

SECRETARY HOUSTON PRAISES STAR-BULLETIN'S 1917 GARDEN CONTEST

HOME AND SCHOOL COMPETITION IS LAUDED BY WASHINGTON OFFICIALS

Head of Department of Agriculture and Experts Recognize Permanent Value and Usefulness to Territory, as Well as Timeliness in Present Food Emergency

Secretary David F. Houston of the Department of Agriculture and his experts in the department have been given a lively interest in Hawaii's food problems through learning of the Star-Bulletin's 1917 home and school garden contest.

When the national food shortage became evident, the department of agriculture began making a country-wide inquiry to learn what was being done to increase the agricultural production. In response to the call for information, the Star-Bulletin sent to Secretary Houston and others of the department a statement of the splendid work which the children of Hawaii were doing in connection with the contest.

Letters were sent to Secretary Houston, to Dr. A. C. True, director of the states relations service, which handles the experiment station work, and to Dr. E. V. Wilcox, formerly head of the U. S. Experiment Station here. They have sent the Star-Bulletin the following replies:

"Mr. Riley H. Allen, Editor Honolulu Star-Bulletin,

"Dear Sir: Your letter of April 20 and copies of your paper giving the plans and results of the home and school gardening contest have been received.

"This department is always pleased to learn of any endeavor to extend and develop agriculture, and it is especially gratified by such efforts at this time when the country is called upon to do so much toward feeding the world. Boys' and girls' clubs, the membership of which exceeds 300,000, are doing a splendid work on the mainland, and the adoption of this idea cannot fail to be of lasting benefit to Hawaii.

"Very truly yours, D. F. HOUSTON, Secretary."

"Mr. Riley H. Allen, Editor Honolulu Star-Bulletin,

"Dear Sir: I have received your letter of April 20, with copies of the Honolulu Star-Bulletin containing accounts of the school and home garden contest. This is a very interesting matter, and I should judge that the school garden movement in Hawaii has been very successful.

"I am very glad to know that Director Westgate and his associates in our experiment station have rendered helpful service in this enterprise.

"Very truly yours, A. C. TRUE, Director."

"Mr. Riley H. Allen, Editor Star-Bulletin,

"Dear Mr. Allen: I have just received your letter of April 20th, together with parts of the Star-Bulletin of various issues relating to the school garden contest and potato growing contest now being carried on in Hawaii. This movement seems to have elicited a great amount of interest in Hawaii and to be meeting with encouraging success. I have long thought that a more active interest should be taken in Hawaii in the production of staple food products and it surely looks as if your present campaign would lead far along the road toward this desired end.

"With best regards to you and other members of your staff, I am,

"Very truly yours, E. V. WILCOX, Agriculturist."

Educational News of Special Interest To Teachers in Hawaii's Schools By Vaughan MacCaughy, College of Hawaii

AN APPEAL TO WOMEN A patriotic appeal that comes straight home to all the women teachers in Hawaii's schools has recently been made by the national secretary of agriculture. His statement is so concise and well chosen that it should be read to and written by every school girl above the sixth grade. He says in part: To save food the housewife must learn to plan economical and properly balanced meals, which, while nourishing each member of the family properly, do not encourage overeating or offer excessive and wasteful variety.

It is her duty to use all effective methods to protect food from spoilage by heat, dirt, mice, or insects. She must acquire the culinary ability to utilize every bit of edible food that comes into her home. She must learn to use such foods as vegetables, beans, peas, and milk products as partial substitutes for meat. She must make it her business to see that nothing nutritious is thrown away or allowed to be wasted.

THE COLLEGE OF HAWAII AND THE ARMY In a recent report W. R. Farrington, chairman of the Board of Regents, states that the engineering and scientific departments of the college are beginning to be of value in offering opportunities for study to young men of the army who are endeavoring to fit themselves for the more advanced service.

STANDARDS FOR HIGH SCHOOL BOYS "Come clean," is the slogan of campaigns that are carrying the day, defining character and rallying forces among boys, especially in the high schools, throughout the mainland. Here is the declaration round which sentiment and organization are growing: "I subscribe to the principles of clean speech, clean sport, and clean habits, at least for 1917. "I will not use profanity, vulgarity, tobacco, intoxicants, or tell dirty stories.

KANEHOE SCHOOL KEEPS UP GARDEN WITH IDEAL 'KANEOHE BEAUTIFUL'

Kaneohe, Oahu, May 31, 1917. Editor Honolulu Star-Bulletin. Sir: This time I am going to write about our land Mr. David Rice gave to us. It is about three acres. A Chinese man is plowing the land. We have already planted one-fourth of an acre of beans. We planted one-eighth of Kentucky Wonder beans and one-eighth of navy beans. The Kentucky Wonder and the navy beans came up. We have planted some carrots and beets, but they are not up yet.

We are also going to plant one-sixteenth acre of tomatoes. We are going to sell them. If we can not sell them we are going to can them. We are going to plant one-half acre of watermelons and some onions.

We ordered six pounds of Mexican red beans and five pounds of Tepary beans, but they have not come yet. The small boys are going to help work the garden in the summer while the large boys work in the cannery. Our teacher is going to have a canning club of the girls to meet once each week and make guava jelly and jam and mango chutney after school closes. We have planted many flowers at school and also at home. We are trying to make our houses very pretty and our town, too. We want this place to be "Kaneohe Beautiful." I have nothing more this time. Yours truly, SHIZUE HAITSUKA

HON. D. F. HOUSTON



DR. E. V. WILCOX



OLD HOMESTEAD MADE READY FOR PELE FESTIVAL

Work is progressing steadily at the Old Plantation in preparation for the "Festival of Pele" on the afternoon and evening of June 11th. This is to be a regular part of the festivities of Kamehameha's birthday, and the grounds are being cleared to accommodate a large crowd. The old structures beyond hope of repair are being destroyed, while others are being put in order to be ready for the opening day.

A large dancing floor is being erected and planned, and general dancing will be interspersed with exhibition numbers under the direction of Madame Lester. The electricians are busy putting in powerful and artistic illuminations, and the Japanese, Koreans, Chinese, Filipinos, Indians, Russians, Australians, Javanese, and Hawaiians who will participate in the big fete are rehearsing their parts. Besides the dancing lanai, there will be numerous side shows and booths, etc., including the wheel of fortune and the fortune medium, the "goops," the poking of public places, Kona coffee ground on the spot, ice cream just off an ice-berg, exhibitions of fancy work, the fishing booth, and other attractions that will lend to the general fun of the occasion.

NORMAN WELLS, HAIKU, WORKS IN BEAN CONTEST

Haiuku, Maui, May 26. Editor Honolulu Star-Bulletin Publishing Co. I received Kentucky Wonder bean seed and instructions. I have measured off and prepared ground for 14 hills. The hills, I think, will be planted during the next week. Please let me know how often I must write to you about the beans. Yours truly, NORMAN C. WELLS. (In response to this and other queries on the same point, the Star-Bulletin hereby announces that the rules in the potato and bean contests do not call for letters to be written, as the contests come during a time when many schools have examinations, but we are glad to get letters at any time and hope contestants will send in at least two or three letters during the season.—Editor)

Practical Talks on Emergency Agriculture No. 6

(Recording an Authentic Hundred Bushel Yield of Shelled Grain.) An Ultimate Crop in Hawaiian Diversified Agriculture BY F. G. KRAUSS Superintendent, Extension Division, U. S. Experiment Station, Haiku, Maui.

FIELD CORN The area devoted to corn growing in Hawaii is constantly and steadily increasing, and well it may when we consider its ultimate possibilities as a food crop for men and livestock. Most crops, under favorable conditions, may produce a hundred fold, but corn will easily outdo any of its fellows. A well developed ear of corn bears approximately a thousand grains of seed—the product of a single grain. An acre may be made to produce a hundred bushels weighing 5600 pounds—two and three fourths tons. This is one hundred and twenty days from planting to harvest. No other crop approaches such production in quantity, and food quality is certainly not lacking in this golden grain. Well may we give careful consideration to the corn crop as have already some of our advanced farmers. The Parker Ranch on Hawaii grows close to 2000 acres in some years. Their yields average 40 bushels per acre. The average yield in the former most corn states is around 35 bushels. Hawaii's average yields on 5000 acres is probably about that of the mainland corn belt. It is certainly not as low as the 25 bushels average for the whole United States. But Hawaii as well as the corn states can double its yields—Parker Ranch has well authenticated yields of 80 bushels per acre. The College of Hawaii farm has produced over 80 bushels on large experimental plots, and during the past year a hundred bushels were produced at the Haiku substation, on land which in its virgin state produced less than 40 bushels. Successful corn culture in Hawaii in all but the most favorable localities requires good farming. Unfortunately most of us are not as yet good farmers. Our diversified agriculture is still in its infancy and too new to furnish the experience necessary to guide us rightly under adverse or unusual conditions. However, we are each year learning more of our seasons, better methods of tillage, adapting varieties and developing improved strains. We are learning to unlock the latent fertility of our soils and at the same time adding materially to the original stores. Lowering costs of production will come with added experience, as will doubtless the extension of our markets in the demand for better conditioned livestock. We must sell our corn crop on the hoof, and retain the priceless by-product—manure—to replenish the drain from our soils.

Conditions and Methods of Culture Climate is an important consideration in corn growing, but Hawaii appears to have upset some well established corn growing theories. In both the Kula region on Maui and the Waikae section of the Parker Ranch, the corn crop certainly rarely experiences either the warmth of temperature, especially the night temperature, or the moisture requirements laid down in our standard text books. On the other hand it should be stated that the marked differences in our climatic conditions over theirs, is probably compensated for by our unusually long growing period. Few mainland corn growers will be able to comprehend that much of our corn requires from five to eight months to mature, and that bumper crops have been produced on less than four inches of rainfall.

Perhaps no crop, not even excepting alfalfa, is so greatly influenced by the character of the soil as is corn. The deep, extremely fine silty soils typical of the Kula and Waikae regions are remarkably well adapted to the corn plant. In the former locality large crops of corn have been produced for more than 30 years without fertilizer and the only rotation ever practiced is an early and late crop of potatoes with intercroppings of potato and beans, all within the same year. But no soils can hold up under these incessant drains and soon there must come an awakening if it is not already there. We have little question but that a rational system of green-manuring and fertilization would result in a material increase of yields and larger profits. But more especially would it build up a reserve fertility without which there can be no permanent agriculture. The Hawaii Experiment Station through its extension division is anxious to lend every possible aid, especially in fundamental agricultural problems of this sort. In the every day practices of the field, the wise farmer will teach the experiment station many lessons, thus compensating in fullest measure for any aid we may be able to give. It is this sort of cooperation that must accomplish much towards a better agriculture for Hawaii.

After all, the practical man desires concrete demonstrations, and for such the Hawaii Experiment Station has inaugurated the demonstration work at Haiku. We have had much to learn over our mainland experiences and it has taken almost four years to demonstrate the possibilities of the hundred bushel crop. After the thing has happened, like "setting an egg on end" it was all simple enough. Perhaps we can do no better at this point than to describe in some detail how the crop was produced. Our soils, in common with a considerable area in the Haiku region, are coarse granula loams, bearing a heavy growth of guava, and are rather acid. A compact and inert subsoil comes to within a foot or less of the surface in most places. When cleared, a heavy sod of Hilo grass usually takes possession and such growth usually intensifies the acidity, especially when heavy growths are turned under. The cost of clearing these lands ready for the plow has ranged from \$10 to \$40. If plowed immediately following grubbing this fundamental tillage operation is fairly easily accomplished, and we have found that such practice evidently favors the processes conducive to fertility. We would urge that under all similar conditions as short an interval as possible be permitted to elapse between clearing and breaking the land. During the dryer seasons of the year we have found it important to disc or harrow immediately following the plow. When this is not done the scant supply of organic matter termed "humus" is soon dissipated by wind and strong sun rays. On the other hand, harrowing should be attempted while the ground is wet. Since a good tilth is essential to maximum root development and conservation of moisture, we plow three times at suitable intervals, to best bring about a friable condition of the soil. However, deleterious effects may follow excessive tilling of the soil, especially when there is a lack of vegetable matter and the season proves one of heavy rainfall. In such cases the soil particles "run" together and the soil becomes excessively compacted.

When, having prepared a good seed bed, selected a suitable variety and favored by normal season, the corn crop falls to produce a good crop, we may be reasonably certain that something is lacking in the soil. As stated before, on a hundred bushel basis our soils proved about 35 per cent efficient on corn. Liming has availed us but little or no benefit thus far, and in some cases depressed the yields. Complete fertilizers applied at the rate of 500 pounds per acre have rarely paid their cost without the addition of green manure. Then we began to green-manure. The corn was intercropped with Jack beans, cow peas and velvet beans. After the seed was harvested, the vines were turned under. Twenty tons in 1913 and approximately an equal amount in 1914 and 1915. The corn crop kept increasing from 35 to 55 and 64 bushels—than a too late planting, coupled with an unfavorable season—dropped the yield to 37 bushels. In 1916 our reward came. Sixty odd tons of green-manure gave us a foundation to work on. One could see and feel the soil teeming with fertility. We began to feel that something "might happen" this season. An experiment was planned to compare the relative value of a carefully selected strain of home grown seed with another standard variety. The influence of light and heavy seeding, and of fertilization with a complete fertilizer as against green-manuring alone, and no fertilization and no green-manuring were also to be determined. Result of the experiment is summarized in the record given below:

Table with 4 columns: Variety, Fertilizer, Rows, Yield (pounds bushels). Rows include Standard Yellow Dent, Sub-Station Hybrid, and various fertilizer treatments.

Standard Yellow Dent ... 2340 41.78 Sub-Station Hybrid ... 2393 42.74 Plot No. 2—Heavily green-manured; fertilized with 500 pounds complete fertilizer; rows 2 1/2 feet apart: Yield in pounds bushels Standard Yellow Dent ... 5196 92.78 Sub-Station Hybrid ... 5643 100.76 Plot No. 3—Heavily green-manured; no commercial fertilizer; rows 5 feet apart: Yield in pounds bushels Standard Yellow Dent ... 2445 43.42 Sub-Station Hybrid ... 2653 47.43 Plot No. 4—Heavily green-manured; no commercial fertilizer; rows 2 1/2 feet apart: Yield in pounds bushels Standard Yellow Dent ... 4208 75.14 Sub-Station Hybrid ... 4458 79.60 Plot No. 5—No green manuring; no fertilization; rows 5 feet apart: Yield in pounds bushels Standard Yellow Dent ... 1872 33.40 Sub-Station Hybrid ... 1943 34.70 Several striking features are brought out in this experiment. The most important in the writer's estimation are the results directly traceable to the green manuring. Plot 5 indicates that the soil's natural fertility under the conditions existing at the time of the experiment enabled it to produce an average of 34.5 bushels when the rows were spaced 5 feet apart. According to plot 1, when 500 pounds per acre of a high grade fertilizer were added there was an increase in the yield of 8.90 bushels, equivalent to a gain of 24 per cent. Now when green manuring was practiced under 5-foot spacing of rows, the yield was increased over no treatment 11.45 bushels or 33 per cent.

Star-Bulletin To Distribute Garden Bulletin of Hints

Washington, D. C., May 15, 1917. The Honolulu Star-Bulletin Co., Honolulu, Hawaii. Gentlemen: I am sending you under separate cover 1000 copies of "Farmers' Bulletin No. 518—The Small Vegetable Garden," which I am asking you to distribute to those who desire them. The pamphlet is just now in great demand all over the country owing to the movement to utilize back lots and other unutilized land for the raising of vegetables and garden truck. I presume that there might be a demand for these pamphlets, hence I am seeking your good offices in the distribution of same. Thanking you in advance, I remain, very truly yours, J. K. KALANIANOALE.

MAKAPALA, FIRST PRIZE-WINNER, TO USE MONEY WELL

Kohala, Hawaii, May 24, 1917. Editor Honolulu Star-Bulletin. Dear Friend: I am in receipt of your letter, awarding the Makapala school first prize for the Star-Bulletin Agricultural Contest on West Hawaii. As principal of the school I wish to thank you and Mr. Atherton, the judges, Miss B. B. Taylor, Mr. Geo. Watt, Mr. Samuel Kanehane, and the Normal School letter judges, for awarding us first place. I also received the prize award of twenty-five dollars. We will use some of it to square up on our Victrola and for buying records and needles and anything we need. Very respectfully, THOMAS K. NAHUA, Principal Makapala School.

MAKAWAO SCHOOLBOY ANXIOUS TO ENTER WONDER BEAN CONTEST

Makawao School, Maui, May 17, 1917. Editor Honolulu Star-Bulletin. Sir: I am going to tell you a little about my home garden. I have cleared up a little place on the ground and made a garden of 64 feet long and 54 feet wide, and is divided into six beds. I bought some seeds such as cabbage, carrots and lettuce. I planted one bed of cabbage, two beds of carrots and three beds of lettuce. My lettuce and carrots are coming up fine but the cabbage is rather slow. We had some rain yesterday and it made my seeds grow up happy. I shall have a better garden for next term. I wish to enter your Kentucky Wonder bean contest. I beg to remain, Yours respectfully, GEORGE M. ORNELLAS.

24 per cent increase credited to the complete fertilizer. These results standing by themselves give a faint inkling as to the value of green manuring. But to get the full significance of the factor of green manuring, we must turn to plot 2 where we have the cumulation of all the limiting factors, i. e., heavy green manuring, fertilization, optimum spacing and an adaptable variety, resulting in the yield of 100 bushels. The limitations of the experiment prevent one from measuring exactly the proportion of gain directly attributable to the green manuring, but by indirect induction. It would seem reasonable to believe that at least 100 per cent increase in yields may be credited to this practice alone. We are likewise justified in believing that the ratio of increase due to the complete fertilizer would have been less without green manuring. Certain we are (although there is no direct evidence in these experiments), that the land could not have sustained the heavy planting without the heavy green manuring. We think that the results in plot 4 bear us out further in our contention. It is unfortunate that there is no check of what the complete fertilizer might have done under like conditions. But after all the most useful lesson in the whole experiment is that it brings out in bold relief the importance of supplying, not only a rich fertility, but an adaptable seed, optimum spacing of the plants, and other untouched and perhaps unseen factors which go to make up the perfect whole.

ELSIE WONG IS WORKING HARDER NOW THAN EVER

Union Mill, Kohala, Hawaii, May 25, Honolulu Star-Bulletin. Sir: Words cannot express my appreciation towards you when I received the letter with the prize. I thank the Star-Bulletin and Mr. Atherton from the very depth of my heart. I did not go to the bank yet as I must go to school. When school is over I use to work in my garden and my interest in it has grown greater than before. I will not hesitate to work in the garden, but will always continue to plant more vegetables. The prize offered me will not be spent until it is absolutely necessary. The children who quit gardening are very sorry that they lose hope and did not continue the work. More children will enter the contest the next time. I have not taken into consideration about my garden for quite a while. Most of the things seen by the Star-Bulletin's good judges are pulled and dried, among them are the beans and peanuts. The bean patch has been planted with Irish potatoes and they are growing brilliantly. The peanut patch is planted with beans. Beside the prize awarded me I have made a profit of \$3.65 by selling vegetables. For the past few months my garden furnished the boarding houses of Union Mill with vegetables, such as egg plant, carrots, celery and beans. I am still supplying the tables yet. Some teachers of Honomakua school buy my carrots, egg plant and beans weekly. In my former letters I did not mention a new kind of plant which I do not exactly know the name. I commonly call it the "Chinese potato." I will write again soon and thank you once more, I will close. Sincerely yours, ELSIE WONG.

JOHN ANDRADE, 12, PRIZE-WINNER ON ISLAND OF MAUI

Pala, Maui, T. H., May 13, 1917. Editor Honolulu Star-Bulletin. Dear Sir: I give you thanks for the money that the Star-Bulletin and Mr. Frank C. Atherton gave me. I was very glad when I heard that I got the first prize. I am digging the soil and planting I am glad to enter the next contest. I am going to try all my best to get the first prize again. I am keeping the garden all the time. I have lots of beans and tomatoes. The most money I made was in tomatoes. I am twelve years old and I am in the fifth grade. Yours truly, JOHN ANDRADE.

LAUNDRY HINTS

A fruit stain on the best linen is a problem which many housewives find difficult to solve. There is a very good remedy in a paste made of soda and water, which when rubbed on the spot will restore the garment to its original color. If the spot is particularly stubborn hold it over a steaming kettle or allow the boiling water to run through and it will quite disappear. Often a careless maid will insist upon washing white and colored clothes together, much to the peril of the white garments. If the latter are injured by their contact with color, by boiling in a soapy water, to which a cupful of vinegar has been added, they should become white again.

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