority in favor of an Honor System. The final authority now rests with a student council elected by the whole body of the students. I believe that the cultivation of a high spirit of honor on the part of the students and of a feeling of responsibility for the moral tone of the University is of fundamental importance. It would be of importance anywhere, but with our as yet undeveloped body of citizens in Hawaii, it is of even greater significance. There is now a movement on foot on the part of the students to extend the application of the Honor System and the activities of the Student Council to fields other than formal examinations. The policy of student government in this and other matters will be extended as far and as rapidly as possible. It is an exceptionally valuable form of education for citizenship in a democracy.

We have all been interested in the evidence furnished by the last intercollegiate football game that our athletic team may be regarded as fully up to the standards of institutions of anything like our size on the Mainland. It is, of course, unfortunate that the barrier of two thousand miles of the Pacific Ocean lies between us and the intercollegiate activities of the Mainland. Nevertheless there are increasing evidences of close relationships with Mainland institutions in addition to our intercollegiate football contests.

Rifle matches have been arranged for by cable, and representatives from our Y. M. C. A. have just been in attendance at the Student Conference on the Coast. With the modern means of communication we may hope that the handicap of our isolation may be at least in part overcome.

The work in dramatics continues to the profit of all concerned. After various more or less unsuccessful attempts, the Glee Club finally got under way last year and gave a number of successful concerts both in Honolulu and on the other Islands. This may be looked upon as the beginning of a successful enterprise, although the trips to the other Islands did not prove to be financially profitable.

Beginning in the fall of 1921 a Y. M. C. A. secretary was placed on the University campus. Mr. Dwight Rugh, a graduate of the University of California, was appointed to the position and proved to be the right man for the place. He has entered actively into the student life and won the thorough liking and respect of the undergraduate body. The student Y. M. C. A. was organized after he had spent several months with us and the organization has been of great value in its brief period of existence. This work has been carried on without expense to the University through the generosity of interested members of the community. It is believed that the Y. M. C. A. has made a permanent place for itself. As soon as it can be found possible to erect a building for its activities, the influence of the organization will become even greater and its usefulness enhanced.

COURSES OF STUDY

There have been no substantial changes in the programs of study mapped out in the undergraduate colleges. There has been substantial progress made in carrying these programs of work which were prepared at the time of the organization into the University, and minor changes made as experience dictated. The establishment of a College of Arts and Sciences has been amply justified by the rapid in-

crease in students. A glance at the table of student statistics given above shows the gain in attendance.

✓ *Extension Work.* The most notable change in the field of instruction has been the development of the Extension Work. It was evident that if progress was to be made in this field there must be some member of the University placed in charge of it with sufficient time to give it attention. Professor Crawford was, therefore, made director of Extension Work and has devoted a large part of his energies to this new departure. Lectures have been given under the direction of the Extension Division not only in Honolulu but at many places on the other Islands. The limit to this class of service is set by the necessity for members of the Faculty to devote the principal part of their time to the instruction of the regular classes of the University and also by the expense of the Inter-Island travel. It is believed that a certain amount of lecturing by members of the Faculty has a stimulating value and should be continued. It cannot, however, become the principal part of Extension Work unless persons are detailed for it who do not have other duties of instruction. A number of short courses have been given, including the short course for men in the sugar industry, given in conjunction with the H. S. P. A. Experiment Station; a course for pineapple men; and courses in agriculture, millinery and marine zoology.

✓ A beginning was made last year in correspondence courses of study. The experiment was inaugurated with an elementary course in agriculture; the response was very much beyond our expectations and the success of the venture was well nigh disastrous financially. The persons who received the lessons and apparently profited from them were some of them connected with the sugar plantations, many others were not. This field of work is being extended this year and is worthy of much greater development. A weekly Extension Letter was begun last year and now has a circulation of over a thousand. In addition to agricultural news and notes it carries market quotations and advertisements for exchange and sale. These activities which have already been begun ought certainly to be continued and the work amplified as rapidly

as the demand warrants and funds permit. Probably the most important future development lies in the organization of a system of county agents. Because of the isolation of much of our rural population and its inability to help itself, some organized system of assistance is called for not only on account of the personal advantage to many of the homesteaders and others, but as a matter of public policy in the development of an agricultural population and the stimulation of local production of our food supply. A tentative plan for a county agent system is given in a later portion of this report.

DEPARTMENTAL CONDITION AND PROGRESS

Agriculture. With the coming of Professor Krauss to the Faculty that part of the farm land lying north of the axis road was set aside for his work in agronomy. The first step taken with the land was to plant it to an index crop, using pigeon peas for the purpose. This has not only been serviceable as an index but has resulted in the production of profitable crops of pigeon pea seed for which there is a ready market. One part of the land is being planted as an orchard for demonstration purposes. Another portion is being used for experimental horticultural projects. In addition to his work in agronomy, Professor Krauss has also taken charge of the poultry work which has undergone notable expansion under his direction. A new poultry building and yards have been erected and the flock of fowls greatly increased. White leghorns continue to be the principal breed although a cross developed by Professor Krauss between the white leghorns and the Plymouth rocks is being developed in an experimental way. It is expected that the poultry plant will be expanded to the point where it will become a profitable unit as well as one valuable for purposes of instruction.

A new venture undertaken by the Extension Department and the poultry division has been an egg-laying contest modelled after those which have been successful at some of the agricultural colleges on the Mainland. Fifteen pens of five laying birds each are in the contest. The results of this contest are bound to be of great value not

only in stimulating poultrymen in the Territory to the development of flocks with a higher egg-laying capacity, but also in demonstrating that large egg production may be expected in Hawaii under proper conditions of care and breeding.

The dairy continues to be one of the most important parts of the agricultural plant. There are now over 40 animals, many of which, of course, are young and not producers. During the fiscal year ending on June 30, 1922, the dairy unit showed a profit, after being charged with the value of feed furnished from the fields. The milk is practically all sold to consumers in Manoa Valley and at the University dining room.

As already stated under Extension Work, the Agricultural Department is making itself useful to others than the resident students of the University. Mr. Krauss's Saturday afternoon short courses in poultry culture and horticulture have been well attended and have filled a real need. The importance of agricultural education in the schools of Hawaii is leading to an increased interest in agriculture on the part of Normal School students. The absence of suitable equipment in agriculture at the Normal School is in part compensated for by their utilization of the University facilities. An acre of land on the farm has been set aside for the use of the Normal School students and they are carrying on various experimental plantings there. The distance between the two institutions is the chief barrier to a very much greater degree of co-operation between the Normal School and the University in the field of agriculture. The work in agriculture has been enriched by courses in horticulture given by Mr. Krauss, and by courses in forestry which have been made possible through the co-operation of the Board of Agriculture and Forestry and the gratuitous services of Mr. Judd and Mr. Kraebel. Further development in the field of forestry is desirable.

Biological Sciences. As indicated above, the facilities for the work in Botany have been somewhat improved by the transfer to more roomy quarters in the old chemistry laboratory. Dr. Bergman has been carrying on some work on the physiology of the pineapple plant which has resulted

in some information of value about that important plant. On account of his exchange with Dr. Pollock, the work has been interrupted during the current year. The herbarium has been transferred to the Bishop Museum under the authority granted in Act 196 of the Session Laws of 1921. We had no adequate means of taking care of the herbarium here at the University and the fire risk is altogether too great. The collection, however, continues to be available, along with the other herbarium material of the Museum itself, for the use of the members of the Faculty and properly qualified advanced students.

The work in zoology appears to be more popular with our students here than is usually the case at universities elsewhere. The laboratory work is all given at the Marine Laboratory and by adjustments of schedule the inconvenience due to the necessity of making a trip to Waikiki is minimized. Research on marine biology is being actively carried on at the Laboratory. One especially interesting piece of work has to do with the rate of growth of coral in our waters, a matter of interest not only to zoologists but also to geologists. During the last academic year a course of evening lectures on marine zoology was given under the direction of the Extension Division by Professor Edmondson. The lectures were well attended and appeared to serve a valuable purpose.

Engineering. The chief problem in the Engineering Department has been that of finding sufficient room for the large classes in mechanical drawing and drafting. The problem has been temporarily solved by putting the large classes into the basement of Gartley Hall. The engineering laboratory has continued to render valuable service in the testing of various engineering materials, and in giving engineering advice and service to the University. It is not easy to overestimate the value of the services rendered by the three members of the engineering Faculty in assisting the President and Regents in all matters pertaining to building and the development of the University plant.

Home Economics. As indicated above, the work in household science has been renewed after a lapse of a year.

In addition to the class work, Miss Miller has research problems on vitamins and the mineral constituents of Hawaiian vegetables in progress. Through the generosity of Dr. Morgan of the Department of Household Science at the University of California, Miss Miller was able to bring with her some white rats for breeding purposes. The colony has increased rapidly and feeding experiments on pineapple, both fresh and canned, are now in progress. It is believed that the results of this work will have significance in establishing just what value the pineapple has as a source of vitamins. Other Hawaiian products will be investigated in subsequent years.

The work in household arts has continued successfully along the lines already developed.

Languages. The work in English continues to be one of the most important fields of undergraduate study. One of the striking and unfortunate features of Hawaiian life is the very inadequate capacity for expression which a large part of the population possesses. The standard of spoken English in Hawaii is very low. It is therefore necessary for the University to emphasize this field of work more than might perhaps be necessary in other parts of America. Work in oral expression of various types is especially important and should be further developed in the near future.

The instruction in other languages now comprises French, Spanish, Chinese, Japanese, and Hawaiian. It is especially desirable that Americans should devote some study to Oriental languages. English is almost universally studied in the higher institutions at the Orient and the advantages which would accrue through some acquaintance with Oriental languages on the part of Americans needs no emphasis, either on account of its cultural value or its practical economic usefulness.

Mathematical and Physical Sciences. The facilities for work in physics and chemistry have been greatly improved by the completion of Gartley Hall. The Department of Physics now has a large chamber for seismological work which is provided with tables and piers placed on founda-

tions independent of the building. Research in seismology can now be continued to much greater advantage. During the second semester of 1921-1922, Professor Romberg was on his sabbatical leave during which he visited a number of important universities in America. During his absence instruction in physics was handled by Dr. Willard J. Fisher, formerly of the University of the Philippines.

The Chemistry Department has gotten pretty well settled in its new quarters. Research is still being continued on the constituents and derivatives of chaulmoogra oil. At the present time two employees of the United States Public Health Service are located at the laboratory and the Territorial Department of Health is also assisting with the salary of two others. The immediate control of the work is in the hands of Professor Wrenshall. All of the chaulmoogra derivatives used for the work at Kalihi Hospital and the Settlement at Kalaupapa are made at the University laboratory. In addition to this more or less routine work, active research is in progress. At the present time this research is taking the form of a study of the possible mercury and arsenic derivatives of chaulmoogric acid. We already have prepared a mercury compound which is being tested out at Kalihi. A new arsenic derivative which promises to be of considerable interest and will serve as a point of departure for other arsenic derivatives has been prepared. We hope that by the continuation of this field of investigation materials of much greater efficacy in the treatment of leprosy may be evolved. Requests for material continue to be received from all parts of the world, but it is only in rare cases that it seems possible to comply with them.

Professor Frank T. Dillingham is on leave of absence for the present academic year and is devoting himself to graduate study in chemistry at the University of California.

The available work in geology and geography has been amplified by the addition of new courses. The Department has occupied the rooms in Hawaii Hall made vacant by the removal of the botany to the old chemistry building.

Social Sciences. The interest in the various fields of

newly established work, which may be classed under the general heading of social sciences, continues to increase. In addition to the new courses offered by members of the permanent Faculty, it has been possible to enrich the curriculum through the services of part time instructors during the last two years. Mention has already been made of the generosity of Dr. Handy and the Bishop Museum, which made it possible to give a course of lectures on Polynesian Anthropology during the second semester of 1921-1922. In the current academic year Mr. Kuykendall of the History Commission is offering a course on the historical development of the Pacific Coast of North America. In addition to his work at the University, Dr. Leebrick is called upon for many lectures on subjects of history and political science. In the general field of economics the most important development has to do with the instruction in commerce. A program of work in commerce was mapped out several years ago and in successive years subjects of instruction have been added as this program demands. It was necessary to begin the instruction in accounting in the fall of 1921. At that time the best solution seemed to be to secure the services of Mr. Phillips of the Public Utilities Commission. This worked out successfully for the first year. Beginning with the fall of 1922, it became necessary to add another full time instructor in the Department. It will be necessary to add yet another instructor in this field of commerce in order to give the full four-year course.

By means of a co-operative arrangement with the Bank of Hawaii, opportunity for practical work in banking is offered to competent students. This is equivalent to a laboratory course and should prove of marked value to the students.

The instruction in psychology has been extended through the establishment of the Psychological Clinic. Advanced courses are now available for properly qualified students.

Like the course in commerce the work in education is undergoing a gradual development and we shall soon be turning out graduates who have specialized in this field.

Co-operation with the Normal School is carried as far as feasible. Unfortunately the distance between the two institutions makes it practically impossible for Normal School students to attend classes at the University. The relations between the two institutions are bound to become closer as the Normal School gets firmly established upon a collegiate basis.

Sugar Technology. Experience with the course in sugar technology indicated that it would be more satisfactory to arrange the program of work with three divisions instead of two. The present schedules are somewhat more flexible and allow specialization looking toward the career of agriculturist, chemist, or engineer. During the last two summers the mill practice work has been given at the Ewa Mill. By an arrangement with the Company, we are credited with the time of any men who are set free through the services of the students and charged with the students' board. We have continued to profit by the close affiliation with the Experiment Station of the H. S. P. A.

Reserve Officers' Training Corps. When the time arrived that we had one hundred cadets or more for military drill, the War Department established a senior unit of the Reserve Officers' Training Corps at the University. Both the basic and advanced courses are now being given and the military work is established as a valuable part of the curriculum. Lt.-Col. Clarke has general charge of the R. O. T. C. units in Honolulu, consisting of the junior units at the Kamehameha Schools, Punahou, and McKinley High School, and the senior unit at the University. In addition, Capt. Rudelius devotes much of his time to our unit and some service is also rendered by non-commissioned officers.

Physical Education and Athletics. The last legislature appropriated \$7,500 for the support of athletics at the University. We secured the services of Mr. Otto Klum as director of men's athletics. During the academic year 1921-1922, he coached the football, basket ball, and track teams which took part in contests with outside teams, and

handled a series of inter-class sports. During the current year he coached the football team which has come through a very successful season, finally defeating the team from Pomona College by a decisive score. This plan of having a regular director of athletics with a place on the Faculty is working out very satisfactorily.

The work in physical education and athletics for girls has been gradually developing with the increasing attendance of young women. During 1921-1922 Dr. Harriet Flinders gave lectures on hygiene, made physical examinations and supervised the girls' health, and Miss May Gay conducted the classes in gymnastics and supervised the sports. In the spring, a series of inter-class games was run off among the girls for a trophy donated by the Women's Faculty Club. During the present year Miss Gay is again handling the classes and the athletics; the physical examinations were made by Dr. Paul Withington.

We have availed ourselves of the services of Dr. Withington for the physical examinations of the men, and frequently consulted him on matters of University health. This service has been rendered for a very slight remuneration. It is believed that the time has arrived for a more thorough-going policy in regard to the health of the student body, and suggestions to that end will be found later on in this report.

PSYCHOLOGICAL CLINIC

Act 140 of the Sessions Laws of 1921 provided for the establishment of a psychological and psychopathic clinic under the direction of the University. In order intelligently to carry out the provisions of the law we sought the advice of Dr. J. H. Williams, the Director of the Bureau of Juvenile Research of the State of California. The California authorities very generously loaned the services of Dr. Williams for a preliminary survey. Following the advice of Dr. Williams we secured the services of S. D. Porteus, who was in charge of the Research Department of the Vineland Training School, as the Director of our Clinic. It was deemed to be good organization to make the Director of the Clinic professor of Clinical Psychology on the

University Faculty. The selection of Mr. Porteus proved to be a very fortunate one. Miss Margaret Catton who had already extended experience in social work in Honolulu was secured as assistant to the Director, and the staff was later augmented by the addition of Miss Marjorie Babcock, an experienced worker in psychological investigations. The work can best be summarized in the following brief report of the Director:

"The work of the Psychological Clinic began with my arrival in Honolulu in February of this year. For a time its activities were confined to organization and the examination of cases referred by parents, social workers and others. It at once became apparent that conditions in Hawaii are so different from those of the Mainland that the standard tests worked out elsewhere cannot be safely applied either for mental diagnosis or classification. The factors of racial origin and heredity, varying environment, language difficulties, etc., have such marked effect that the problem of measuring intelligence here is practically a new one. I consulted with President Dean and we agreed that the best service I could render, both the University and the Territory, would be in the direction of adapting or devising new mental tests for special use in Hawaii.

If this research work is not done there will be grave danger of gross misconceptions as to the number and identity of the mentally defective in the Territory. Applying Mainland standards we would require, not an institution for so-called defectives, but one of the larger islands! It would, of course, be ridiculous to accept these standards.

Considering that, for fifteen years, an army of Mainland investigators has been at work on mental tests and that the work is by no means complete, it will be seen that our task here is no small one. Yet a knowledge of the mental status and grading of the various racial groups here is fundamental to an intelligent solution of every educational and social problem. Without this adaptation of the tests for gathering this knowledge the community is at the mercy of every psychological alarmist.

With the fine co-operation of the public school officials and especially of Mr. B. O. Wist, principal of the Normal School, this research work was at once instituted. It was then extended to the University, McKinley High School, Kaiulani, and Waiialua public schools. In these institutions over 1200 cases were individually examined in order to standardize new tests for local conditions and to discover what are the normal levels of intelligence.

In the private schools of Punahou, Kamehameha Boys, Iolani, and the Korean Christian Institute 648 additional cases were examined, making in all over 1900 cases.

Three hundred twenty-six cases have been examined in connection with the comparison of the brain growth and capacity of the different races—a scientific problem with an extremely practical bearing on which the Director of the Clinic has been working for some years.

In addition, clinical examinations have been carried out on 231 individuals referred to the Clinic by public agencies, such as the Court of Domestic Relations, Girls' Industrial School, and various public schools.

The Islands of Kauai and Maui have been visited by the Director and Miss Babcock, assistant psychological examiner, and 150 cases examined individually. On Hawaii 66 cases by individual tests and 70 children by group tests were examined. The work on Hawaii included two Roman Catholic institutions and six public schools.

In addition 238 children have been examined by group tests and 209 Freshmen at the University have been given entrance psychological examinations.

Private agencies such as the Social Service Bureau, Humane Society have referred 32 cases to us for examinations and reports whilst private individuals have referred 18.

The grand total of cases examined for all purposes is 3,060. Plans for next year provide for:—

1. Continued research work on the lines previously mentioned.

2. Additional studies on racial differences in relation to social problems.

3. A systematic mental survey of schools. In connection with the last named project it may be pointed out that the Federal School Survey took account of everything in the school system except the children. Yet in the provision of a curriculum suited to the children's needs a prime consideration is the distribution of their intelligence. This mental survey should be one of the next steps.

(Signed) S. D. PORTERUS."

WAIAKEA EXPERIMENT STATION

The land turned over to the University for purposes of the Waiakea Experiment Station comprises three lots, 812A, 912A, and 913, lying in the heart of the Waiakea Tract. A part of the land has not been in cane for a number of years and is not suitable for cane culture. This portion is in a depression, apparently underlaid by an impervious sheet of pahoehoe, thus causing the soil to be more or less water-logged according to the amount of rainfall. Nothing has yet been done with this area; at a later time when the more pressing work is well established it will be worthy of attention. The greater part of the Station lands had been in cane which was cut in the spring of 1921, some time before the land was turned over to the University. After consultation with Mr. Forbes, Manager of the Waiakea Mill Company, it was decided to try to save the ratoons on the mauka portion of the land and to plow up a part at least of the lower section, lot 812A. Since there was no personnel attached to the Station at that time, and it was necessary to act immediately if the ratoons were to be saved and the plowing done in time for planting that season, arrangements were made with Mr. Forbes to have the preliminary work done by the Waiakea Mill Company.

Near the end of June we appointed Robert Pahau, College of Hawaii 1918, as Director of the Station. At that time the improved road which has since been built through

the Waiakea tract passing directly alongside the Station land had not been started, and there were no living accommodations of any kind. All our efforts were concentrated on saving the ratoon stand and getting in a few acres of plant cane before it should be too late. Nevertheless it was possible to lay out some experimental work as follows:—

Experiment No. 1. Value of paper mulching for plant cane at Waiakea: 22 plots, 11 with paper; 11 without. Total area of experiment 2.04 acres.

Experiment No. 2. Amounts of nitrogen on ratoons: Applications of 150, 200, 250, and 300 lbs. per acre of nitrogen as nitrate of soda to eighth ratoons. 36 plots, total area 3.6 acres. Uniform applications of 120 lbs. of $P_2 O_5$ as reverted phosphate, and 120 lbs. $K_2 O$ as potassium sulphate per acre.

Experiment No. 3. Amounts of phosphoric acid on ratoons: Applications of 0, 60, and 120 lbs. $P_2 O_5$ per acre in the form of reverted phosphate to eighth ratoons. 27 plots, total area 2.7 acres. Uniform application of 120 lbs. $K_2 O$ as potassium sulphate and 200 lbs. nitrogen as nitrate of soda per acre.

Experiment No. 4. Amounts of potash on ratoons: Applications of 0, 60, and 120 lbs. per acre as potassium sulphate to eighth ratoons. 27 plots, total area, 2.7 acres. Uniform application of 200 lbs. per acre of nitrogen as nitrate of soda and 120 lbs. per acre of $P_2 O_5$ as reverted phosphate.

Experiment No. 5. Number of applications of fertilizer on ratoons: Comparison of (1) two applications, one in first and one in second season with (2) three applications, two in the first and one in the second season. 22 plots, 2.2 acres of eighth ratoons. Total application in each series of 80 lbs. $K_2 O$, 60 lbs. $P_2 O_5$ and 200 lbs. nitrogen per acre, partly as high-grade mixed fertilizer and partly as nitrate of soda.

Experiment No. 6. Forms of nitrogen on ratoons: Comparison of 200 lbs. nitrogen in form of nitrate of soda, sulphate of ammonia and dried blood. Uniform applica-

tions of $K_2 O$ and $P_2 O_5$ at rate of 120 lbs per acre each. 25 plots, total area of 2.5 acres.

Experiment No. 7. Seasonal proportions of nitrogen on plant cane; Comparison of one application the first season and two the second, with two in each season. Total amount nitrogen, 173.6 lbs. as nitrate of soda. All plots received 120 lbs. each of $P_2 O_5$ and $K_2 O$ in one application. 12 plots, total area of 1.2 acres.

Access to the Station became easy with the construction of the new homestead road. A house for the superintendent of the Station was constructed and other buildings for stock and tools should be provided as soon as possible. A considerable area at the rear of the house was enclosed with a stone wall to serve as a paddock for cattle. This area was rocky and not very productive as cane land. A tract immediately surrounding the dwelling has been reserved for experimental plantings of diversified crops, for orchard, garden, and poultry yards.

The plans for the Station contemplated cane culture as the principal part of the work, but in addition we hope to have auxiliary farm activities including livestock and the raising of as much of the food for men and animals as possible. Three Holstein heifers and a young bull were purchased and are doing well on the grasses and weeds of the paddock. A Berkshire sow has recently been added, and in a few months a home flock of poultry will be established.

There will be a substantial income from cane to be harvested in the spring of 1923. There are fifty acres of ratoons and twelve acres of plant cane. The crop will not be as heavy as it would have been could the work have been started a few months earlier; nevertheless, the stand is good, especially when one remembers that this is the eighth ratoon, and that the plant cane was not gotten in until after mid-summer.

The usefulness of Mr. Pahau can be greatly extended if arrangements can be made which will allow him to be absent for several days to advise with the cane farmers up the Hamakua coast.

FUTURE POLICY AND RECOMMENDATIONS

Student Health and Physical Education. As indicated above, substantial progress has been made during the last two years in looking after the physical development of the students. This should be further strengthened by the addition of lectures on public and personal hygiene, and by a comprehensive system of physical examinations and records, and advice to students based thereon. It would be advisable to combine this service with the work in athletics both for men and women into a single department dealing with student health, physical training, and athletics.

Agricultural Education. Much attention has recently been directed to the necessity of adapting the curriculum of our schools to the economic and social necessities of Hawaii. In any discussion of plans for agricultural education in the schools one is always confronted with the difficulty of finding persons qualified as teachers and supervisors. It would appear to be the duty of the University to enter the field of the preparation of young men to develop elementary and special agricultural education in Hawaii. This will involve careful study of the problem of methods of instruction, together with the mapping out of programs of undergraduate study adapted to the training of successful teachers of elementary agriculture under Hawaiian conditions.

Instruction in Pineapple Culture. The work in sugar technology has been of undoubted value, both to the students and to the industry. With the steady growth of the pineapple industry it has become increasingly evident that there are opportunities for qualified young men, and that the industry will benefit by their entrance into it. It would therefore appear that one of the next steps in the correlation of the work of the University with the industrial life in Hawaii is the development of instruction fitting young men for the pineapple industry.

Improvement to Plant and Equipment. There is a pressing need for a new dairy barn on the Farm, an extension of the poultry plant, and houses for the two foremen on the

Farm. On the campus we should complete the Girls' Dormitory and build a cottage for the superintendent of grounds. A small amount of paving is required and a small sum yet needs to be expended in completing the laying of water pipes and grassing the campus. Since these items are needed immediately, appropriation for them should be made from current funds. The present provision for classrooms and offices is becoming increasingly inadequate. Already there is difficulty in finding enough rooms for classes to meet in, and with increasing numbers it becomes necessary to run many classes in two or more sections, thus increasing the demand for class-rooms. Before another Legislature meets we shall have outgrown our accommodations. The Legislature should, therefore, be asked to appropriate \$150,000 in the next Loan Fund Bill for a new permanent building conforming in general type to Hawaii and Gartley Halls.

It seems the part of wisdom to purchase from the Bishop Estate the tract of land lying immediately to the south of the University campus, a matter of some 28 acres. This is now under lease to small cultivators, mostly Japanese. The leases on this land are about to expire and the Bishop Estate contemplates the dividing of the tract into house lots. If the University is ever to expand, the logical direction would be on this new Bishop Estate land rather than to purchase lands on the other side of the campus which are already in use and upon which there are many homes. At our request the Bishop Estate has deferred making definite plans for cutting up the portion of their land which lies next to the University until we can find whether it is possible for the Territory to secure possession on behalf of the University. There is, of course, no immediate need for this land but the opportunity of purchasing it at the present prices will not occur again. From the experience of universities elsewhere and from the present indications of growth in the population of this Territory, we may predict that in twenty years from now the lands now used for the University campus will be inadequate. It would seem the part of wisdom to secure an

additional tract of some 28 acres immediately adjoining our present lands. This may be looked upon as a perfectly safe investment even should our prediction of needing it in the future prove to be ill-founded. The present University lands were purchased at about \$1,000 an acre a comparatively few years ago and are now worth several times that amount. It is not likely that land in this vicinity will ever be any cheaper than it is now.

Summer School. There have been numerous requests for summer instruction, most of them from school teachers. The Normal School conducts a summer school, the standard of which has been rising. Rather than embark on the enterprise of another summer school it would seem much wiser to co-operate with the existing institution with the idea of developing one strong summer school. By using the services of some members of our own Faculty and sometimes bringing special instructors from outside the Territory, and by utilizing the facilities of the University, the program of summer work can be greatly enriched and its standard raised.

Extension Service. The Extension Service has passed its first experimental stage. The giving of short courses and correspondence courses, and the issuing of the weekly Letter along the lines already laid down should be continued and amplified. It is believed, however, that to be really effective for the improvement of agricultural practice and rural conditions, the University should maintain a system of county agents. This system has become a well established part of the work of the agricultural colleges of the United States. On June 30, 1922, there were 2,086 county agricultural agents in the United States. It is reported that in the year ending on that date these agents had made 1,456,860 farm visits, received 3,110,647 office visits, held 465,752 meetings and gave assistance in marketing \$349,807,153 worth of products. The number of agents ranges from three in Delaware with its three agricultural counties, to 128 in Texas with 250 counties. In addition, most of the States have women agents, the largest number, 60, being in Georgia. The largest expenditures for agricultural ex-

tension during the year ending June 30, 1922, was made in Iowa with a total of \$1,098,292; the smallest was in Rhode Island, \$36,670. The total for the United States was \$18,497,360, making an average of \$385,361 per state. Of the total amount expended, \$6,730,000 came from the Federal Government.

The facts set forth above show how far behind the States the Territory of Hawaii is lagging in this matter of agricultural extension. I believe that this agency should be put actively to work in Hawaii and therefore recommend the expansion of the work already in progress and the establishment of a county agent system.

A SYSTEM OF COUNTY AGENTS FOR HAWAII

PURPOSES

Educational. It shall be the function of the county agents to increase the knowledge of good agricultural practices. This can be accomplished both with those actually engaged in agriculture and with the potential farmers, especially the children. This involves consultation with individual farmers on their own places and at the office of the agent, the carrying out of demonstrations and experiments with farmers, distribution of printed matter, talks to groups, and co-operation with the schools.

Improvement of Economic Status. Farming is a business; to be successful it must be profitable. This means economical production and efficient marketing. It is on this business side of agriculture that our farmers especially need assistance. Instruction in the keeping of simple accounts to locate profitable and unprofitable enterprises will be of value, but more important still is the proper grading, packing, and sale of products. Aid in this latter field is urgently needed by all except the cane and pineapple farmers. The agents should be in close communication with purchasing agencies in Honolulu and elsewhere. The central office in Honolulu should act as a clearing house between producers and buyers, especially in the earlier stages of building up business relations.

Improvement of Rural Life. In addition to being profitable, country life should be attractive if we are to develop our rural population. Assistance in planning buildings, in sanitation, growing of fruits, and other details of the farm and community should receive attention from the agents.

WORK OF THE COUNTY AGENTS

1. To advise and consult with individuals on agricultural matters either by:—
 - (a) Personal visits to farmers, or
 - (b) Receiving calls at the agent's office.
2. To disseminate agricultural information through the distribution of bulletins, circulars, and posters, by talks, newspaper articles, and the like, and by putting inquirers in communication with sources of special information in Honolulu and elsewhere.
3. To conduct demonstrations in co-operation with farmers to test out and illustrate improved methods, new crops, or new varieties of old crops, insect disease control, livestock improvement, and the grading and packing of products.
4. To give information and assistance in marketing, and act as liason officer between farmers and marketing agencies in Honolulu and elsewhere.
5. To aid in the exchange and purchase of good seeds, fruit trees, breeding stocks, etc.
6. To assist in the agricultural education of children by:—
 - (a) Co-operating with the schools, and
 - (b) Organizing and looking after boys and girls, cane clubs, pig and poultry clubs, etc.
7. To assist in the improvement of the conditions of rural life in matters of sanitation, water supply, buildings, and general standards of living.

PROPOSED ORGANIZATION

1. Director of the Extension work of the University of Hawaii in charge.

2. Assistant Director, to act as central marketing agent in Honolulu, and care for other agent duties on Oahu

3. Local agents as follows:—

(a) *East Hawaii*. This work is largely for cane growers. Recommend that Robert Pahau handle this district and that an assistant be provided so that a responsible person would always be at the Experiment Station. Mr. R. A. Goff, for the Hawaii Experiment Station, is already doing good work which should not be duplicated.

(b) *West Hawaii*. Agent with office at Kealahou or that neighborhood.

(c) *Mau*. Agent with office at Wailuku or Kahului. Proper co-operation should be established with L. T. Lyman, Hawaiian Homes Commission, on Molokai.

(d) *Kauai*. Agent with headquarters at Lihue. Should be versed in cane culture.

BUDGET

Salaries:—

Director already provided for.	
Asst. Director at \$3,000	\$6,000
Three agents at \$2,700.....	16,200

Equipment:—

Automobiles, office furniture, etc.	\$4,000
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Expenses:—

Travel, telephone rentals, printing, etc.	5,000
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TOTAL FOR 1923-1925	\$31,200
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BUDGET 1923-1925

In any discussion of budget for the next two years it is necessary to keep in mind two principles: the necessity for making provision for students now in attendance together with the probable increase; and the necessity for economy in Territorial expenditures. Between the time of writing the report for the 1921 Legislature and the present, the student body has increased 88 per cent. We had not foreseen so considerable an increase and it has only been with great difficulty that the institution has been able to meet the demands upon it.

We must look forward to continued growth and to wider usefulness. This prospect cannot be faced without adequate funds. The per capita cost has been steadily decreasing and is this year less than one-third what it was in 1914-15 in spite of the fact that it now requires about \$1.70 to purchase what \$1.00 would purchase at the earlier date. Taking into consideration the purchasing power of money, we are now spending less than one-fifth as much to educate a student for one year as we spent in 1914-15. With increasing numbers this per capita cost will be yet further reduced, but the total cost must increase. Especially is this true in the matter of the total payroll, since more instructors must be added from time to time to handle the increasing numbers. The total amount asked for out of current funds is but \$16,550 more than for the last biennial period, an increase of 4.2 per cent. We shall probably have ten times as great a percentage increase in attendance.

APPROPRIATIONS FROM CURRENT REVENUES

APPROPRIATION: SALARIES AND PAYROLL

	1921—1923			Estimate 1923-1925
	Spent 1921-1922	Allotted 1922-1923	Total for Biennium	
Administration	\$17,862.46	\$16,399.20	\$34,261.66	\$42,200.00
Care of Buildings	2,227.67	1,820.00	4,047.67	5,760.00
Care of Grounds	4,850.00	5,760.00	10,610.00	13,200.00
Library	6,955.00	6,470.00	13,425.00	13,800.00
Shop	2,059.67	1,980.00	4,039.67	7,800.00
Agriculture	8,408.75	5,000.00	13,408.75	22,800.00
Education	3,900.00	4,300.00	8,200.00	7,800.00
History and Political Science	5,850.00	6,000.00	11,850.00	13,500.00
Art	5,100.00	5,100.00	10,200.00	10,800.00
Economics and Commerce	5,200.00	6,650.00	11,850.00	18,600.00
Languages	11,200.00	11,900.00	23,100.00	25,500.00
English	3,800.00	6,760.00	10,560.00	17,100.00
Sciences	5,284.90	10,600.00	15,984.90	14,100.00
Military and Women's Phys. Education	1,595.00	1,600.00	3,195.00	* 2,040.00
Extension	1,007.66	3,156.75	4,164.41	Specific Approp.
Contingent		1,169.69	1,102.94	** 15,000.00
Total	\$85,401.11	\$94,598.89	\$180,000.00	\$230,000.00

*Military only.

**To pay substitutes for men on leave and employ new instructors as increased enrolment may require.

APPROPRIATION: MAINTENANCE AND EXPENSES

Biennial Report to the Legislature

	1921—1923			Estimate 1923-1925
	Spent 1921-1922	Allotted 1922-1923	Total for Biennium	
Administration and Contingent	\$3,917.74	\$3,858.04	\$7,775.78	\$8,000.00
Buildings	3,466.33	3,000.00	6,466.33	8,000.00
Grounds	361.90	500.00	861.90	1,000.00
Furniture	2,325.66	2,000.00	4,325.66	5,000.00
Library	4,807.83	4,500.00	9,307.83	10,000.00
Publications	1,502.01	1,500.00	3,002.01	5,000.00
Shop	540.99	500.00	1,040.99	1,000.00
Farm	7,117.01	4,500.00	11,617.01	10,000.00
Apparatus and Supplies	7,103.53	6,000.00	13,103.53	16,000.00
Extension	2,084.20	2,000.00	4,084.20	Specific Approp.
Travel	1,414.76	2,000.00	3,414.76	5,000.00
Total.....	\$34,641.96	\$30,358.04	\$65,000.00	\$69,000.00

APPROPRIATION: HEALTH AND PHYSICAL EDUCATION*

	1921-1923	Estimate 1923-1925
Lecturer on Hygiene, etc.....	-----	\$3,600.00
Instructor, Men's Athletics	\$7,000.00	7,000.00
Instructor, Women's Athletics	**	2,700.00
Expenses	500.00	-----

Totals..... \$7,500.00 \$13,300.00

*Called "Supervision and Maintenance of Athletics" in S.L. 1921.

**Paid from "Salaries and Payroll" Account.

1921-1923* 1923-1925

APPROPRIATION: NEW CONSTRUCTION AND IMPROVEMENTS

	1921-1923	1923-1925
"Completion of Laboratory Building".....	\$22,000.00	
"Furniture"	13,750.00	
"New Construction"	65,000.00	*\$38,000.00
Total.....	\$100,750.00	\$38,000.00

*For the following purposes:—

New Dairy Barn and Addition to Poultry Plant.....	\$25,000.00
House for Superintendent of Grounds	2,500.00
Two Houses for Farm Foremen	4,000.00
Completion of Women's Dormitory	3,000.00
Paving and Curbing	2,000.00
Water Pipes and Grassing	1,000.00
Campus Lights	500.00

APPROPRIATION: PSYCHOLOGICAL CLINIC

	1921-1923*	1923-1925
Salaries	\$12,543.76	\$20,000.00
Expenses	2,456.24	3,000.00

*Clinic did not begin active operations until January, 1922.

APPROPRIATION: WAIAKEA EXPERIMENT STATION

	1921-1923	1923-1925
Salaries and Payroll	\$13,167.19	\$14,100.00
Fertilizer and other Supplies	3,276.45	4,000.00
Buildings and Equipment	6,736.97	5,500.00
Miscellaneous Expense	1,819.39	2,400.00
Total.....	\$25,000.00	\$26,000.00
Estimated income	-----	16,000.00
Appropriation required	-----	\$10,000.00

APPROPRIATION: EXTENSION WORK

Extension Letter	\$9,000.00
Correspondence Courses	1,200.00
Lecture Service, Travel, etc.	2,000.00
Salary of Director*	4,800.00
Salary of Stenographer	3,000.00

Total \$20,000.00

*Part time.

**APPROPRIATION: SUMMER INSTRUCTION IN CO-OPERATION
WITH THE NORMAL SCHOOL**

Salaries	\$6,000.00
Expenses	500.00
Total	\$6,500.00

APPROPRIATION: FROM LOAN FUNDS

New Building	\$150,000
Purchase of Bishop Estate Lands.....	To be appraised

Respectfully submitted,

A. L. DEAN, *President.*