

C. R. Bishop

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THE
TRANSACTIONS
OF THE
ROYAL HAWAIIAN
AGRICULTURAL SOCIETY :
INCLUDING A RECORD
OF THE
PROCEEDINGS PRELIMINARY TO THE FORM-
ATION OF THE SOCIETY, IN
AUGUST, 1850.

VOL. I. NO. 1.

HONOLULU, H. I. :
PRINTED BY HENRY M. WHITNEY :
GOVERNMENT PRESS:
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PREFACE.

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The papers presented to the public in the present No. have been collected and published in accordance with a vote of the Royal Hawaiian Agricultural Society, passed at their recent meeting.

It is due to the authors of these papers to state that they were prepared with no expectation that they would ever be printed, and simply for the benefit of the meeting at which they were read. It was, however, believed by those who then heard them that they embodied an amount of information too valuable to be locked up in the archives of the society, and they have accordingly been collected in the present form.

Should the Society be prosperous and increase in members and usefulness, as its founders confidently hope, it has been thought that its members would look back with interest to its "day of small things," and be glad to have a chronicle of the rude beginning of Hawaiian Agriculture.

PROCEEDINGS

OF

PRELIMINARY MEETING.

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#### FIRST DAY.

Agreeably with an invitation to "all Farmers, Planters, Gardeners and other persons interested in the formation of a society for the promotion of Hawaiian Agriculture," published in the *Polynesian* of April 27th, a very respectable number of the residents of Honolulu, and some from other parts of the Hawaiian Kingdom, met at the Vestry Room of the Bethel Chapel, on Monday evening, April 29th, 1850.

His Honor, Judge ANDREWS, was called to the chair, and C. R. BISHOP was appointed Secretary for the meeting.

His Honor, Judge LEE, being called upon by the Chair, stated, briefly, the object of the meeting ; said that it was a preliminary meeting, called principally for the purpose of appointing a Committee to correspond with the planters, farmers and others upon the different islands, at some future time to call a meeting of the people of all the islands, who are interested in agriculture, with a view of forming a Society, and uniting the action of those interested in the culture of the soil ; that the business of such Committee should be definitely stated, and that he considered all classes, trades and professions of residents interested in the promotion of agriculture, the consumer, as well as the producer.

Messrs. Reynolds, Newcomb, Marshall, Fuller, Damon, Armstrong, Whitney, Johnson and Castle addressed the meeting in favor of the object proposed.

On motion of Mr. Marshall, a committee of five was appointed in accordance with the suggestion of Judge Lee. The following gentlemen were placed on that committee. Wm. L. Lee, James F. B. Marshall, R. W. Wood, W. Newcomb, and Stephen Reynolds.

On motion, the committee were instructed to fix upon a time for the

general meeting at Honolulu, of the planters, farmers and others interested in agriculture, throughout the islands, and to issue a circular to be published in the newspapers, stating the objects proposed in the formation of an agricultural society, and inviting all interested in the promotion of such objects to assemble on the day fixed, and to bring with them samples of their products and animals, for exhibition. They were also instructed to solicit certain persons to prepare essays, upon the various subjects connected with agriculture, to be read at the meeting, and, to procure a suitable person to deliver an address upon the occasion.

The subject of the introduction of foreign laborers, and the securing of domestic laborers was discussed at some length by Messrs. Marshall, Gower, Lee, Newcomb, Wood and others.

His Honor Judge Lee said that he had proposed an Act for the mutual protection of masters and servants, which he proposed to place in the hands of the present Legislature, to be laid before that body, for their consideration, and that with the permission of this meeting he would read the Act, hoping that the persons present better acquainted with the practical working of such an Act, might suggest many valuable amendments.

On motion, it was resolved that the meeting approve of the Act read by Judge Lee. It was also resolved that the proceedings of this meeting be published in the Honolulu newspapers.

The meeting then adjourned, *sine die*.

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## CIRCULAR,

(ISSUED BY THE COMMITTEE ON THE FIRST OF JUNE.)

*To the friends of Agricultural Operations at the Hawaiian Islands:*

At a public meeting of those persons interested in the promotion of Hawaiian Agriculture, held at Honolulu, April 20th, it was unanimously resolved that the formation of an association for the promotion and improvement of agricultural operations and products in these Islands, was highly desirable: that such an association would meet with cordial support from all classes of foreigners resident on

these Islands, and would also be encouraged and fostered by the Hawaiian Government. It was also voted that all persons interested in the subject, should be invited to assemble in Honolulu in the month of August next, for the purpose of organizing such an association, and the undersigned were chosen a committee to carry out the above design, by appointing a day for such convention, and addressing a circular to all persons interested, explaining the objects of the contemplated association, and inviting their attendance and co-operation in carrying out these objects.

The importance and almost necessity of an institution like the one contemplated is too evident to require exposition. For years past, the agricultural interests of these islands have been insignificant, and their pursuit unprofitable. With an uncertain and distant market—with little or no encouragement, or facilities given to foreign tillers of the soil, without proper knowledge of that soil, or sufficient capital to experiment upon its capabilities, most of the agricultural enterprises here have languished or utterly failed. And with the exception of a few sugar and coffee plantations, the proprietors of which have invested too much capital to be able to abandon them without heavy loss, and which were still struggling on with doubtful prospects, the whole amount of agricultural operations at these islands consisted in the raising of fruit and vegetables for the fleet of whaleships that semi-annually touched here for supplies.

Within the last two years, however, a great and sudden change has taken place in the prospects of this group. The extension of the territory and government of the United States to the borders of the Pacific, the wonderful discoveries in California, and the consequent almost instantaneous creation of a mighty state on "the western front of the American Union," has, as it were, with the wand of a magician, drawn this little group into the very focus of civilization and prosperity. We find ourselves suddenly surrounded by intelligent, enterprising neighbors, who call loudly to us to furnish of our abundance and receive in exchange of theirs. Our coffee and sugar no longer remain piled in our ware houses. Our fruits and vegetables no longer decay on the spot where they were grown. We are not even compelled to seek for them a market, but clamorous purchasers come to our very doors and carry off our supplies with an eagerness that has caused us to feel a scarcity ourselves, and we are assured that not

only for all these, but for any other products of the soil that we will raise, a ready and increasing demand may be relied on from our enterprising neighbors. The native government too, impelled by the irresistible influence and example of the Anglo Saxon energy and progress, which it sees in every direction, is relaxing its former tenacious grasp on the arable lands of the Islands, and even inviting and encouraging their cultivation by foreign skill and capital.

With these brilliant prospects suddenly opening to these Islands, let us inquire how far they are prepared to render them available. With every variety of soil, adapted to all the productions of the temperate and tropical latitudes, we find the agricultural operations of these Islands checked and embarrassed by the insufficiency of the four great requisites of capital, experience, proper implements and labor.

It is a fact worthy of remark, that, as your committee believe, without a single exception, all the plantations that have been commenced at these Islands, have been so commenced by persons possessing neither experience in the business they were undertaking, or the requisite capital and knowledge of the soil, to carry it through to a successful result.

Plantations for the growth or manufacture of silk, cotton, coffee, sugar, &c., have been commenced under such circumstances, and their failure, in some instances, is not to be wondered at, when we take into consideration such circumstances, added to the disadvantages of the *then* isolated position of this group, almost cut off from communication with the civilized world, and the knowledge, capital, proper implements, &c., so readily rendered available at home. Large sums of money have been thrown away on experiments, which the experience of persons acquainted with the business would have enabled them to avoid, and no system of intercourse between the planters has been established, by which the experience of one could be rendered available to another. And these are the great drawbacks from progress now. But few of our planters have sufficient capital to enable them to purchase the services or experience of others, and they are consequently learning by hard, expensive and slow experience themselves, and with few facilities of communication, and some may still be pursuing plans which others have found to be fruitless.

To meet these difficulties, to provide for those wants, to render the experience of other countries available to this, to supply by a com-

bined action, facilities and information to *all*, which cannot be procured by individuals, to encourage and foster agricultural operations in every form, is the main object of the proposed association. The merchant, the mechanic, the professional man, indeed, all classes of consumers are equally interested with the producer, in the prosperity of this branch of labor, and we hope to have your aid and your personal co-operation in promoting these objects.

It is proposed that the association shall subscribe for the principal standard periodicals and newspapers devoted to agriculture, and if the means of the society allow, an able editor shall be engaged for an agricultural magazine to be published at Honolulu, which shall contain such selections from these periodicals as shall be most useful or interesting to the members, and shall also contain original articles and correspondence. Your committee would also suggest for your consideration, the propriety of the establishment of an agricultural warehouse at Honolulu, for the importation and collection of such kinds of agricultural implements and machinery, plants, seeds, &c., as are most adapted to this soil and to the laborers employed. The advantages of such an establishment are obvious to all who have had any experience in the matter, as most of the implements shipped to this market by merchants who are unacquainted with its wants, are entirely unadapted to the necessities of the planters. Such a warehouse could also be a depot for the sale of the products of the various plantations and farms, the proprietors of which have not special agents at Honolulu.

The improvement of the breed of cattle, horses, swine, sheep, Poultry, &c., is another great object of the society. Stated annual exhibitions could be held, and encouragement given to farmers and planters, by premiums being awarded for superior specimens of their products.

Another subject of great importance before this association is that of *Labor*. The introduction of Coolie labor from China to supply the places of the rapidly decreasing native population is a question that is already agitated among us, and should such a step become necessary, the aid of such an association in accomplishing this object would be of great benefit. All these objects, if left, as heretofore, to individual enterprise, would wholly or partially fail for want of the necessary means, but could easily be effected by an organization like that contemplated.

Having thus stated some of the objects of the proposed association, your committee most earnestly and cordially invite your presence and co-operation in the accomplishment of these objects. We have appointed as the time most convenient for the planters from other islands to assemble in Honolulu, Monday, the twelfth of August next, for the first meeting for the purpose of organization. Due notice will be given of the hour and place of meeting.

An address will be delivered on the occasion by the Hon. W. L. Lee, and it is hoped that addresses will be made by other persons. Your committee earnestly request the attendance of all who feel interested in the objects of the meeting. The statistics of agricultural operations on these islands, the capacities and nature of the soils, the experience of farmers, planters, graziers, and others on this group would prove useful and interesting topics to be brought before the meeting.

Your committee would also request that specimens of the various products of the islands, such as sugar, coffee, potatoes, indigo, arrow root, &c; be sent for exhibition at the meeting. Animals of superior breed, such as cattle, horses, sheep, poultry, &c., might be sent for exhibition, and a public sale might be made of any such that the owners might wish to dispose of. A building will be prepared for the reception of such specimens.

In conclusion your committee would again urge upon your attention the importance of the proposed association. A full attendance of all who are interested in the accomplishment of the objects of the convention is solicited; as the aid and countenance of all is needed to secure its success.

STEPHEN REYNOLDS,  
W. NEWCOMB,  
J. F. B. MARSHALL,  
R. W. WOOD,  
W. L. LEE.

## PROCEEDINGS

OF

## AGRICULTURAL CONVENTION.

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In pursuance of the call in the foregoing circular, a Convention assembled at Mauna Kilika, Honolulu, at 3 o'clock on the 12th of August, 1850.

Mr. Reynolds from the preliminary committee, called the meeting to order, and announced that the committee had in fulfillment of the duty assigned to it, prepared the draft of a Constitution of an Agricultural Association, which they were now ready to present to the Convention.

The Convention was organized by the choice of His Honor Judge Lee as Chairman, and Mr. Bond as Secretary.

Dr. Newcomb from the Committee, read a draft of a constitution of the Hawaiian Agricultural Association.

On motion of Mr. Castle it was voted that each article of this draft be read separately, with the view to elicit discussion upon its merits, preparatory to its reference to a special committee.

The first articles were accordingly read and discussed, after which, upon motion of Mr. Marshall, it was

Voted—That a committee of one from each of the islands represented in this convention, be appointed, to whom the draft should be referred, with directions to report such amendments as seem needful at the next business meeting of the convention.

Voted—That the committee be appointed by the chair. The Chair appointed,

Dr. Newcomb, Oahu,  
Mr. Gower, Maui,  
Mr. Rhodes, Kauai,  
Mr. Hussey, Molokai,  
Mr. Kenway, Hawaii.

Voted—That the Chairman of this Convention with Dr. Newcomb and Mr. Wyllie be appointed a committee to draft a code of bye-laws for the government of the association.

Mr. Reynolds of the preliminary committee gave notice that his Honor Judge Lee would, in compliance with the invitation of the committee, deliver an address upon the objects of the proposed association at 7½ o'clock P. M., at the Bethel Chapel.

The chairman announced that several gentlemen had prepared reports upon agricultural topics, which were held ready for presentation at such time as the convention should appoint for their hearing.

On motion of Dr. Wood it was voted that a committee of two from each island represented in the convention, be appointed by the chair, to draft resolutions expressive of the sense of the convention, and to report to an adjourned meeting.

The Chair appointed Dr. Wood, Mr. Marshall, Oahu; Mr. Johnson, Mr. Pease, Kauai; Mr. Torbert, Mr. Parsons, Maui; Mr. Kenway, Mr. Reynolds, Hawaii; Mr. Hussey, Molokai.

Adjourned to meet at the Bethel Chapel at 7½ o'clock, to listen to the address of Judge Lee, and to attend to such other business as time may permit.

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Adjourned meeting, 7 1-2 o'clock.

Judge Lee delivered an address upon the history and importance of agriculture.

Upon motion of Dr. Wood it was voted unanimously, That the thanks of the convention be presented to His Honor Judge Lee for his admirable address, and that he be requested to furnish a copy of it for publication.

Mr. Wyllie presented an interesting report upon the progress of agricultural science, with especial reference to the action of agricultural associations.

On motion of Mr. Armstrong, it was voted—that the thanks of the Convention be presented to Mr. Wyllie, for the report, and that he be requested to furnish a copy of the same for publication.

The Chairman gave notice that there would be an exhibition of choice stock on Tuesday at 2 P. M. at Mauna Kilika.

Adjourned to meet at Mauna Kilika, on Tuesday at 3 1-2 o'clock precisely.

#### SECOND DAY.

Tuesday, August, 13th, 1850.

At Two o'clock the Members of the Convention assembled at Mauna

Kilika to view specimens of stock, fruits, etc, presented for exhibition.

At Four o'clock the Meeting was called to order.

The minutes of the last meeting having been read, Dr. Newcomb, Chairman of the committee to whom was referred the draft of a Constitution, reported the same again, with amendments.

### CONSTITUTION.

ARTICLE 1. The name of this association shall be THE ROYAL HAWAIIAN AGRICULTURAL SOCIETY.

ARTICLE 2. His Majesty the King, by Royal permission, is hereby declared to be the Patron of the Society.

ARTICLE 3. The objects of this Society shall be to foster the interests of Agriculture in all its various branches, and the Mechanical Arts ; and to increase the amount of industrial productions in this group of islands.

ARTICLE 4. The officers of this Society shall be one President, six Vice Presidents, one Treasurer, one Corresponding Secretary, one Recording Secretary, an Executive Committee of five members, whose terms of service, for all these offices, shall be for one year, or until their successors are duly appointed.

ARTICLE 5. There shall be an Annual Meeting of the Society at Honolulu, or at such other place as the Society may designate, at which time, under the direction of the Executive Committee, an election for officers shall be held ; which election shall be by ballot, and the persons receiving the greatest number of votes for the respective offices, shall be duly elected.

ARTICLE 6. All the Official Members shall constitute a Board of Managers ; and a majority of those residing on the island of Oahu, shall constitute a quorum for the transaction of business.

ARTICLE 7. The Board of Managers shall have power to appoint agents, may purchase books, and subscribe for papers and periodicals ; may institute experiments to test supposed improvements in agriculture or manufactures ; may publish, or cause to be published, an agricultural journal ; may cause a geological and analytical survey of the islands ; may award premiums to meritorious producers, residents of the islands ; may introduce foreign machines, implements, plants, seeds, etc. ; shall provide for holding the Annual Meeting of the Society ; and shall fill all vacancies caused by death, resignation, or otherwise,

among the officers; but shall have no power to incur indebtedness beyond the amount of funds in the treasury.

ARTICLE 8. The duties of the several officers shall be more particularly defined in the Code of By-Laws.

ARTICLE 9. It shall be the duty of the retiring President to render a report of the proceedings of the Society for the current year, and deliver, or cause to be delivered, an address at the Annual Meeting of the Society.

ARTICLE 10. It shall be the duty of the Treasurer, at the close of the current year, to present a written report, giving in detail an account of receipts and disbursements.

ARTICLE 11. It shall be the duty of the Treasurer to disburse all monies of the Society upon the order of the Chairman of the Executive Committee.

ARTICLE 12. The ordinary members of this Society shall be those who pay annually into the treasury the sum of Five Dollars, for which a certificate of membership shall be given by the President upon the presentation to him of the Treasurer's receipt.

ARTICLE 13. The Life Members of this Society shall be those who pay into the treasury at any one time the sum of Fifty Dollars, for which a certificate shall be given, as provided in Article 12.

ARTICLE 14. Life Members shall have all the rights and privileges of ordinary members, and for ever after be exempt from the payment of annual dues.

ARTICLE 15. The Board of Managers shall have power to issue certificates of membership to persons residing in foreign countries; who shall be designated Corresponding Members of the Society.

ARTICLE 16. No alteration or amendment of this Constitution shall be made but at some Annual Meeting of the Society, and by a concurrence of two-thirds of the members present at such Meeting.

The draft having been considered, article by article, and having received sundry amendments, was accepted by unanimous vote.

The Secretary was directed to receive the names of all persons who wish to become members of the association for the coming year, or for life.

Thirty-eight Annual Members, and four Life Members were reported.

The Convention adjourned, *sine die*.

The First Meeting of the Royal Hawaiian Agricultural Society was organized by the choice of Hon. W. L. LEE, as Chairman, and EDWARD P. BOND as Secretary.

Voted—That the Meeting now proceed to ballot for President of the Society, it being understood that if any individual have a majority of all the ballots cast, he shall be declared duly elected, but that if no person have a majority of all the ballots cast, the vote shall be regarded as informal, and a second balloting be required. The ballots having been collected and counted, and Judge LEE having received a majority of all the ballots cast, was declared duly elected President of the Society, and assumed the Chair in that capacity, thanking the Society for the honor conferred upon him.

Voted—That the meeting now proceed to ballot for the other officers of the Society.

The following individuals were elected.

|                                 |   |                         |
|---------------------------------|---|-------------------------|
| B. PITMAN, Jun., Hawaii,        | } | <i>Vice Presidents.</i> |
| G. S. KENWAY, “                 |   |                         |
| L. G. DWIGHT, Molokai,          |   |                         |
| L. L. TORBERT, Maui,            |   |                         |
| STEPHEN REYNOLDS, Oahu,         |   |                         |
| GODFREY RHODES, Kauai,          |   |                         |
| S. N. CASTLE, <i>Treasurer.</i> |   |                         |

(R. C. WYLLIE, *Corresponding Secretary.*)

RICHARD H. BOWLIN, *Recording Secretary.*

|                    |   |                             |
|--------------------|---|-----------------------------|
| R. W. WOOD,        | } | <i>Executive Committee.</i> |
| J. B. F. MARSHALL, |   |                             |
| W. NEWCOMB,        |   |                             |
| E. O. HALL,        |   |                             |
| G. A. LATHROP,     |   |                             |

The Meeting adjourned to Wednesday at Ten, A. M.

EDWARD P. BOND, *Secretary.*

## THIRD DAY.

Adjourned meeting, Aug. 14, 10 A. M., President in the Chair.

The minutes of the last meeting having been read, Mr. Wyllie presented his thanks to the Society for the honor conferred in the appointment of Corresponding Secretary, but positively declined the appointment.

The Society proceeded to ballot for Corresponding Secretary.

The election resulted as follows :

Whole number of votes, 23.

E. O. Hall having more votes than any other member was declared duly elected. Mr. Hall declined the appointment.

Voted, that a committee of three be appointed by the Chair, to retire and report the name of a suitable candidate for the office of Corresponding Secretary. The Chair appointed A. W. Parsons, R. C. Wyllie and E. O. Hall.

During the absence of the committee, Mr. Marshall from the committee on resolutions, reported a series of resolutions for the discussion of the meeting, and a series of resolutions for the appointment by the Chair of committees of investigation for the ensuing year, also the draft of an address to the government upon the subject of agriculture.

## RESOLUTIONS.

Whereas, the Members of the Society believe Agriculture to be the great basis of Commerce, Manufactures and all other business, and the only sure foundation of Hawaiian prosperity, it is therefore,

1. Resolved, that this Society do respectfully and earnestly entreat the Government, and all classes of individuals to lend their exertions to its promotion.

2. Resolved, That we warmly approve of the action of the last Legislature in the passage of laws improving the landed tenures of the Kingdom, and abolishing the duties on garden seeds, plants, agricultural implements, sugar mills, coffee mills, and animals introduced for the improvement of our stock.

3. Resolved, That this Society respectfully recommend to the Legislature, the adoption of efficient measures for the improvement of the public roads, and the appointment of suitable Superintendents in every district, to carry out these measures.

4. Resolved, That this Society respectfully recommend the adoption of some means to facilitate inter-island navigation, by steam vessels, and also for the improvement of Harbors.

5. Resolved, That a petition be drawn up by this Society, asking the Legislature for an annual appropriation to be distributed in premiums, and otherwise used for the promotion of Agriculture.

6. Resolved, That this Society respectfully and earnestly recommend to the Legislature, to employ some competent person, with a sufficient salary, to make a Geological and Agricultural Survey of the Islands, and compile a written report of the same, together with a report on the Natural History of the Islands.

7. Resolved, That in the opinion of this Society, one of the greatest obstacles to the success of agriculturists is the want of labor ; and that it is the duty of this Society not only to devise means for securing more labor, but for economizing what we have.

8. Resolved, That in the opinion of this Society, the importation and adoption of improved agricultural implements, would be a great saving of labor, and at the same time increase the products and profits of the husbandman ; and that a Committee be appointed whose duty it shall be to take this matter into consideration and report at our next annual meeting.

9. Resolved, That this Society earnestly recommend to the Legislature the establishment of a Public Nursery, for Plants and Fruit Trees.

10. Resolved, That a Committee of ten be appointed by the President, whose duty it shall be to collect statistics relating to the export of domestic produce and to report at our next annual meeting. *Committee*, B. Pitman, *Chairman*, G. S. Kenway, Preston Cummings, L. L. Torbert, J. T. Gower, H. S. Swinton, C. R. Bishop, F. Wundenburg, George Gilmore.

Voted, That this Committee be instructed to send in their report to Stephen Reynolds, the Vice President for Oahu, in time to enable him to present the same at the next annual meeting.

11. Resolved, That a Committee of five be appointed by the Chair, to inquire into the necessity and importance of an increased attention to Horticulture and that they report at our next annual meeting. *Committee*, Henry M. Whitney, *Chairman*, Thomas Brown, E. H. Rogers, A. B. Bates, S. C. Damon.

12. Resolved, That a committee of five be appointed by the Chair, to collect statistical facts in relation to the culture of sugar cane and the manufacture of Sugar therefrom, to report at our next annual meeting. *Committee*, R. W. Wood, *Chairman*, G. A. Lathrop, J. F. B. Marshall, A. W. Parsons, L. L. Torbert.

13. Resolved, That a Committee of five be appointed by the Chair, to collect statistical facts in relation to the growth of Coffee, and to make such suggestions for its promotion and improvement as to them may seem proper, and to report at our next meeting. *Committee*, T. C. B. Rooke, *Chairman*, G. Rhodes, B. Pitman, Antonio Catiline, A. Archer.

14. Resolved, That a Committee of three be appointed by the Chair to devise means for procuring more labor, and also for economising what we have, to report at our next annual meeting. *Committee*, J. F. B. Marshall, *Chairman*, R. W. Wood, Stephen Reynolds.

15. Resolved, That a Committee of three be appointed by the Chair to procure, as far as possible, an analysis of our soils, with other geological knowledge interesting to agriculturists, to report at our next annual meeting. *Committee*, W. H. Pease, *Chairman*, W. Newcomb, T. C. B. Rooke.

16. Resolved, That a Committee of three be appointed by the Chair, to collect facts in regard to the history and habits of the cut-worm, and other destructive insects and vermin, to their ravages on our crops, and to the best means, if any are known of preventing their depredations, and to report at our next annual meeting. *Committee*, L. Andrews, *Chairman*, J. T. Gower, W. H. Pease.

17. Resolved, That a Committee of three be appointed by the Chair, to enquire into the condition of our roads, harbors, and inter-island navigation, to suggest improvements therefor, and to report to our next annual meeting. *Committee*, T. Metcalf, *Chairman*, G. M. Robertson, R. C. Wyllie.

18. Resolved, That a Committee of four be appointed to make enquiries in reference to implements and to devise means for procuring the same, to report at our next annual meeting. *Committee*, R. Armstrong, *Chairman*, C. W. Vincent, W. H. Rice, Robert C. Janion.

19. Resolved, That Committees be appointed by the Chair whose business it shall be to report at the next annual meeting, the progress of improvement in *Neat Stock, Horses, Sheep, Swine, and Poultry*, to-

gether with any information they may be able to obtain, interesting to the agricultural interest generally, relating to these subjects.

*Committee on Neat Cattle*, John Meek, *Chairman*, C. G. Hopkins, Henry Sea.

*Committee on Horses*, Thomas Cummings, *Chairman*, Samuel Thompson, John Meek.

*Committee on Sheep*, George S. Kenway, *Chairman*, Thomas Cummings, Thomas Brown.

*Committee on Swine*, Thomas Brown, *Chairman*, A. Paki, George Gilmore.

*Committee on Poultry*, E. H. Rogers, *Chairman*, Paul Manini, Thos. Brown.

20. Resolved, That the King and Privy Council be requested to carry into effect the Act of the last Legislature in regard to post offices and mail communication between the Islands by promulgation according to the provisions of that act.

21. Resolved that an auxiliary Committee of one from each Island be appointed to communicate statistics in regard to labor. *Committee*, B. Pitman, *Chairman*, L. L. Torbert, S. G. Dwight, G. Rhodes.

*Committee on Seasons*, J. S. Emerson, *Chairman*, J. S. Green, E. Bond, H. R. Hichcock, J. W. Smith.

*Committee on Fences*, Wm. Miller, Esq., *Chairman*, E. Johnson, R. G. Davis, H. A. Pierce.

*Committee on Trees and Grasses*, Mr. Duncan, *Chairman*, E. Bailey, W. H. Pease, H. M. Whitney, G. P. Judd.

22. Resolved, That a Committee of three be appointed to enquire respecting garden seeds and fruits, and to obtain varieties of the same, and to report at our next annual meeting. *Committee*, Rev. S. C. Damon, *Chairman*, A. Adams, Rev. D. Baldwin.

The committee upon nominations of Corresponding Secretary presented their report.

Voted, that we proceed to the election of Corresponding Secretary. The result was as follows : whole number of ballots, 25.

Edward P. Bond having a majority of all the votes cast was declared duly elected. The report of the committee on resolutions was accepted.

## EVENING SESSION, 14th.

The Society met pursuant to adjournment, the President in the Chair.

On motion of Mr. J. F. B. Marshall, the petition of the Committee to the Hawaiian Government was read.

*To the House of Nobles and Representatives of the Hawaiian Islands.*

The Petition of the undersigned members of the Royal Hawaiian Agricultural Society, respectfully represents :

That in their opinion Agriculture is the main reliance of the Kingdom ; that upon the products of the soil all classes must depend for subsistence and wealth ; that it is the great fountain of physical and moral health to every nation ; and that upon its encouragement and increase the fate of the People greatly depends :

That indolence is the besetting sin of the land ; that nothing can save the nation from destruction but increased labor in cultivating the soil : and that hence, it is of the first importance that no effort should be spared, of which the Legislature is capable, to stimulate industry and promote rural labors :

That the wasting state of the nation and the scarcity and high price of our Agricultural products, are such evils as to cause the profoundest sorrow and awaken the most earnest attention of our Legislators, who are the constituted guardians of the Public weal :

That they have viewed with the liveliest emotions of satisfaction and gratitude the recent acts of the Legislature, granting to the common People their lands in fee-simple,—throwing open the waste acres of the Kingdom to the industry, skill and capital of foreigners, and abolishing all duties on plants, garden seeds, agricultural implements and animals :

That they trust the good work so well begun will be prosecuted to a successful end, and the fostering aid of the Government be extended in every direction that gives the least promise of adding to the resources of the country, or restoring health to the nation :

That one of the means of awakening industry and improvement in cultivating the soil, which has been practiced with success in other countries, has been the bestowment of pecuniary rewards and honorary distinctions ; and that believing the same means would be blessed with the like result in this country,

We would respectfully recommend to the Legislature the appropria-

tion of a permanent fund, which shall yield at least an annual interest of one thousand dollars, to be distributed in premiums, or otherwise, as may best promote the interest of husbandry, and to be regulated and restricted in such a manner as to your Honorable Body may seem just and proper.

On motion of J. T. Gower the petition was adopted.

On motion of Mr. Hall a Committee of one was appointed to present the petition to the Legislature.

The Chair appointed Mr. Armstrong, said Committee.

Essays were read by the following gentlemen : Stephen Reynolds, H. M. Whitney, Rev. E. Johnson, W. H. Pease.

Also letters from Thos. Miller, of Hilo, and Rev. T. E. Tayler of Lahaina.

On motion of Mr. Bond, a vote of thanks was returned to those gentlemen who prepared and read Essays to the Society, and copies requested for the archives of this Society.

Messrs. Parsons and Torbert presented verbal statements of the extent of agricultural productions of the Island of Maui.

On motion of Mr. Bond—voted, that the thanks of the society be presented to Messrs. Parsons and Torbert, for their interesting reports, and that they be requested to reduce the same to writing, that they may be deposited with the permanent documents of the Society.

Adjourned to Thursday at 9½ A. M.

#### FOURTH DAY.

Adjourned meeting, August 15—10 A. M.

The Recording Secretary being absent, the minutes of the last meeting were read by the Corresponding Secretary.

The Chairman announced that Gen. Wm. Miller had requested that his name might be recorded as a Life Member of the Society.

On motion of Mr. Hall—Voted, that Gen. Miller be added to the Committee on Fences, and that he be requested to act as Chairman of that Committee.

On motion of Mr. Armstrong—Voted, that the natives throughout the Islands, be invited to co-operate with this Society in carrying out its designs, and that a committee of one from each of the large Islands, be appointed to propose to them the formation of Societies auxiliary to this, and to aid them in their formation, and that all Missionaries

throughout the Islands be requested to aid the committee in the formation of these auxilliary societies.

On motion of Mr. Marshall—Voted, that the chairman of the same Committee be instructed to issue a circular to the native population inviting them to unite with this society, or to co-operate with it through auxilliary associations.

The Chair appointed Messrs. R. Armstrong, J. S. Green, Titus Coan, H. R. Hitchcock, G. B. Rowell.

On motion of Mr. Armstrong—Voted, that a Committee of five be appointed by the Chair, to report at the next annual meeting upon the subject of Trees and Grasses. The Chair appointed Messrs. Duncan, Bailey, Pease, Whitney, and Judd.

On motion of Mr. Parsons—Voted, that a Committee of three be appointed by the Chair to report at the next annual meeting upon the subject of food for laborers. The Chair appointed Messrs. A. W. Parsons, R. W. Wood, and J. S. Emerson.

The President read a letter from Robert C. Janion, Esq., requesting that his name might be recorded as a Life Member of the Society.

On motion of Mr. Castle, it was Voted, that Mr. Janion be added to the Committee on Agricultural Implements.

The President read a communication from Mr. G. M. Robertson on the culture of the Grape and of Tobacco.

On motion of Mr. Castle—Voted, that the thanks of the Society be presented to Mr. Robertson for his communication, and that a copy be requested to be placed with the permanent documents of the Society.

Dr. Wood read a communication upon the history of the culture of the sugar cane.

On motion of Mr. Castle, it was voted that the thanks of this Society be presented to Dr. Wood for his communication, and that a copy be requested to be placed among the permanent documents of the Society.

Individuals recommended as corresponding members.

By Judge Lee—Dr. Johnson, of Tahiti, Hon. Daniel Lee, of Geo. United States.

By Rev. S. C. Damon—Wm. Hooper, Esq., San Francisco.

By R. H. Bowlin—Hon. T. Ewbank, Commissioner of Patents, Washington, U. S.

On motion, it was—Voted, that the transactions of this Society be published annually in periodical form, and that Rev. Sam'l C.

Damon, E. Bond, Corresponding Secretary, and R. H. Bowlin, Recording Secretary, be appointed a committee to carry into effect the foregoing resolution this year.

The Society then took up the subject of importing foreign labor which elicited a spirited discussion, in which Messrs. Lee, Gower, Castle, Hall, Parsons and others participated.

Adjourned to 3 P. M.

EVENING SESSION—August 15, 3 P. M.

The minutes of the last meeting were read and approved.

The subject of importing foreign labor was again taken up and a long and interesting discussion ensued, during which many practical hints were thrown out. The subject was finally laid over.

On motion—Resolved, the thanks of this Society be tendered the Government for the use of the building in which it met.

On motion of Mr. Hall—Resolved, that Messrs. Armstrong and Clark be requested to publish the proceedings of this Society in the native language.

On motion of Mr. Castle—Resolved, that the Editors of the *Polyesian*, *Times*, *Elele* and *Friend* be requested to publish the proceedings of this Society in their respective papers.

On motion of Mr. Hall—Resolved, that the Vice Presidents on their respective Islands be requested to use their best exertions to secure members to the Society.

Resolved—That when we do adjourn, we adjourn to meet again on the 2nd Monday in August, 1851.

On motion—Resolved, that the thanks of the Society be presented to the following individuals, for the exhibition of specimens of stock, vegetables, fruit, &c.

John Meek, Samuel Thompson, H. A. Pierce & Co., A. Paki, Paul Manini, James F. B. Marshall, Mrs. Ladd, Alexander Adams, John C. Jones, R. W. Wood, J. T. Gower, L. L. Torbert, H. M. Whitney

On motion, adjourned.

## ADDRESS.

*Delivered by WM. L. LEE, Esq.*

This is no common gathering. In a small Island of the Pacific, which thirty years ago was buried in the darkness of heathenism and scarcely known to the most civilized portions of the earth, in a country whose uplands were then slumbering in the almost unbroken rest of ages, and whose lowlands knew little culture but that of the kalo patch, there has this day assembled the planter who counts his hundreds of acres of sugar cane and coffee trees—the farmer raising cargoes of vegetables for California,—and the herdsman who gathers in his folds a thousand cattle. Indeed this is no every day assemblage. Who in the days of the distinguished discoverer of these islands,—of the great and good Vancouver, or in the still later times of the arrival of the American Missionaries on these then savage shores, would have dared to predict that in the year of our Lord one thousand eight hundred and fifty, there would gather in these ends of the earth, from Europe and from Asia—from North and South America—from Old England and from New England, such a body as we now see ! Who at that time would have staked his reputation on such a prophesy ? Verily, my friends, I hail this assemblage with joy ! I hail it, if it prove successful in the objects for which we have come together, as the dawn of a new era in the history of the Sandwich Islands. I hail it as an advancing step towards the thorough civilization of the Hawaiian race and the security of its national prosperity and independence. An advancing step, I say ; for great as is the contrast presented to us between the present and thirty years ago, in the view we have just taken, I venture to predict that those who shall fill our places thirty years hence, will see a far greater one between that time and the year 1850. They will see our vallies blooming with coffee and fruit trees—our barren hill-sides waving with luxuriant cane fields—our worthless plains irrigated and fruitful, and the grass huts now scattered over our land replaced by comfortable farm houses. This is the day of small things in the agriculture of the Hawaiian Islands, but by no means is it a day to be despised. Let us improve it by doing a work not to be forgotten when

we are gone. By forming an institution to be perpetuated by its blessings, and for which the generations to come will remember us with gratitude.

\* I propose to spend the time allotted me on this occasion in a few remarks on the necessity for and the objects of the Society proposed ; and then pass to the consideration of the dignity and importance of agriculture, and the necessity for its encouragement as a source of national prosperity and independence.

The necessity for the formation of an Agricultural Association in these Islands is too obvious to need more than a word. The cultivators of the soil, scattered as they are from Kau to Waioli, points, which, owing to the slow and uncertain movements of our inter-island navigation, are more distant from each other than England and the United States, with little or no opportunity of communicating with each other, live bound to their fields, in ignorance of their co-workers on other islands—in ignorance of each others advantages and disadvantages, improvements or wants, and with many of their best sympathies dwarfed and dormant. This is clearly wrong, and there exists an imperative necessity for reform. The agricultural interests of this group stand pre-eminent in importance, and its Representatives should at least meet once a year to aid in their promotion. To prosper, the farmers of this Kingdom need what they have never had, namely, an organization. One which shall bring them acquainted with each other's improvements, and means of procuring, securing and economising labor. One which shall give them a community of feeling—a singleness of purpose, and concert of action. One which shall serve as a head—a *well regulated* head, by which their operations may be guided, and through which they may speak as with the voice of one man. To supply these wants, is one of the great objects of the proposed association. It has other objects not less important, among which, are the promotion of friendly and social intercourse,—the mutual bestowment of assistance and the interchange of kind offices,—the awakening of a spirit of industry and frugality ; and the diffusion of light and knowledge throughout the Islands in relation to every branch of agriculture. Nor is this the end of benefits expected to flow from this association. It is intended by the judicious distribution of premiums, to arouse the people to a laudable ambition in the growth of finer and larger crops, the introduction of new seeds, plants, and better agricultural implements, the importation of new breeds of cattle and the improvements of those

we have, and the discovery of some means for the effectual destruction of the various insects and vermin which at certain seasons of the year sweep over portions of the group like the locusts of Egypt, destroying every green thing.

Having briefly stated the necessity for, and some of the principal objects of, the proposed society, I shall now proceed to address you upon *the dignity and importance of agriculture, and the necessity for its encouragement as a means of national prosperity and independence.*

Of all the occupations of man, agriculture stands first in importance and second to none in dignity. I would not follow the error, so common with public speakers, of attaching undue importance to the subject under consideration, but I do feel, that in the assertion I have just made, I am upheld by the universal voice of history, of the ablest writers on political economy, and the observation of every day life. Agriculture is the original source of all wealth and prosperity. It supplies our food and raiment. It gives us life, health and strength. Its productions furnish the materials for the labors of the manufacturer, and in turn freight the bark of commerce. In a word, it is the basis of all other arts—the great substratum upon which rests every other interest, individual and national. It is the most ancient and most sacred of all employments. We read in the Holy Scriptures, “And the Lord God planted a garden eastward in Eden: and there he put the man whom he had formed.” “And the Lord God took the man, and put him into the garden of Eden, *to dress it and to keep it.* After the fall of Adam, we read, “The Lord God sent him forth from the garden of Eden, *to till the ground from whence he was taken.*” It is clear then, from the highest of all authority, the Bible itself, that the great Creator made man a farmer; and that all other avocations are secondary in rank to that of agriculture. Being the first labor commanded of Heaven it is the most dignified, honorable and important. Its seniority and divine origin entitle it not only to our reverence and respect, but to our highest consideration among the arts, of which it is the common parent.

From the day of Adam to the present time the culture of the soil has held its high position in every civilized country. Among the Israelites it stood first in rank, with the Persians it was rewarded with royal favor, and among the Chinese, the most populous, one of the most ancient, and in many respects the most civilized of the nations of the

globe, it has ever commanded alike the adoration of the "Sole Guardian of the Earth," and his four hundred millions of subjects. The annual ceremonial by which the emperor of China manifests his respect for agriculture, is probably familiar to you all. Surrounded by his principal officers, he prostrates himself upon the earth, and invokes the blessing of the God of Heaven upon the labors of himself and of his people. As the high priest of the Empire, he then sacrifices a bullock, and while the altar is still smoking, he lays aside his imperial robes, puts his hands to the plough, and opens several furrows over the whole field. After the Mandarins have followed his example, presents are distributed to the peasantry, and the festivities close, to be again renewed when the Emperor comes to sow the seed. A noble tribute this to one of the noblest pursuits of man! In no country, perhaps, is agriculture so honored, dignified and nurtured as in China. Certainly in no other is its astonishing power as a sustainer of human life and the support of a nation so strikingly illustrated. Its crowded population, which has little or no other source of subsistence, has pushed it to the highest state of perfection, and necessity, ever fertile in invention, has furnished it with means of inducing and perpetuating the fertility of the earth, which to the most enlightened agriculturists of the present day is a matter of astonishment. Not a rood of ground, that can be made to produce the most unimportant crop is suffered to run to waste. The steepest hill-sides and most precipitous mountains are cut into terraces and cultivated to their very tops. The rivers that flow along their bases are taken from their beds—carried to commanding heights, and made to trickle down their barren sides to beautify, enrich, and bless the earth. There alone in all the globe the soil is never let to rest. From age to age not an acre of its five millions of square miles is permitted to lie idle, and the same land which for thousands of years has been yielding from two to three crops annually, is by a judicious system of manuring made to retain its pristine vigor.

The revenue of China, which is estimated at upwards of \$150,000,000, consists chiefly in productions of the soil; and well may Agriculture be honored, in a land where she takes up its dusty atoms, transmutes them into her powerful alembic, and pours them into its treasury, a stream of molten gold.

In Egypt, once the very centre of civilization, and even in its ruins the land of wonder to the philosopher and endless research to the

scholar, agriculture was an object of especial devotion. In such estimation was it held by the Egyptians that they ascribed its invention to the Gods,—deified the Nile as the fertilizer of their soil ; and worshipped the ox for his services in the field. Though Egypt has ever been for the most part an arid waste covered with burning sands, yet the overflowings of the Nile, united with the industry of her inhabitants, earned for her the reputation of being the granary of the world. Even in her present desolation, her Copts and Arabs supply their Turkish masters with grain.

In Greece, agriculture was never cherished to the same extent that it was among the other great nations of ancient times. This was partly owing to the sterility of her soil, and in part, no doubt, to her prosecuting the labors of the husbandman by means of slaves. Still it was honored by the poetic genius of Hesiod, and by the writings and lectures of Xenophen.

Rome venerated the plow, and her noblest sons followed in its furrows. Her pride, her strength, her wealth and chief glory lay in her agriculture ; and from the time of Numa, when to neglect the cultivation of a farm was an offense punishable by the chastisement of the censor, to the decline of the Empire, her senators and magistrates, her most distinguished statesmen and generals, were often found tilling the soil with their own hands. Farmers filled the ranks of her invincible legions, and to this fact it is probably owing, that wherever Rome carried conquest, instead of burning and devastating the vanquished countries, she caused them to smile with the peaceful fruits of the husbandman. The Roman Eagle was almost the sure omen of victory, but upon his wings was borne the promise of human advancement and prosperity. Good roads were made ; property protected ; the products of the soil increased ; towns and cities built ; and the conquered provinces were made to teem with a beauty and luxuriance scarcely second to that of Italy herself. Even at the present day there is no country that exhibits such a diversity of culture as Italy, and none, except it be China or Flanders, that exceeds it in fertility. Weak, distracted and despised as Italy now is, she preserves in the character of her agriculture, a faint ray of the glory of that splendid empire of which she was once the centre.

In Carthage, the illustrious rival of Rome, the cultivation of the soil was one of the chief subjects of attention. Agriculture was the pri-

capital source of her revenues ; and her great generals thought it not beneath their dignity to make themselves master of all its rules, both by study and by practice. Such was the esteem in which agriculture was held by the ancients. For nearly four thousand years it was the fountain of life and power to the most renowned and civilized nations of olden times.

Through the dark ages agriculture languished. The labors of the husbandman were swept away with the torrent of blood and carnage that followed in the train of the Goth and Vandal, and died amid the desolation of provinces, the groans of slaughtered millions, and the shock of falling empires. There was no incentive for the farmer to sow and plant, for he felt no certainty that the harvest would not be gathered by some new invader. With the revival of letters and the bursting forth of that pure flame of civil and religious liberty which shone with such glory in the Reformation, Agriculture, in common with the other arts, awakened from her long slumber, and again took up her march of joy and gladness to the depressed and starving nations. From this time, the art of improving the soil advanced slowly but surely, yet it can hardly be said to have regained the height it occupied in the days of the Romans until the middle of the eighteenth century.

At the present day it has attained to a high degree of improvement, and is constantly growing in dignity and importance. The numerous societies which have been formed for its promotion in Europe and America have given it an impulse which seems to promise a progress and development in the science hardly conceivable. In Germany, France, and other parts of Continental Europe, schools have been established for its promotion, and it is receiving the attention of chemists and other men of science ; but in no country has it reached that distinction which it possesses in England. British Agriculture, is undoubtedly more scientific and instructive, than any other in the world. It is the great interest of that Kingdom, and one which is watched over with a vigilance that never sleeps. So great is it, that until very recently it has been able to shut the door against the admission of foreign bread stuffs, and by means of its corn laws to create a complete monopoly of British grains, even at the expense of dear bread to the great body of the people. The agricultural interests of Great Britain are in the hands of her nobility, the principal landed proprietors of the Kingdom, and the eminence which it has attained, is owing in no small degree to their exertions in the formation of Boards and Societies for

its advancement. Perhaps no part of the United Kingdom has felt the influence of these societies to a greater degree, and exhibited so rapid an improvement in agriculture during the last half century as Scotland. Naturally one of the most sterile and inhospitable of countries in soil and climate, it has become, under the hands of her industrious and educated farmers, one of the most fertile and generous. The change which has been wrought in the face of that country within the last fifty years, is said to be almost miraculous. Whole districts, once more desolate than the mountains of Hawaii, have been made to blossom as the rose. The change in England, according to Macaulay, is hardly less wonderful. Great Britain is estimated to produce annually between 350 and 400 millions of bushels of grain, and her agriculture is not only of vital interest to the twenty-seven millions of inhabitants, whom it feeds, but a matter of no small moment to the whole civilized world. Daniel Webster, that distinguished American statesman and farmer, remarked more than ten years ago, that, "should there be a frost in England fifteen days later than usual,—should there be an unreasonable drought or ten cold or wet days, instead of ten warm or dry ones, when the harvest should be reaped,—every exchange in Europe and America felt the consequence of it." The truth of that remark has been fearfully demonstrated by the potato rot of Ireland. The decay of a single vegetable has been the starvation of thousands, and has agitated to its remotest extremities the commerce and business of the four quarters of the globe. A short crop in England produces almost as great a sensation in the United States as in England itself; for the vacuum produced, must be supplied mainly by the surplus products of America. It is well known that within the last few years, owing to the failure of crops in Great Britain, the United States has transported an immense amount of agricultural produce to her shores, feeding the starving with her bounty, and realizing enormous profits from her sales.

In the United States the agricultural interest has always been in the ascendency; and her farm houses have ever been the nurseries of her best and most distinguished citizens, from the days of the immortal farmer of Mount Vernon, down to those of the honored husbandmen of Marshfield and of Ashland—of Lindenwald and of North Bend. Five sixths of her entire population are said to be engaged in the labors of the field, and the products of her soil for the last year have been esti-

mated at upwards of 1000 millions of dollars. It is true that agriculture has not attained to that perfection in the United States which it has reached in England, but this is owing not to any want of effort for its promotion, but rather, if I may so speak, to the want of *necessity*. In the United States every man may become the proprietor of a large estate, which he need only half till to be independent of want. In England it is far different. There no soil must lie idle or be partially tilled ; for upon his little field depends not only the farmer's subsistence, but his ability to meet his rent. American agriculture has the sweep of almost endless territory, and knows no limits but the demand for its products. The farmer of America may almost say—

“No pent up Utica contracts our powers,  
For the whole boundless Continent is ours.”

The importance of agriculture and the necessity for its encouragement as a means of national prosperity must be obvious to all. The culture of the soil lies at the bottom of all culture, mental, moral and physical. In every country has it been coeval and inseparably connected with civilization. The dawn of one is the birth of the other. Check one and the other languishes ; divide them, and both die. It is an axiom of history too plain to admit the question, that until the savage abandons his roaming, hunting, and fishing, and laying aside his vagrant habits, confines himself to some fixed abode and improves the soil, he can never become a civilized being. Like every other wild animal, before man can be tamed, or civilized, if you please, you must confine him to some local habitation and gather around him the attachments of place and home. I repeat what I have already said, that it is agriculture that civilizes a nation—it is agriculture that feeds a nation—it is agriculture that clothes a nation, and it cannot be denied, that that which civilizes, feeds, and clothes us, must be regarded as the chief pillar in the temple of national prosperity.

England, great as she is in her manufactures, and justly proud as she is of that commerce whose giant arms bind the globe in her embrace, would be weak indeed, if deprived of the productive power of her soil. Agriculture is the *body* of which manufactures and commerce are but the *members*. Both the latter may be lopped off without destruction to the former ; but touch the heart of agriculture and it is death to all. As in England, so is it in the United States. She looks

to the surplus products of her soil to furnish materials for her Lowells and her Manchesters, and commodities to freight her ships for trade with foreign countries. So is it in every great country ; and so, if we would prosper, must it be here. Until we produce more than we consume,—until our surplus produce afford an export exceeding what we import, we can make no advance in wealth or prosperity. In all countries the products of the earth, and the animals it sustains form the main reliance of the state. Mines of gold and silver richer than those of California may fail, or the poor digger starve while groaning under the weight of his hard earned treasure, but the well cultivated field and abundant harvest are an exhaustless mine, and are sure to close the door against want, and fill the land with comfort and plenty.

Again, agriculture is the source of physical and moral health. It is the salt of the earth that gives a nation vigor and strength and preserves its moral from taint and corruption. It is true beyond dispute, that the culture of the soil is the most natural and healthy of all labors. It is to the farm we must look for vigorous bodies and stalwart arms ; and in every country which has an agricultural class, that class forms the bone and muscle of the nation, on which she relies as the great bulwark of her strength. That those who are steadily engaged in the labors of the field have sounder bodies and firmer health—that they are less liable to sickness, and less apt to die when sick, than others, is a truth which has been fully demonstrated in these Islands during the last two years. While the measles and whooping cough were ravaging whole districts and carrying death to nearly every dwelling, the laborers on plantations passed almost unscathed. On the plantation of Mr. Torbert, which employs upwards of forty hands, there was not a single death, and on that of Mr. Rhodes, which employs an equal number, there was but one. To what is this marked difference owing ? Undoubtedly much is due to the superior care received by the sick on plantations ; but is it not mainly owing to the superior health induced by steady labor in tilling the soil ?

I have said it is not only the source of physical but of moral health to a nation. So it is. In every country where man is not reduced to a slave, those engaged in rural labors are the most moral and religious. It is natural it should be so. The husbandman, removed from the giddy pleasures and vices of the town, sows and plants, and looks up to God to bless the labor of his hands. “For all his peculiar blessings

he is invited to look immediately to the bounty of Heaven. No secondary cause stands between him and his Maker. To him are essential the regular successions of the season, the timely fall of the rain, the genial warmth of the sun, the sure productiveness of the soil, and the certain operations of those laws of nature which must appear to him nothing less than the varied exertions of omnipresent energy. In the country we seem to stand in the midst of the great theater of God's power, and we feel an unusual proximity to our Creator."

Farmers, and by this term I do not mean the serfs of Russia—the vassals of an absent lord, or the hired laborers of a great planter, but those who own a portion of the soil and till it, are of all classes the most moral, contented and independent. They love order and peace, and are not willing to jeopardize all the comforts and enjoyments that cluster around their rural homes, by promoting popular tumult.

In my opinion agriculture is a matter which has been too much overlooked in the Sandwich Islands. That so little has been done towards its promotion, is, at the first glance, a matter of astonishment to all. But when we strike beneath the surface of things, and examine the tenure by which the people have held their lands, and the little protection they have had for the products of those lands, our wonder vanishes. Until within the last year the Hawaiian held his land as a mere tenant at sufferance, subject to be dispossessed at any time it might suit the will or caprice of his chief or that of his oppressive *luna*. Of what avail was it to the common people to raise more than enough to supply the immediate wants of their subsistence? Would the surplus belong to them, or afford the means of future independence? Far from it. It would go to add to the stores of their despotic lords who claimed an absolute right in all their property, and who periodically sent forth their hordes of *lunas* to scour the country and plunder the people without the shadow of right or mercy. Often did these ravagers—these *Land Pirates*, leave the poor *makaaina* with little else than his maro, his digger and his calabash! With such a tenure to their lands, and with such protection, or rather want of protection for their products, what could be expected of agriculture or the people? I thank God that these things are at an end, and that the poor *kanaka* may now stand on the border of his little *kalo* patch, and holding his fee simple patent in his hand, bid defiance to the world! Yes, I thank God that he has moved the hearts of the King and Chiefs of

these islands to let the oppressed to free ! The granting of Royal Patents in fee simple to the common people for their lands is the brightest jewel that adorns the crown of Kamehameha III., and will shine with increasing lustre long after his body shall have mouldered to its mother earth !

The agricultural prosperity of a country is greatly dependent upon its landed tenures ; and it has been justly remarked, that "give a man a barren rock in fee simple, and he will soon make it a garden ; give him a garden with an insecure title and he will soon convert it into a desert." The social and political condition of a country also depends in no small measure upon its landed tenures. So true is this, that when we seek to know the state of a nation, one of the most important questions to be asked is, *by what title do the people hold their lands ?* Let the peasant hold his land at the will of another, and he is a serf ; give it to him in fee simple, and he is a *man* !—an independent, a better, a more useful man.

Perhaps there is no country in the world that offers greater promise to the husbandman and grazier, at the present time, than the Sandwich Islands. The lands are now thrown open to all classes, the native and foreigner, the subject and alien. We have a climate unparalleled in its salubrity, and affording every variety from the perpetual snows of Mauna Kea to the burning plains of Waikiki. Our soil though not deep, is warm, quick and fertile. We have no great extent of arable land, but I suppose out of the four millions of acres, at which the area of the islands has been computed, in round numbers, it would be a fair estimate to say that one eighth, or 500,000 acres, are fit for the plow, and 2,000,000 of acres will afford good pasturage. What a fund of wealth lies hid in the slumbering energies of those 2,500,000 acres ! Enough to feed five millions of inhabitants, and load a hundred first class ships annually with our surplus produce. Besides a fine climate and good soil, we are free from taxation on our land, and in California and Oregon we have an unlimited market. A market too, which, owing to our proximity to those countries, will enable us to take advantage of every favorable turn it presents, and obtain larger prices for our great staples of sugar and coffee than traders from any part of the world. Let us be awake to these advantages.

There is one agent, however, that we require, who holds the key to success,—the great brawny-armed, huge-fisted giant called LABOR. We must not only secure him, but direct, aid, and economise his ef-

forts ; for though with his strong arm and heavy hand he is mighty to accomplish, yet unguided by the art of man he strikes like the blinded Cyclops of old, destroying with one blow what he effects with another.

We may not have sufficient labor, we have not, but do we improve what we have ? Do we economise it as we ought, by studying the nature of our soil and plants, and the amount of labor necessary for them ? Are we making such improvements as we ought in our modes and implements of culture ? Let us look back upon the history of our agriculture and see what advance we have made. What more do we know of sugar cane and coffee, their growth and manufacture, than we knew at the opening of the first sugar plantation at Koloa, or the first coffee plantation in Manoa ? Doubtless we have made some advance, but far less than we ought. Depend upon it, until we bestow more study upon our soil, plants, and modes of culture, and seek to economise labor more than we do, we shall never meet with success.

It is an old adage that, "the man who causes two ears of corn or two blades of grass to grow, where only one grew before, is a public benefactor ;" and if ever a field was open for acquiring such a reputation, it is here in the Sandwich Islands. If what I have said be true,—if agriculture *does* lie at the bottom of all other interests of this kingdom,—if it is the source of life and wealth to a nation, and the only sure foundation of its prosperity, then it is our duty to spare no effort for its promotion. And not only is this great duty incumbent on us as individuals, but upon the government, as the chief guardian of the nation's welfare. I know much has been done by the last Legislature towards encouraging agriculture, by granting the natives their lands in fee simple,—by throwing open our waste acres to the skill, industry, and capital of foreigners, and by the abolition of all duties on agricultural implements, garden seeds, and cattle introduced to improve our stock ; but much yet remains undone. Government could, and I believe will, afford an important aid :

First—By making good public roads and bridges, both of which are so essential to the agricultural prosperity of a country. By a judicious system of internal improvement, cultivation would be extended to thousands of acres now waste, and the productive territory of the kingdom be constantly increased.

Secondly—By improving our harbors, and facilitating communication between the islands by the introduction of small steamers.

Thirdly—By the importation of new seeds and plants adapted to the climate of these islands, and improved agricultural implements.

Fourthly—By the annual appropriation of a small sum to be distributed in premiums for the improvement of our cattle and crops; and also for the discovery of some means for destroying the cut worm and other insects so fatal to many of our best plants.

Fifthly—By collecting and diffusing practical knowledge adapted to the agriculture of these islands.

It is contended by some that the best way of encouraging agriculture is to *let it alone*. But this *let alone* system I fear, has been practiced in these islands too long. We have seen its evil effects, and the general condemnation it receives calls for a speedy change. I am fully convinced, that the encouragement of agriculture is the last ray of hope left for the Hawaiian nation. Agriculture has been *let alone*, and the people's rights so long withheld, that now when the dark cloud which has lowered upon them for ages is lifting, there is hardly a nation to save. Alas, and must this people possessed of so many kind and generous traits perish from the face of the earth! Perish too, not by famine, nor pestilence, nor the sword, but by the rust of indolence—the canker of sloth. Must they die! Will we let them die, without making one struggle to save them from the grave to which they are hastening! No, my friends, justice and humanity forbid! Let us not forget that the soil whose treasures we would unlock, was once the undisputed heritage of the poor Hawaiian, and let us remember too, that though the white man bore the glad tidings of salvation to his wondering ear, he planted in his veins the seeds of disease from which the great reaper Death has gathered full many a harvest. Though but a lone remnant remains, let us strive to gird it with strength to wrestle with its approaching destiny—to arm it with the healthy body and vigorous frame, the only weapons that can stay the hand of the Destroyer. Then, if our efforts to send a quickening life pulse through the heart of the wasting nation avail not, we can but commend it to Him in whose hand are the issues of life and death,—to Him who “counteth the nations as the small dust of the balance, and who taketh up the Isles as a very little thing.”

## MR. WYLLIE'S ADDRESS.

*Read before the Royal Hawaiian Agricultural Society, on the 12th  
of August, 1850.*

GENTLEMEN :—I hail the commencement of your labors as a Society for the promotion of Hawaiian Agriculture, as the beginning of a new and better Era, on these islands. Although, from education and habits, ill prepared to be a useful member of your Society, yet I promise you to be a zealous one.

You have very appropriately, chosen the *King* to be the *Patron* of this Society. And I say, respectfully, it well becomes His Majesty, who has had the liberality and political sagacity to break through all the ancient usages, prejudices, and laws, that bore upon the possession, cultivation, and transfer of land, and to establish laws opening the soil to the tenure of all, and for the benefit of all, to be the Patron of such a Society. In doing so, His Majesty has become the Benefactor of all, and naturally becomes the leader of all those who are disposed to participate in the benefits of the policy that He has had the wisdom to adopt. In carrying it into effect, He has been beset with difficulties which can hardly be appreciated. His native subjects are not yet sufficiently enlightened to perceive, in His Majesty's late measures, anything but an abandonment of native rights, and a disposition to confer wealth and power on Foreigners. To you it will belong to undeceive them, by practical lessons of useful industry, increasing the King's revenue, enriching the Chiefs and native Landlords, and affording profitable employment to all the King's subjects who wish to work. The King expects this of you, and that your willing subjection to His jurisdiction, in the enjoyment of the rights which He has conferred upon you, will be His Majesty's best justification for lending a deaf ear to all evil forebodings of a loss to His Sovereignty, by your admission to a right in the soil. I am quite sure that you will not fail, in this point, of grateful duty ; and I am no less certain that the history of coming ages will record the King's enlightened policy in regard to land, as the pride and glory of His Majesty's reign.

Agriculture as an art, commenced with the existence of Man upon the Earth. Adam was placed in the Garden of Eden, to cultivate and take care of it, as the employment most congenial to the state of perfection in which he was created. The first lessons of the art, were thus given by God himself. And when Man fell from that state of perfection, in which he was created, it was his doom, by the toils of agriculture, during his probationary state, to prepare himself for the recovery, in another and better world, of that perfection which he had lost.

A land flowing with milk and honey and abounding in the precious fruits of the Earth, typified with the Hebrews, the fulfilment of God's promises to Abraham, Isaac and Jacob, in the Redemption of the world.

Agriculture, and the pasturage of cattle, thus became, and continued to be, the chief occupation of God's chosen people, till by their hard heartedness, disobedience and unbelief they were cast off, and scattered among Gentile Nations.

Agriculture was held in high estimation by the ancient Egyptians, and by the chief nations of Antiquity. It is the process by which nature yields her products for the support of man and animals, for useful arts and manufactures, and for that commerce which unites the different nations of the earth, as members of the same family, and conveys to all, the knowledge of the one only true God, to whom belong the earth and the fulness thereof.

Nor was agriculture unknown to the ancient Hawaiians. The early Navigators, Cook, Vancouver, and others, have recorded their skill, and industry, in that important art, and their admiration of the ingenuity of the Hawaiians in conducting water by *conduits* to fertilize their fields, in constructing paths to divide them, and fences to enclose them. That those early accounts were not exaggerated is proved by the vestiges of ancient cultivation that may be traced in every valley, and on the slopes of every hill, where the soil was good, throughout the Islands.

Even in the oldest times of which we have records, the Hawaiians raised enough for themselves, and to spare for others. But they were not, then, accustomed to the conveniences and luxuries of civilized life. These conveniences and luxuries have now become *necessities*, increasing from year to year. They cannot be supplied without the

aid of foreign merchants ; and foreign merchants will not supply them, unless they get something in exchange, of sufficient value to replace the money which they paid for such necessities, and luxuries, and to leave them some compensation for their trouble, in buying them, in bringing them to your shores, and in selling them to you. But they are quite willing for their woollens, their linens, their silks, their cottons, their hardware, their furniture, &c. &c., to take your sugar, your coffee, your cotton, your arrow root, your tobacco, your indigo, your potatoes, your hides, your tallow, and many other articles for which the soil of the Islands is well adapted, and which you can easily produce, to the extent of your labor, provided you offer it to them of as good quality, and as cheap as they can obtain it elsewhere.

No intelligent Hawaiian, then, can fail to perceive, that it is the interest of his countrymen to obtain as many of the good things of other nations as they can ; and it must be equally clear to him, that in order to get them, it is his interest to be able to offer, in exchange, as many of the good things of his own Islands, as possible. Now the very end and object of this Agricultural Society is to place him in this advantageous position. Its establishment, therefore, is a national advantage, worthy of the Patronage of the King, and of the hearty co-operation of all the Chiefs, Landlords, Tenants and Laborers throughout the Islands.

Even under the most enlightened Governments of modern days, such societies have received public encouragement. In England, in 1793, a *Board of Agriculture* was created, chiefly through the exertions of Sir John Sinclair. At first it was a mere private association for the promotion of agricultural improvements, but being assisted annually by a Parliamentary grant, it became a semi-official Institution. One of its first proceedings, was to commence a survey of all the English Counties on a uniform plan, which brought out for the information of the class most interested in adopting them, improved practices, originating in individual enterprise and intelligence, and which were confined to one particular district. During the years of scarcity in England, at the end of the last, and beginning of the present century, the Board of Agriculture took upon itself to suggest, and as far as possible, provide remedies for the *dearth*, by collecting information, and making reports to the Government, on the state of the Crops. It was the fallacy of past ages of ignorance and tyranny, that civil Governments

were, and ought to be, all in all, and ought to regulate every thing. It is the wisdom of the present age of light and freedom, that civil Governments ought to remove shackles, and burdens upon industry, to leave it to exert itself in its own way, and not to disregard, or reject, the suggestions or recommendations of those who, expert in their own callings, know incalculably more about them, than any Government possibly can.

The Smithfield Club was originated about 55 years ago. It addressed itself chiefly to the improvement of Breeds of Cattle.

The Bath and West of England Society has been in existence 75 years, during which, it has regularly published its transactions, whereby it has contributed to many agricultural improvements.

In 1838 another Society was commenced in England, under the name of the Royal Agricultural Society of England, consisting of 466 members. Next year the number had increased to 1104, and in 1844 to 6927, of whom there were 95 life Governors, paying £50 each on admission :—442 life Members paying £10 on admission : and 6161 annual Members, paying £1 each yearly. This Society is debarred by its 22nd bye-law, from discussing any political question, at any of its meetings. It received a Charter of Incorporation on the 26th March 1810, in which charter the objects of the association are set forth as follows :

1. To embody such information contained in Agricultural publications, and in other scientific works, as has been proved by practical experience, to be useful to the cultivation of the soil.

2. To correspond with agricultural, horticultural, and other scientific societies, both at home and abroad, and to select from such correspondence all information which, according to the opinion of the Society, may be likely to lead to practical benefits, in the cultivation of the land.

3. To pay to any occupier, or other person who will undertake at the request of the society to ascertain, by any experiment, how far such information leads to useful results in practice, a remuneration for any loss that he may incur by so doing.

4. To encourage Men of Science to devote themselves to the improvement of agricultural implements, the construction of farm buildings, and cottages, the application of chemistry to the general pur-

poses of agriculture, the destruction of insects injurious to vegetable life, and the eradication of weeds.

5. To promote the discovery of new varieties of grain, and other vegetables, useful to man, or for the food of domestic animals.

6. To collect information with regard to the management of woods, plantations, and fences, and on any other subject connected with rural improvement.

7. To take measures for the improvement of the education of those who depend upon the cultivation of the soil for their support.

8. To take measures for the improvement of the veterinary art, as applied to cattle, sheep and pigs.

9. At the meetings of the Society in the country, by the distribution of Prizes, and by other means to encourage the best mode of farm cultivation, and the breed of live stock.

10. To promote the comfort and welfare of laborers, and to encourage the improved management of their cottages and gardens.

For the purpose of holding its country meetings, England and Wales are divided into nine great districts, and a place of meeting, in each, is fixed a year beforehand. At Derby, the show of agricultural implements consisted of 700 different articles, valued at £7,400, or 35,520 dollars. Under such a stimulus, it is needless to say that both husbandry, and the implements of husbandry, have vastly improved in the twelve years of the society's existence.

A reading room and library are attached to the society's house, and the Journal of the Society which commenced in April 1839, in less than five years, had a circulation of 10,000.

The great success of this Society, has given rise to numerous county societies, and to a great many farmer's clubs throughout the kingdom, which have done much good.

In France there are schools of agriculture, assisted by the State. Young persons, there, can be instructed in the art, or rather science, both theoretically and practically. At Grignon, one of the Royal Palaces, the domain attached to it consisting of 1185 acres of arable, pasture, wood and marsh land, has been devoted to the teaching of agriculture. The practical part of the education is conducted on the following system. The pupils are instructed, in succession, in all the different labors of the farm. Some perform operations of veterinary, under the direction of the Professor of that branch, others

work in the garden, woods, and plantations, inspect repairs on premises, make starch, cheese, butter, &c., attend to the manure, the compounding of drugs, the keeping of the books, &c. The Professor who presides over the practical part of their education, explains the proper manner of executing the field operations, while the pupils are at work. After two years training in the theory and practice of rural economy, to every pupil, who passes his examination before the Professors collectively, is granted a DIPLOMA, that he is capable of fulfilling the duties of what may be styled an "*Agricultural Engineer*."

Simultaneously with instruction in practical details, theoretical knowledge is imparted by the professors, in courses of lectures, upon the following subjects :

1st. The rational principles of husbandry, and on the management of a farm.

2d. The principles of rural economy applied to the employment of the capital and stock of a farm.

3d. The most approved method of keeping farming accounts.

4th. The construction of farm-buildings, roads, and implements used in husbandry.

5th. Vegetable physiology and Botany.

6th. Horticulture.

7th. Forest Science.

8th. The general principles of the veterinary art.

9th. The law relating to property.

10th. Geometry applied to the measuring and surveying of land.

11th. Geometrical drawing of farming implements.

12th. Physics, as applied to agriculture.

13th. Chemistry, as applied to the analysis of soils, manures, &c.

14th. General notions of Mineralogy and Geology.

15th. Domestic medicine applied to the use of Husbandmen.

The pupils are of two grades, of which, one pays £48 a year, and the other £36. The Professors are paid by the Government.

The Austrian Government support agricultural institutions, at Vienna, Prague, and Pesth.

The King of Bavaria has given up the Domain attached to the Royal Palace of Schleissheim, to be used as a model farm. In 1840, there were 21 pupils who paid annually £15 each, and 11 who paid about £6. The latter were mere field laborers.

The King of Wirtemberg, has appropriated an old Palace, at Hohenheim, two leagues from Stuttgard, for an agricultural College. The land attached to the Palace is about 1100 acres. Lectures are delivered by 12 Professors on Mathematics and Physics, Chemistry and Botany, Technology, Tillage, and other operations of rural economy, Forestry and the veterinary art. Attached to the Institution is a small botanical Garden; a Museum of Zoological, Botanical and Mineral objects, skeletons of Domestic Animals; collections of seeds and woods, and a library of works on rural economy. There is also connected with the establishment, a manufactory of beet root sugar, a brewery, a distillery of whiskey from potatoes, and a nursery of silk worms. The superior class of pupils pay for their board 120 florins, and for their instruction 300 florins a year, making in all £37, or about \$177.

The late King of Prussia founded a most important Institution for the improvement of agriculture, at Mogelin, in Brandenburg, about 40 miles from Berlin. It consists of a college and a model farm of 1200 acres. It is under Professors who teach theoretically and practically, nearly the same branches as at Hohenheim; but each pupil has to pay £85 a year, or about \$385. Besides, there are in Prussia a model farm and Academy of Agriculture, in nearly every Province.

My own native land Scotland, has long been famed for the excellence of its husbandry. That excellence is the more creditable to Scotland, that it does not depend either upon the superiority of soil or of climate. It is owing to the societies which from a remote period have existed there and conducted the mind of the Scotch farmer to improvements not thought of, even in England, till long afterwards. The nobility and gentry of Scotland were patrons of agricultural improvements, within their own estates, for a period far back. But the first regular society was established in 1723, under the name of "The Society of Improvers in the Knowledge of Agriculture." The Society continued to publish its transactions till 1755, when it ceased to exist, and was succeeded by a new society, known under the name of the Highland and Agricultural Society of Scotland. This Society publishes quarterly a journal of its transactions, which has a high reputation and enjoys an extensive circulation.

*The Scottish Agricultural Chemistry Association* was established in

1843, and is an admirable institution. It can be extended to any district where there are sufficient subscribers to command the services of a competent chemist. Landed proprietors who subscribe twenty shillings, (about four dollars and forty cents) yearly, and tenants who subscribe ten shillings yearly, are entitled to have performed analyses of soils, manures, &c., according to a scale fixed upon. Advice without analysis is given by letter, for a charge of two shillings and six pence. Thus, in every county in Scotland, the farmer can be instructed in the exact description and quantity of manure, which he ought to apply to any field that he is about to cultivate, so as to enrich it with what the soil most wants. In the University of Edinburgh there is a Professorship of Agriculture, where all theoretical knowledge is taught. There is a Lectureship, on the same branch, in the University of Aberdeen, and it has long been customary to perfect young men, in the practical details of farming, by sending them to exercise it, for a few years, among the incomparable farmers of the Lothians.

In Ireland, a *Royal Agricultural Improvement Society* was established in 1840. Since its establishment, numerous local societies have been established throughout the counties, in connection with the parent societies. It has an Agricultural Museum in Dublin, for the reception of implements of husbandry, seeds, grasses, &c.

It contemplates the establishment of an Agricultural College, and has already spread throughout Ireland much useful information, by the diffusion of cheap publications. But the good effects of the Society are greatly counteracted by predial outrage, sectarian partizanship, political agitation, and defects in the tenure of land.

With, our now, near neighbors of the United States, the land laws are admirable, but except in the vicinity of great cities, where land is of great value, a very laborious and scientific agriculture is not to be expected. The necessity of a precarious climate, a poor soil, and little choice of land, has made the Scotch farmer the best in Europe; but the same necessity does not operate upon the American. What operates with him is how to countervail the high price of labor, and in his contrivances to attain this object, he surpasses the husbandman of all other nations. Another influence that operates upon him, in an extraordinary degree, is to travel over the world westward. Thus we have the late proprietors of farms on the rich soils of Ohio, Indiana,

Illinois, and Missouri, with axe in hand clearing out new farms on the far inferior soil of Oregon; and so irresistible does this *occidental* propensity appear to be, that soon after the establishment of a trans-Pacific line of steamers, we may expect to hear that Jonathan, axe in hand, is at Jeddo or Pekin. He has, therefore, no time to stop to experiment upon, and manure his land; and why should he, where by shifting a little westward, he can so easily change an exhausted soil, for one of virgin richness? Still, of all men in the world, the Americans are the men to break up a new soil, and overturn the forest; and I should not be sorry to see some thousands of them here, if they would only bring their axes and leave their rifles. But their arrival, here, is not to be expected, for their course like that of Phœbus himself, is straight westward, and the Hawaiian Islands lie to the south of their track.

Sorry indeed would I be to do our enterprising neighbors injustice. If I have done so in regard to their agricultural societies, and the increased fertility that they have given to the soil, of which they have so much, I stand in the presence of my friend the United States Consul, Mr. Allen, lately one of the law-makers of that mighty confederation, and who, I am sure, will correct my errors with that ready courtesy which ever distinguishes him. There are many other citizens of the United States, now present, who can speak of the state of the agriculture, in their respective states, much more correctly than I can, though there are few states in which I have not eaten, and heartily too, of their "*wheat cakes and chicken fixings, corn bread and common doings,*" which I consider proofs *rather substantial*, that they know how to make mother earth yield her treasures, of which discovery the famishing Irish have been made participators, without having gone so far to make it, as I did.

I have thus digressed, in order to show from what has been done by agricultural societies, elsewhere, what may be expected to be done by them, here, where a virgin soil invites them to experiment; where the most intelligent men in the community rank in the Provisional Committee, whose members are now present, and where the King himself patronizes their association. I must confess I anticipate an incalculable degree of good, from the Society, which I hope I may consider now formed; and I have no doubt that the just judgment of pos-

terity will award to the members, the honors of eminent benefactors of the Hawaiian nation.

We are now in a position duly to appreciate the great benefits conferred on the nation by the introduction of seeds, plants and animals, by those who have gone before us.

In running through the pages of Capt. Cook, we find the following productions, only, of the Islands seventy two years ago, viz :

Taro of large size and fine quality.

Sweet potatoes, from 12 to 14 pounds each.

Plantains, five or six varieties.

Bread fruit ; scarce.

Yams ; scarce.

A sweet root like a yam in form ; probably the root of the ti plant.

Sugar cane of large size and good quality.

Cocoa nuts.

Ava root.

Gourds.

Fowls ; scarce.

Hogs ; abundant.

Dogs ; used as food.

Geese.

Large White Pigeons.

Fourteen years afterward, or fifty eight years ago, when Vancouver visited the Islands, we find that the following were the only new productions, viz : Goats,

Water Melons. }

Musk Melons. }

Since those days the productions of the Islands have become wonderfully multiplied, and their wealth has increased in proportion. I have taken some pains to learn to whom the Islands are indebted for this great and beneficial change. They are as follows :

1. The discoverer, Capt. Cook, who on Sunday, the first of February 1778, left on the Island of Niihau, one ram goat and 2 ewes, a boar and sow of English breed, and the seeds of melons, pumpkins, and onions.

2. Captain Colnet, who left a ewe and a ram on Kauai, before the arrival of Vancouver.

3. Captain Vancouver, who, on Sunday the fourth of March, 1792, left to *Tianna* on Hawaii, some vine and orange plants, some almonds and garden seeds, and to Keaumoku (the father of Kaahumanu) a goat and kid, some fine orange plants and garden seeds. On the 13th of March, 1792, he left to the young Prince Kaumualii, of Kauai, a male and female goat and two geese; on the 25th February, 1793, he left to Keaumoku, before mentioned, one ram, two ewes and one ewe lamb; on the 19th February, 1793, he landed a bull and cow from California, for Kamehameha I, in the canoe of Krimamahoo, off the coast of Hawaii; on the 22d of February, 1793, he landed five cows, two ewes and a ram, in the bay of Kealakeakua, for Kamehameha I; on Tuesday, the 5th of March, 1793, he landed in the same place, for the King, a variety of culinary utensils, implements of husbandry, smiths' and carpenter's tools; on the 17th of March, 1793, he presented a large assortment of useful tools, implements and household utensils, and some goats to the king of Maui; on the 28th of March, 1793, he presented a complete set of armorer's tools to Enemo, the ruling chief of Kauai; on the 15th of January, 1794, he landed a bull, two cows, two bull calves, five rams, and five ewe sheep, from California, in Kealakeakua Bay, for Kamehameha I.

4. Don Francisco de Paula Marin, who came to the islands at a very early period, (it is believed in the *Princesa Real*, in 1791) and who appears to have served the King in many capacities. His journal, kept in Spanish, and consisting of several volumes, is in my possession. The volumes are much dilapidated, and as the first entry is dated 14th November, 1809, there is reason to believe that several volumes have been lost. I have hastily extracted the following particulars from his journal:

On the 11th January, 1813, Marin says he had planted at sundry times, some pine apples and an orange tree, beans, cabbages, potatoes, peaches, chirimoyas, horse radish, melons, tobacco, carrots, asparagus, maize, fig trees, lemons, lettuce, and that he had been engaged in making kukui oil, cocoa nut oil, candles, tiles, hay, cigars, and had acted in the several capacities of butcher, cook, mason, ship carpenter and physician:

On the 27th of June, 1813, he was engaged in making nails:

On the 24th of February and 1st of March, 1815, he was engaged in planting vines for the King:

On the 6th of July 1815, it is recorded that he made 38 gallons of wine :

On the 13th July, 1815, that he made five flasks of brandy:

On the 7th of December, 1815, that he made a barrel of beer :

On the 30th of December, 1817, there is a record that he planted coffee, cotton, made lime, planted cloves, salted pork, made pickles, planted tomatoes, turnips, pepper and chilis, sow'd wheat and barley, made castor oil, soap, molasses, syrup of lemon juice, planted saffron, cherries, and made shirts :

On the 25th of February, 1819, he was engaged in making sugar :

On the 15th of April, 1819, that he was sent for to cure the King, with whom he remained till the 8th of May, when he says, the king died, aged 60 years and 6 months :

On the 18th of May, 1819, that he was repairing muskets :

On the 27th of August, 1819, that he was selling vegetables for the King to the French sloop of war "Descubierta :

On the 14th of September, that he was making extensive purchases from vessels, for the King :

On the 22d of September, 1819, he says : " This day they brought me the first orange, though I planted the seeds eight years ago :"

On the 4th of November, 1819, that he was engaged bartering sandal wood for rum :

On the 8th of December, 1819, that he received the commission of Captain, which commission is still extant :

On the 14th of March, 1820, he records, "this day arrived the brig of middling size, called the Thaddeus, Capt. Blanchard, bringing missionaries for these Islands.

From this brief account of the labors of Don Francisco de Paula Marin, from 1809 to 1820, few of you will doubt that much of the present wealth of the Islands, is owing to seeds, roots, and plants introduced by that one man. In my own opinion, it may be fairly questioned if there existed on these islands, or exists at present, any man, to whom the Hawaiian people are generally so much indebted. His surviving children, therefore, are well entitled to the favorable consideration of the King's Government.

It is true that Marin was more frequently engaged in distilling brandy, rum and beer, than I have thought it worth while to record.

But, nevertheless, he seems to have been, upon the whole, a temperate man, for, from 1809 to the 14th of March, 1820, he only records that he was drunk on three occasions, on one of which they had to carry him home. If he had been oftener drunk, I have no doubt he would have mentioned it, for his journal is singularly minute in regard to his private habits, and those of the King and the ladies of his family. It is due to his memory to mention, that amongst his papers were found some ancient translations into native of the Lord's prayer, and other prayers used by the Catholics, from which it is to be inferred that he had made some effort to abolish the native idolatry.

As the intercourse of the natives from 1778 to 1827 was confined almost wholly to English and Americans, a knowledge of their language had become indispensable to the multiform agencies in which the King employed him; consequently he had applied himself to the study of their language with so much success as to become a kind of notary and interpreter for the King.

It may not be out of place, here to remark that on the 30th of October, and 26th of November, 1814, and on the 6th of January, 1815, he records three successive and peremptory orders, as sent down from Hawaii, by Kamehameha I., touching the residence of foreigners, and their rights, which clearly show how much Kamehameha III. has exceeded his father in the liberality of his policy towards foreigners.

In fourteen years that intervened between the visits of Capt. Cook and Vancouver, the Islands had been visited by Captains Brown, Meares, Metcalf, Portlock, Kendrick, and others engaged in the fur trade, but I have been able to find no record of any introductions of seeds, plants, or animals by them, and in like manner from the time of Vancouver up to the arrival of the missionaries, they had continued to be visited by vessels engaged in the same trade, and in the sandal wood trade, and it is fair to presume that several, from their own benevolence, or at the request of resident foreigners, had made large additions to the seeds and plants and animals known at the time on the Islands. To do justice to those parties, I know no one so well qualified as my friend Mr. Reynolds, now present, who in his person unites the Consular Agency of France, the Consulship of Bremen, and the Consulship of Hamburg.\*

\* It is believed that the Islands are indebted to Capt. John Meek, and to Mr. Wm. French, for sundry valuable importations.

Although Marin's journal is continued from the 14th of March, 1820, to the 1st of August, 1826, I have abstained from any mention of his labors in promotion of agriculture, beyond the former date, because after that date a new and more systematic agency commenced on the Islands, I mean that of the American Missionaries, the first of whom then arrived, under instructions from the philanthropic Board, which they and their successors have carried into effect, in so many places and with such beneficial results in the introduction of seeds, plants, roots, implements and utensils, as cannot be done justice to in a passing notice.

Suffice it to add that Marin died in October, 1837, in the 63d year of his age, and that he devoted all his spare time up to the day of his death, to the cultivation of his garden, and to the other useful works in which he had taken an active part for many years.

If every member of the society only intimate his zeal, with the additional advantage of the enlightened policy, now adopted by His present Majesty, I am quite certain that with its installation will indeed dawn a new and a better era, on these charming Islands.

## REMINISCENCES OF HAWAIIAN AGRICULTURE.

By STEPHEN REYNOLDS, Esq.

Agriculture claims the attention of the world. To a greater or less degree every nation cultivates the ground. The first discoverer of these Islands found agriculture was attended to, and considered of the utmost importance by the natives: although not extensive. Their commerce was trifling, consisting of occasional visits from and to the different islands of the group. The *kalo* was the great object of their agriculture, yet the sweet potatoe, melon, banana and other vegetables and fruits were not neglected; but by whom and when introduced, so far as I have been able to ascertain, is unknown.

There can be but very little doubt, that the discoverer and early navigators left seeds and plants, but not being cared for by the natives, very little attention was paid to their cultivation—and therefore soon

became extinct. It is impossible at this late period to find who brought the first seeds and plants to Hawaii. In 1792 Vancouver gave orange plants, a packet of garden seeds, &c., to Kahaumoku, a chief on Hawaii, the father of Kaahumanu.

Coffee plants were introduced by Lord Byron in the "Blonde" in 1825. If the plant had been introduced here before, it had become extinct. These plants were taken on board at Rio Janeiro.

In an agricultural and commercial view, cane and coffee are most important—for food, the kalo. Experience has proved thus far that the soil and climate are favorable to the coffee tree, to the growing of cane and manufacture of sugar.

The first enterprise to any extent to start a plantation on these Islands, was undertaken by Mr. John Wilkinson, who came from England under the patronage of Gov. Boki, when Lord Byron in the "Blonde" brought Gov. Boki and his party back to the Islands, and the remains of the King and Queen who died in London.

Mr. Wilkinson had made partial arrangements with Gov. Boki while in England, to be completed here. Manoa valley was selected as an eligible situation, and a suitable soil for a coffee and sugar plantation. The documents were made out and operations began. Mr. Wilkinson, unfortunately, had but small funds which were soon expended. He began on a large scale—laid out a large garden in a most fanciful and tasteful manner. He commenced operations in July or August 1825. Every kind of farming utensils was wanted—not to be had,—to carry on so great an undertaking. Carts, ploughs, hoes,—all were very scarce. Expedients had to be resorted to. The land was mostly prepared by natives with the *oo* or digger, a long and costly process, for a speedy operation. Labor at 25 cents per day soon exhausted the planter's funds. He was sickly, and died March 1827. He had more than one hundred acres of cane growing when he died. Gov. Boki was desirous to save it. Mr. Wm. French, John C. Jones, Esq., John Ebbets and myself took an interest in the plantation. After the first cutting, the plantation dilapidated and wasted away for want of protection. The coffee trees were left to grow without care or attention. Small parcels were picked by the natives, a pound or two at a time. Whether the same trees are still growing I do not know. Alexander Adams planted some slips in Kaliki valley, that produced excellent coffee. Also at Niu a valley beyond Dia-

mond Hill. Rev. Joseph Goodrich introduced coffee plants at Hilo, which grew luxuriantly. There were two kinds, the large white and the dark berry—similar to that now cultivated at Hilo. Some plants were introduced on the west side of Hawaii, which grew and produced largely, demonstrating most clearly that it was well adapted to that part of the island. The plantations of Mr. Charles Titcomb, and Mr. Godfrey Rhodes, on the island of Kauai, give complete evidence that coffee of superior quality grows on that Islands yielding large crops.

**CATTLE.**—The first cattle were landed by Capt. Vancouver, from California. He landed first a bull and cow, they were too weak to stand up; he hired a canoe to take them on shore where they could get grass. The bull died in a few days; the remaining cattle, healthy but thin, were landed at Kealakeakua. The loss of the bull was a misfortune which prevented any increase. He had but one hope. Two of the young cows proved to be with calf, and if one should bring forth a male, the increase might safely be effected. Fortunately his hopes were realized. At the request of Vancouver, Kamehameha tabooed the killing of cattle for ten years—except the males should become too numerous. Then the King might kill for his own, the Queen's and Chiefs' eating.

The women were not allowed to eat of the same animal as the King and chief—they were to have a separate animal. Few cattle were killed until after 1830; they were killed mostly for their hides; they were greatly thinned off, and being so much harrassed, retreated farther up the mountains.

Sheep were also introduced by Vancouver at the same time. He landed one ram, two ewes and one ewe lamb at Kauaelae, presented to Kahaumoku, partly in consequence of his care of the goat and her increase that had been given to him the year before. Also one ram and two ewes were landed at Kealekeakua with the cows. The dogs killed the ewes a few days after they were landed, for which remorseless murder, the dog was promptly killed.

**GOATS.**—Vancouver left goats on his first visit, but does not say it was their first introduction.

**HORSES.**—I have not been able to find the name of him who introduced the first. It appears two were brought and presented to Kamehameha; the natives say Mr. Manine was in the vessel. Several were brought before 1823. From 1824 to 1838 many cargoes were brought

from California. The horses born and reared on the Islands are superior in all respects to those imported from California,—better limbs, better spirits, and tougher animals. But slight attention has been given to procure good studs, an object that claims the attention of all who are fond of spirited horses.

**SWINE.**—Tradition reports that too hogs, two dogs and two fowls, were landed from a vessel, the officers wore uniforms, cocked hats and swords.

**POULTRY.**—Turkeys have been introduced within the last thirty years, or if introduced no pains were taken to induce care, or attention in rearing. Vessels from China have frequently brought and landed geese, but they have not been able to stock the Islands.

**SEEDS.**—Garden seeds were introduced before Vancouver by trading vessels. In 1811, the vessel on board of which I was a foremast hand, took beets, turnips, onions, &c. Onions used to be raised of large size and good flavor at Kohala, Hawaii, and at the Island at Niihau. Green peas have been raised in Nuuanu valley by Wm. Hincley, at Kalihi, by Alexander Adams. They came up well, but in a day or two, the worms entirely destroyed them.

**SQUASHES**, melons, &c, grow to great perfection, although not a great variety. Grapes flourish exceedingly well, and would be of excellent flavor if left on the vine until they could perfectly ripen. I dare say you all know by experience that you find many, very many "*sour grapes*."

**FRUIT TREES.**—Orange, lemon, lime, citron, shaddock, &c, grow finely. The orange is of two sorts, sour and sweet. The best grows on Hawaii,—probably from the stock introduced by Vancouver. On Kauai, at Hanalei, there are some most excellent sweet. The Guava grows profusely on all the Islands. Apple trees grow very well, but do not bear any apples; no doubt they would produce good fruit on the Hawaiian mountains. Let some of the members of the Agricultural Society try the experiment. Good apples would pay. Peach trees grow well. The fruit is small, but of fair flavor.

Implements for farming were not in use till about 1825-6. The natives dug the land with an instrument of oval form, about eight inches long beside the socket, or sometimes a broad chisel. This instrument is called an *oo*. Carts were introduced about the same time, Jersey

wagons about 1826-7. Household utensils were but very little used till recently. Vancouver presented King Kamehameha with a few articles of kitchen and table utensils. Capt. Benjamin Worth of the ship *Catharine*, of Boston, in 1801 gave Kaahumanu some white plates; he was ever known by the name of pa-keokeo (white plate.)

OXEN.—These noble animals were used by the missionaries, about 1825-6. Many excellent teams are now in daily use in this city. Several plantations kept from ten to fifteen yoke of good working oxen. Good yokes and good teamsters are much wanted to complete well trained and experienced teams.

INDIGO.—Seed was brought here first in the summer of 1829 by Dr. A. P. Sevier. It was planted on land at Waikiki, belonging to Capt. Wm. Sumner, and grew to the entire satisfaction of Mr. Sevier. He also planted some seed at Pearl River which grew luxuriantly. He manufactured some parcels from the growth at Waikiki, which he thought excellent—showing that Indigo might be cultivated with much success.

POTATOES.—The sweet potato has been cultivated so long that its origin cannot be traced here, at least so far as my inquiries have been made. The Irish potato was but little cultivated until since 1820. The large red potato appears to have been introduced by Capt. Joseph Maughan. He gave some to Gov. Boki, who gave a part to Gov. Hoapili, of Maui, where they flourished, and have been raised in great abundance. They yield better on that Island than on either of the other Islands.

The Mulberry tree was introduced a few years since for the purpose of feeding the silk worm. The trees grew finely, but the silk worms did not thrive.

## BENEFITS OF AGRICULTURAL ASSOCIATIONS.

BY HENRY M. WHITNEY, Esq.

Agriculture is the soul of a nation—the vital, living part, which gives life and vigor to every branch of industry. A manufacturing or a sea-faring people, may, as a nation, be wealthy; but if deprived,

by nature or otherwise of agricultural resources, such a nation must be dependent upon others for the means of subsistence, and must be exposed to the constant fluctuations of commerce, and to the disadvantages which a dependence on foreign productions always creates. Wealthy in one respect, it is poor and dependent in another.

It does not need a dense population or crowded cities, to constitute a wealthy people; but a people, which, after producing enough to supply its home consumption, has still a surplus for export, is wealthy just in proportion to the amount of such export.

The object of the present effort is a noble one,—it is no less than an effort to increase the spirit that creates such wealth,—to give impulse to every measure tending to develop the sources of such wealth, and to unite all who are endeavoring to promote the agricultural prosperity of these Islands. Time is gradually, but sensibly working great and important changes here. It is but a short time since the foreigner, who landed on these islands, found it impossible to obtain the land he desired, so close was the policy of the rulers, except as he might chance to become the recipient of royal favor; and every thing about him tended to impress on him that he was a stranger in a strange land. But now, the foreigner buys his land; and in that land and in its improvement he feels an interest, as well as in the prosperity of all the Islands.

We look over the plains, hill-sides and valleys, and ask by whom are these plains and vallies to be cultivated, what are they best adapted to yield, and what are the probable capacities of these Islands. These are questions that may not be hastily answered, for they need examination and study from us as individuals and as a society.

Every one must own that it is not the hand of native industry that is to change these wastes into vineyards. That may continue still, as for ages past it has done, to till the luxuriant vales, where nature promises and grants her hundred fold to the most indifferent laborers. But the principle ever acted on, and the only one that governs the native producer, is that the supply must not exceed the actual wants for consumption; and to this limit has always been confined the native agriculture, and, so far as can be judged, it will always be confined.

If native industry is never to till these plains, and necessity demands that they be tilled, they must be yielded to the foreigner. It is his industry that will change the face of the land, and turn “the barren

wilderness into a fruitful garden." If the dwelling and the mansion of the *haole*\* are in future seen on every rising mound, it will not be the hand of tyranny or invasion that places them there, but industry alone.

But what are these lands best adapted to yield? On this subject we need the dissemination of light—we need facts—such facts as the experience of the farmer alone affords. The adventurer from other countries arrives on our shore, seeking a spot where he may enjoy the home and happiness he has so often pictured to his fancy. He selects and purchases his land, he has the means of liberally improving it, but he is ignorant what will best remunerate his labors. He sees that in certain localities the sugar cane flourishes, in other places he finds the coffee plant a favorite, and in others still he finds that vegetables best repay the labor expended. He is told that perhaps this, perhaps that product will be found best by him. Ignorant of the experience of those who have had to test the capacity of the soil for certain products, or of their modes of cultivation, or of the success or failures that have attended their labors, he commences his experiments. His labors perchance meet with success; perchance they prove a failure, diminishing his capital, and disheartening him in the very outset of his enterprise.

Here we may see the benefits which such an association as this must necessarily produce, viz:—the collecting and disseminating useful knowledge, the practical experience of those who have already met with fortunes or misfortunes. "Knowledge is power." It is such power as the husbandman needs, to procure from the smallest capital and the least labor, the greatest results. Let the coffee planters of Hilo and Hanalei, the grain and sugar cane planters of Maui and Koloa, the potato growers of Kula, and the numerous farmers scattered over the Islands, publish the modes of cultivation they have found most successful, and also those they have found entirely useless, and the cause of agriculture would be prospered, and with it the nation's prosperity must be promoted.

Another interesting question is, what are the probable resources of these islands? Their area has been variously estimated at from 6000 to 7000 square miles, but, until accurate surveys are made, it will be impossible to state the exact extent of our territory.

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\* Haole, foreigner.

I will assume, however, as the basis of this estimate, that the superficial area is 7000 square miles, or 4,480,000 square acres. The greater part of this area, we all know, consists of mountainous tracts wholly unfit for cultivation, but a large portion of it is valuable as wood land. Of the whole surface, probably one tenth, or 448,000 acres, will be found tillable and fit for agricultural purposes.

Now, what is this land capable of producing? If we estimate the one half of it, viz, 224,000 acres, yields annual crops to its cultivators, while the other half remains fallow or uncultivated, and take the produce of the sugar cane as an average of the entire crops of the kingdom, we may perhaps approximate the truth, in obtaining a result which may one day be found correct. One ton of sugar is considered an average yield per acre, but skillful planters are found who obtain two tons per acre. The value of sugar we will place at 6 cts. per lb. as a fair remunerating price, though at present it is much higher. The yield per acre would then be \$120, and the value of the annual produce of the soil of these islands would be about \$27,000,000. Of this annual product one fourth would be needed for home consumption, leaving \$20,250,000 as the value of the annual exports from agriculture alone. Of the remaining 4,032,000 acres, probably 1,000,000 acres are suitable for pasturage and grazing, and would sustain at least 1,000,000 head of cattle, one fourth of which might be annually withdrawn, and considered as the annual produce of the pasture land. These valued at \$10 per head, would produce \$2,500,000 of which one fourth should be deducted for home consumption, leaving \$1,875,000, as the amount of the annual produce for export from the pasture lands in the shape of hides, tallow, salt beef, &c. But besides this, the productions of the dairy, butter and cheese, would be very considerable, and would find ready and constant markets. The dairy might be made to yield for export at least \$1,000,000.

We have then, the following summary of what these islands are capable of producing annually, for export, beyond a supply for home consumption.

|                               |              |
|-------------------------------|--------------|
| From the produce of the soil, | \$20,250,000 |
| From hides, tallow and beef,  | 1,875,000    |
| From butter and cheese,       | 1,000,000    |
|                               | <hr/>        |
|                               | \$23,125,000 |

But the produce of these Islands, is not to be estimated wholly from the few staples which are now cultivated. Their climate and soil are peculiar, presenting a variety which is seldom met with, and I trust we may see the day when we shall find the fruits of the temperate zone growing on our uplands in richest abundance, while in the lowlands are cultivated the productions of every tropical land.

There are some of our fruits which might be made sources of profit, and which need improvement and care. The tamarind grows with luxuriance in moist soils, and produces very abundant crops. But much care is needed in its cultivation, especially in pruning. The vine ought to receive more attention. The yield of the grape here is certainly astonishing. Clusters are frequently found on well pruned vines, measuring from fifteen to eighteen inches in length, with fruit nearly an inch in diameter. May not the day arrive when these islands shall be as famed for their raisins and their wines as Madeira? Nothing grows with more luxuriance or with less care, than the fig. Yet nothing has received so little cultivation as an article of commerce, as the fig. And what is there to prevent Hawaii from becoming as celebrated for the fig as Smyrna.

Thus we see, gentlemen, that the field for improvement in agriculture is a wide one, but in the very outset we meet with drawbacks that must make the progress of agriculture slow and perhaps tedious. You all know that one of the greatest of these is the question of labor, which is now become a question of vital importance to the Hawaiian producer, and to this noble cause of agriculture. Is the native population of these islands capable of furnishing the labor needed for the production of an annual export of \$23,000,000? On this subject, opinion is divided. Some who have already tested the native laborer, assert that it will never do to depend on him, and have found it almost impossible to obtain the performance of the needed labor. I will not attempt to discuss this important subject, leaving it to those whose experience has been brought to bear on the the question. But before I shall coincide in the assertion that native labor cannot be depended on, I shall wish to see the inducements to make that labor useful thoroughly tested. We all know that the nature of the character of the Hawaiian is pliable. It is easily diverted, and, with proper inducements, it is easily directed. Has every means been tested to induce the cultivation of the spirit that makes a contented home? Is the

planter or farmer interested in making the home of the native laborer such as would tend to cultivate a contented spirit? I do not know how the measure would operate, but I respectfully suggest it to those planters who have the means at hand, whether the erection of suitable cheap houses on their plantations, the providing these house with what would render them attractive to the laborer, with a constant endeavor to promote the welfare of the laborer, would not tend in some degree, to render such labor more useful. A constant eye to the welfare of the laborer is vitally essential to the welfare of the husbandman, and that man who is keenest in observing and studying the nature and wants of his laborers, and in forestalling their wants, will always find his interests most promoted.

Gentlemen, if a benign Providence has bestowed a rich reward on your labors, during the past year, that blessing has been given for wise and good purposes. It is given, not to lie idle, but for the development of the resources of these islands, and for the benefit of this people. It may be that for years to come the same Providence may bestow the same reward to labor. Let us study ways and means not only to benefit this interesting people, with whom we are becoming identified, but to bring into action the full resources of this favored group. Let each member of this association endeavor to enlarge his experience for his own and others' benefit, and to disseminate whatever knowledge may be useful or instructive to others; and the day may come when these Islands shall become a storehouse for the merchandise, and a treasury for the riches, of both shores of the Pacific.

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## THE VALUE OF SCIENCE, APPLIED TO AGRICULTURE.

BY WM. H. PEASE.

I offer a few remarks to the Society, not presuming they will afford any novel or original ideas. They are offered, rather, as my mite of contribution towards the advancement of a cause, in which all residents of these Islands are deeply interested, and to which each one has it in his power to contribute to a greater or a less extent. The field is wide and open to the labor of all classes; the encouragement

sufficient to the development of our agricultural resources to their fullest extent. I need scarcely refer to the sudden revolution that has taken place in the state of affairs on the coast, as affecting these Islands. The march of Empire westward, to which gentlemen have referred, appears to have arrived at that heretofore indefinite locality, and, in company with civilization, has well nigh completed the circuit of the globe, and reached the goal from which it set out.

We have now, for neighbors, on the one hand, our Celestial friends, whose science and art date far back of our humble calculations, while on the other, the universal Yankee has made his appearance, with his new fangled notions, turning the world upside down, not knowing yet what he will do with it. In his search for the almighty dollar, every nook and corner of our wide ocean will be ransacked, and if possible made available. Were we to calculate the rapidity and extent of the changes about to take place around us, from the agents and means now in the hands of those who are effecting the settlement of the Western Coast of the United States, as compared with those in possession of their ancestors when they landed upon its eastern shores, and the progress they have made since, the most moderate predictions would appear wild and visionary.

I would merely instance one of those agents in comparing the May Flower and her little band, to the fleet of magnificent steamers now carrying thousands of their descendents to the El Dorado. From this agent, steam, may be expected the most important results, as affecting our Islands, by the opening of communication between the Pacific and the Atlantic, and the completing the last link in the great chain of steam navigation which will then encircle the world. Here, on the islands we find every reason for encouragement. The four great staples of tropical growth, sugar, cotton, coffee and tobacco, can be produced, the crops being liable to less casualties than those in any other part of the world. As regards fruits and spices, there is but little doubt that we can accommodate all the tropical varieties with the temperature, moisture, soil, &c., suited to them. Although the introduction of some varieties may be attended at first with some difficulties, and perhaps failures, still by perseverance it may be accomplished. The conditions of their growth in the countries whence they are introduced, should, of course, be known and complied with as far as

possible. The enquiry might with propriety be made what varieties will not succeed, rather than what will. To those who have resided in tropical America, the neglect of their culture must be most surprising. It may be attributed in part to the exclusive use of kalo, as vegetable food by the natives. Also the length of time necessary to mature many varieties, has been an objection on the part of the whites. But their great importance in an economical point of view cannot be denied. Stock by their means, could be furnished at a price, which would secure the supply to the whaling as well as the merchant fleet, hereafter to be expected. The introduction of new varieties, together with the improvement of such as we have, is, in my humble opinion, the greatest benefit we can expect from the operations of such a society as has been formed, affecting, as it would, the interests of the greatest number of natives as well as whites. It can be accomplished also more readily and successfully than by private individuals. A large selection, and more full and accurate information respecting their growth and culture can be obtained from correspondence with kindred societies, and persons interested, particularly in the growth of such as are wanting here. In this work the labors of each individual member can be enlisted, by furnishing information to those officers of the society who have the matter in charge.

But our Paradise is not wholly exempt from the curse we are taught all lands lie under. The many rich advantages within our reach, are connected with difficulties and discouragements, and more will arise as cultivation extends. To avoid and overcome them experience and skill must be made use of. To apply and direct their use, is one object of an agricultural society. The amount of uncultivated land suited to the growth of sugar and coffee without expense, beyond that of simple cultivation is very limited. By what means to render other large tracts which are now given up to pasturage available, in the most economical and effectual manner, by preparation of the soil, irrigation, protection of the crops from the wind, &c, is of the highest importance to our land proprietors, enhancing as it would, the value of lands of all grades. The soil under cultivation at the present time, will also before many years, require to be renovated. How is all this to be accomplished? To ascertain the deficiencies of the soil--what need to be supplied should be the first step taken.

Very few analyses would be required by reason of the common origin, and consequent similarity of the soils throughout the kingdom. On those portions where the basaltic or volcanic rocks are thoroughly decomposed, the soil appears to be highly argillaceous, and containing iron, in the shape of some of its salts, to a greater or less extent, with little or no vegetable matter. In dry situations, the surface becomes hard and baked, and the evaporation of water is almost instantaneous. Trees and shrubs can be grown by irrigating until they reach a depth which will render them independent of the surface for a supply of water.

The best preparation for sugar cane on such lands, or, I might add, on all, is the application of lime of which the sea beach sands is mostly composed, being made up of comminuted shells and corals. It will enrich the soil beyond the effect of its great fertilizing qualities, by neutralizing the effect of the iron, and rendering the soil more open. The salt which would be introduced along with it is considered of great value in these sugar growing countries, where it can be readily obtained and applied, sugar cane being one of the few plants which benefit by its application. When the soil is not thoroughly decomposed, turning it up and allowing it to remain exposed to the action of the atmosphere would hasten its decomposition, and in a short time afford support to some hardy variety of grass, such as mancareia.

The most serious difficulty to overcome, however, is the want of labor. The great demand, and consequent high price of supplies, in connection with the increased amount of land put under cultivation, has no doubt had the effect to bring about the present scarcity. But there are other causes to which in part it must be attributed, which sooner or later would have produced the same result. The laboring classes of all warm regions, are for various reasons, averse to labor, beyond a supply of their most simple wants, consequently no tropical product has ever been grown successfully to any extent, by free labor. Emancipation has ruined, in an agricultural point, the English and French colonies. I might add also the Spanish American, for the peonage of Mexico secures to the planter all the advantages of slave labor without any of its disadvantages. In Central America, which has been spoken of as a rival to these Islands in the production of sugar and coffee, the price of labor averages about two reals per day,

and little or no security to the employer. On the other hand the value of exports of sugar alone from Cuba, the present year, will exceed thirty millions of dollars, and the crop of the United States will, it is calculated, reach twelve millions, and be doubled the coming year, more than 150 mills being in course of erection.

The non increase, and consequent rapid decrease of our native population, is another cause affecting labor, which is a very serious one in connection with the great increase in demand, which will continue for some years to come. The origin of this difficulty would more properly be treated by our medical members. Is it likely to be arrested? Suppose it were. The number might be sufficient to meet the demand. But here the difficulty arises to which I have referred. How is it to be made available? There may be individual cases, in which the planter, having been long resident and confining himself closely to the superintendence of his own estate, may rub along,—not, however, without considerable wear and tear of temper and patience, which all persons unfortunately do not possess to a sufficient degree. The mass of natives in possession of the kalo patch and \*kula are more independent than their wealthy neighbors. They provide themselves and families with all the luxuries of a Hawaiian life, *ʻiʻopi* and fish. Though he has no visible means of support, a Hawaiian has always one tangible. The Fourierite system of a community of goods and interests is carried out more fully on many parts of our Islands, than the disciples of that sect would probably submit themselves. What law, then, or system, could you adopt to compel him to work without abridging his freedom. Create wants if you please; they would be supplied by a much less expenditure of labor than would be required of him on a plantation. But a necessity has arisen that our plains be cultivated, for which the skill and capital of the white man are necessary. Should the native refuse to put them in use to render them available by his labor, other hands must and will do it.

If the Hawaiian will not be inoculated with that spirit of progress which appears to be the law of action with the Anglo Saxon race, with whom they now come in contact and competition, they must disappear. Their race will not be the first, nor probably the last to share the same fate. Not all the efforts of our mission friends, nor the ex-

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\*Kula, uplands. A sort of paste made by kneading the baked kalo root with water.

ertions, I might almost say, sacrifices, of our planters, will avail. No greater inducements can be offered to stimulate and arouse the natives than are now before them. Every consideration, moral, patriotic, pecuniary, combine to urge them one step more forward, where they might gain a sure foundation, a permanent position among the civilized nations of the world, a monument to the triumph of modern christianity and civilization. The inefficiency of native labor is another cause affecting the price. The cost of slave labor in the United States averages about 37½ cents per day, producing between five and six thousand pounds of sugar per hand, against native labor at 20 or 25 cents per day, producing from two to three thousand pounds. It may be answered that the amount of sugar obtained from the same weight and quality of cane in the United States, is much greater by reason of the use of more perfect machinery, and improved process in manufacturing. This is counterbalanced in a great measure, however, on the part of our planters, by the privilege they enjoy of choice in the variety of cane grown. The Tahiti cane, as it is called, which I believe is the richest, will not succeed there. Instead of this, they are obliged to select the most hardy, and of the quickest growth, their crop being allowed but nine months. The insufficiency of native labor would be more apparent, should an improved system of agriculture be introduced in connection with proper implements. Yet with all the disadvantages attending native labor, its sure decrease, its high cost, its inefficiency, &c, a remunerating price may be obtained so long as the present state of affairs exists on the California coast, and our planters may rest content. The favorable position of these Islands will also enable them to command a price above the average of other markets for many years to come. The object to be attained however, is the production of the largest crop with the least expenditure of time and labor. The introduction of foreign labor will no doubt afford security to the planter in so far as quality is concerned. Whether it will reduce the cost remains to be proven. The surest means of effecting this most desirable object is, in my humble opinion, by adopting a more improved mode of culture, using skill in connection with labor saving implements, and calling in the aid of science. They have not yet been called into requisition to any extent by Southern agriculturists. Cheapness of labor has been their main dependence. The planters of Louisiana, who, as a body, are as intelligent, if not more

so than any other in the world, are but just waking up to the importance of such aids. Were proof required as to the utility of labor saving implements, I would refer to the Western parts of the United States, which have become the granary of Europe, with labor at from one to two dollars per day, competing successfully with the serf labor of the Danube and Russia. There is great room for improvement in our case, we having within our reach many advantages not possessed by any other planters in the world. The salubrity of the climate will admit of the use of white labor throughout the year. Another advantage is in the choice of labor, whereby any mode of culture thought proper can be practised, which is denied to slave countries, it being impossible to connect free with slave labor to any extent. The isolated position of our group, too, will, also, when sufficient labor has been attained, have a tendency to render it permanent and secure.

What mode of culture it is best to pursue, must, in some measure depend on the situation of the planter. The substitution of horse or mule teams in place of such as are now in use, is highly desirable, and will become necessary as more land is brought under cultivation. A good breed of working horses should be obtained, which will require grain food. Grass fed horses can no more be expected to do their work than a man made up of poi and fish can be expected to work alongside of a pork fed Yankee. With proper food, one team would accomplish more, I should calculate, even of heavy work, such as breaking up, &c., than two ox teams as now used, and in a more satisfactory manner. In the Southern States the lowest average for growing Indian corn, is 250 bushels for one man and horse, at the rate of 30 bushels per acre. It reaches, however, as high as 1000. We will reduce the lowest amount and call it 200. The amount necessary for a working horse is 30 bushels per year, calculating that for a part of the time, grass feed is made use of. The cost, therefore, of the labor of one man and horse, for the length of time necessary to grow one crop of corn, yields support for a team of four horses one year. Other grains may possibly be grown here to better advantage. With good teams and proper implements, the services of the natives in the cultivation of cane could be dispensed with until he was wanted in the field with his hoe. The skill of the white man properly applied, can in our climate, more successfully compete with rude, uninstructed labor, than in any other tropical country.

These Islands possess advantages which render the growth and production of tropical products possible and profitable by means of free labor, and they consequently hold out inducements to the agriculturists of small means of the United States and Northern Europe, which no other tropical country affords.

By the action of the society just formed, the experience of our planters will be combined, and the best mode of economising labor will be proved. I hardly need say a word in favor of unity among the members of our society as insuring success in its operation. All who have at heart the true prosperity of the Islands must hail its formation as opening up a new era in their history; and as all must benefit directly or indirectly from its operation, so all should be willing to co-operate and contribute to its advancement. Sectional interests and jealousies should be lost sight of, or thrown aside, for we may be sure that any good accomplished, benefitting one interest, must operate favorably on all. The result of your long experience, gained by losses and hard blows, if contributed, may enable your neighbors to increase their crops, consequently enlarge the market, inviting more competition from abroad, and thus enable the producer to obtain the full market value for this crops at all times. The most favorable auspices appear to attend the formation of our society. The result will depend on the cordial co-operation and union of the members.

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## THE MANUFACTURE OF SUGAR.

By R. W. Wood, M. D.

The visits of the earlier navigators and accompanying events which led to the introduction into the Sandwich Islands of domestic animals, and plants of foreign origin, and also of systematic modes of agriculture, will be interesting, as well as instructive matters of record in the transactions of this association.

We were all no doubt surprised to find ourselves so much interested and entertained by Messrs. Wyllie's and Reynolds's narration of incidents connected with the introduction of animals and plants from

foreign countries, by the first European visitors and settlers upon the islands, the record of which might have seemed trivial to their contemporaries, but which, now that they have become matters of history, are justly estimated.

He who plants a tree valuable for its wood or fruit, or introduces any new variety, either of the animal or vegetable kingdom, may confer a more valuable legacy upon posterity than he who hoards his thousands, to be dissipated, perhaps, by improvident heirs.

But for Vancouver, this society might this day have been occupying itself with the discussion of the practicability of introducing and growing the orange, which has now become almost indigenous, and forms no inconsiderable item of export. And, did not the Sandwich Islands present so wide a field for emulation, we might almost envy the fame of Vancouver, and even that of the more humble Spaniard Marin, whose meritorious acts although involving no great expense, or personal sacrifices, have deservedly identified their names with Sandwich Island history. But, if much may still be done in the way of introducing new and useful varieties of plants adapted to the soil and climate of the islands, much more remains to be done by the discovery of improved methods of culture and manufacture of existing products. The attainment of this object would be facilitated by instituting a survey of the different fields of individual enterprise, in order to determine what has been attempted and failed,—what has been accomplished by single handed exertions, and especially what may be expected from associated action. There are within the experience of every practical man, facts apparently, it may be, unimportant, but which may have, nevertheless, if noted, an important bearing upon the interests of society, both immediately and remotely. These remarks may suggest to those engaged in the culture of the more important staples of the islands, the utility of journalizing their experience. The value of such journals was suggested to my own mind by the request that I would prepare to be laid before this meeting, a historical account of the introduction, and progressive culture and manufacture of sugar in these islands. For want of time and of the necessary data, I have failed so to do.

I will, however, make a brief statement of such facts bearing upon this subject, as happen to be within my recollection, in relation to a single plantation, with the hope that these may serve as hints to others

in collecting additional statistics, in order that they may hereafter be embodied in a suitable form, to be placed in the archives of the society. The preservation of statistical matter of this kind, may, casually viewed, appear unimportant. Yet, by rendering available to each planter, the experience of his predecessors as well as cotemporaries, much time is saved which is otherwise lost in the repetition of fruitless experiments. Since the commencement of the plantation above referred to, there have been several superintendents, each of whom, neglecting the experience of his predecessors, has pursued a routine of unnecessary experiments, at no inconsiderable expense to the proprietors.

It is known to most of the older residents, that about the year 1835, a mercantile house in Honolulu obtained, with no little difficulty, a grant of land, on the Island of Kauai, for the purpose of establishing a sugar plantation. Previous to this period some attempts had been made to introduce this branch of industry, but that which has been already alluded to by Mr. Reynolds, is the only one deserving of notice, and that not promising to be productive, was soon abandoned. That on Kauai was the first enterprise of any magnitude of this kind, on the Sandwich Islands. For a period of six years subsequent to its commencement, its failure continued to be confidently predicted by the more intelligent portion of the foreign community.

On this plantation the ground was first broken by a plough drawn by natives. There were no working cattle at that time upon the Island. Wild, or indigenous canes, abundant in the vicinity of Koloa, after three or four months persevering resistance of the \**kapu* imposed upon them by the Chiefs of Kauai, were collected, and a nursery commenced. From the first crop of cane obtained, the proprietors succeeded in producing molasses or syrup only. The following season they succeeded in producing sugar, but of inferior quality, and the sugars produced from that estate previously to the year 1842, would now be considered scarcely merchantable.

Previous to the year 1840, two mill sites were abandoned, and the entire works, including buildings, machinery and furnaces sacrificed. A third mill was erected in 1841, which, with improved works, enabled the proprietors to increase considerably the products of their

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\**Kapu*, taboo—prohibition of use.

estate, with however but very little, if any, improvement in the quality of the sugars manufactured.

About this time a French gentleman, M. Provost, who had had considerable experience in the manufacture of sugar in the Isle of Bourbon, was engaged upon the estate for the period of one year. In consequence of the improvement introduced by him in the tempering, clarifying, boiling and granulating of sugars, their quality was greatly improved, and their value increased. Previous to the year 1843, in the absence of purchasers, and for the want of nearer markets, the proprietors were under the necessity of shipping, on their own account, their sugars, to Valparaiso, Sydney, and the United States, and they sustained by these operations, a loss of some thirty thousand dollars. Since the year 1843, very little, if any, advance has been made in the improved quality of sugars, although the aggregate quantity produced upon the Islands, has been yearly increasing. Although the present mode of conducting its manufacture is a great improvement upon the rude and unskillful attempts of the pioneers in this branch of industry, yet, owing to the want of better constructed works, and of more skill and experience in constructing them, the business is still prosecuted under comparatively great disadvantages. And thus far the Sandwich Island planters, have been less indebted for their success, to the efficiency of their mills and boiling houses, than they have been to the excellent adaptation of soil and climate to the culture of the cane, to the proximity of good markets, and especially to their exemption from competition with more systematic and skillful manufacturers. In proof of this assertion, I need but refer to the statement made by Mr. Parsons, that it has been ascertained, by a nice calculation, that on a plantation on Maui, the cost of growing was about twelve dollars, and that of manufacturing fifty dollars per ton; whilst in Demerara, the East and West Indies, the cost of growing and manufacturing is considered about equal. It is true that in some of these countries, especially Demerara, where the land requires to be drained by canals intersecting each other in every direction, and where only the spade and hoe can be used, the culture of cane is attended with more expense, than it is in the light mellow soil of these Islands. Still the cost of manufacturing ought not much to exceed that of growing the cane.

The samples of sugar which have occasionally been exhibi-

ed in this market, leave no doubt that the Sandwich Islands are capable of producing raw sugar inferior to none in the world. That the finer samples, however, are more the result of accident, than of any valuable improvement in the manufacture, may be inferred, in as much as by far the larger portion of Island sugar sold in the Honolulu market is but of middling quality. But not only is the quality much below what it might be, but, owing to the want of better constructed works, and more correct information in regard to their proper management, most of the mills now in operation in the different Islands, yield but about one half, and the best but two thirds, the quantity which mills of the same power, with batteries of the same capacity, yield in older sugar growing countries. I make this statement on the authority of a gentleman who appears to be well informed on the subject.

It is a matter which deeply concerns the planters to institute an inquiry into the defects of the present system, and to ascertain what improvement can be made without any great additional outlay of capital, which will increase the efficiency of their works and economise and expedite the manufacture of sugar.

I have given some attention to this matter, but for want of a larger experience I have been able to arrive at no satisfactory conclusions. I will however make a few suggestions with the hope of eliciting information from those who have had better opportunities of observing than myself.

And in the first place, the flues of the batteries now in operation, do not appear to have the requisite height which is necessary in order to secure a draft of sufficient intensity. Some of the flues terminate with the ridge of the boiling house, some rise fifteen or twenty feet above this point, and the highest in the Islands is about fifty feet from the base of the furnace. In the West Indies the usual height of the perpendicular flues are from seventy to one hundred feet.—The degree of heat generated in the furnace is increased with the intensity of the draft, and this depends upon the height of the flues. The horizontal flue after passing under the last boiler, instead of terminating, as is usually the case at this point, should extend about fifteen feet beyond it. Constructed in this manner, the combustion is more perfect, and the object attained of securing a high degree of heat from the least expenditure of fuel. These results have been obtained in part, by adding twelve feet to the flue of the boiling house at Koloa.

No proper grates have yet been imported into the country for furnaces. Pig iron ballast and other refuse iron has been used for this purpose. About 6000 lbs of refuse iron at a cost of some three hundred dollars, has been consumed in the furnace at Koloa in a single season. There is no reason why a set of grates of suitable size and form should not last for years. The position of the grates in the furnace is not unimportant. Instead of being placed at right angles with the long diameter of the furnace, they should be placed parallel with it. Placed across the furnace, they require to be so far asunder, to allow the cinders to escape, that a large proportion of the fuel escapes also, into the ashpit in the form of charcoal, and is lost. Parallel with the furnace, and half or three quarters of an inch asunder, they can be readily cleared of cinders by means of an iron spade.

The most expeditious and effectual means to remedy all these defects, would be to secure the services of intelligent and expert masons from abroad, who are accustomed to this kind of work. There is no work within the province of a mason that requires more skill and judgment than the construction of furnaces and flues of boiling houses. There is one other subject in which the Island planters are immediately and prospectively interested, and that is the reputation of Island sugars in foreign markets.

Previous to 1843, Island sugars were not in high repute. For the last three or four years, they have had a better reputation. Most of those exported the last year have had the advantage in the California market of two or three cents in the pound over those of Manilla and Central America,—the only two countries likely to compete with the Islands. The only raw sugars imported into California the last year in any considerable quantities which were preferred to Island sugars, were those from Pernambuco, and even these were not considered superior to the better qualities of Island sugars. These remarks, however, do not apply to sugar exported from the Sandwich Islands the present year. On account of the unusually high prices of this article in the California market, and the desire of planters to avail of it to the utmost of their ability, sugar imperfectly cured, with all the refuse that could be collected from the drying houses, and which formerly would not have been offered for sale, except at retail among the native population, has, the present year, been exported from the coun-

try, or sold for exportation upon its general reputation and has failed to give entire satisfaction. Island sugars have, consequently, fallen into some disrepute, and are very little more esteemed at this time in the California market, than Manilla sugars.

It is of the first importance to Sandwich Island producers, that they endeavor to secure the highest possible reputation for the produce of their estates, and, in as much as a good character is sooner lost than established, that they do not allow a temporary advance in price, or an increased demand, to tempt them to injure their good name, by exporting, or selling for exportation, unmerchantable sugars.

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## THE CULTURE OF THE VINE AND TOBACCO.

BY GEO. M. ROBERTSON.

There are several branches of agriculture for which these Islands are thought to be admirably adapted, which seem to be discountenanced, or at least neglected, from a prejudice against them. For example, the raising of grapes for making wine and raisins, and the growing of tobacco for making cigars.

Many parts of the Islands, from the volcanic nature of the soil, have been pronounced by persons well qualified to judge of the matter, equal, or perhaps superior to some of the most celebrated wine growing countries in the old world. Vines might be raised to great perfection on many places where our present staple articles of sugar and coffee cannot be grown. We must by no means judge of the capabilities of our genial soil and climate, for vine growing, by the wild, untrained, unpruned specimens which we now see brought to market. Grapes, as well as most other fruits, require care and cultivation to bring them to perfection, and I am informed that there are on the Islands several Portuguese from the Western and other Islands in the Atlantic Ocean, who understand both the mode of culture, and the process of manufacturing wines in those countries. There can be but little doubt that this would prove a very profitable branch of agriculture, if properly followed up.

That we should continue to import so much poor wine from other countries, and pay them for it in hard doubloons, when we can raise our own of a much better quality, is too absurd for me to believe that it will continue so for many years. And not only might we manufacture for our own consumption, but be able to export to other countries. It has been said that the manufacture of wine would lead to habits of intemperance, and perhaps prove ruinous to the native inhabitants. But I believe this argument to be entirely unfounded on fact or analogy. For it is a well known circumstance that in the wine growing countries of Europe, where the inhabitants use it constantly as a beverage, the people are far more temperate than those of England, the United States or Russia. I believe the people of the Hawaiian Islands will begin to show the spirit of true civilization only when they set about developing all the resources of wealth and comfort, and enjoying rationally all the means of happiness, which it has pleased their Creator to bestow upon their country and place within their reach.

In reference to the cultivation of tobacco, I would remark that the tobacco raised on these Islands, is said by the Mexicans and Californians, to be of excellent quality. It certainly possesses a flavor superior to that of two thirds of the cigars imported into our market. It will grow, I think almost anywhere on these Islands. I have seen considerable quantities of it growing in some parts of Hawaii, where I believe it would have puzzled a goat to have found a blade of grass. There are thousands of acres of barren land in this kingdom that are suitable for nothing else that I am aware of but raising tobacco. These lands might be turned to account in this way, and they will be so in a few years, or as soon as those who own such lands begin to wake up to their own interests.

Should either the Government or the Agricultural Society adopt the system of giving premiums for the encouragement of Agriculture and Manufactures, I hope they will not forget to offer one for the finest flavored wine, grown and made within the kingdom, and one, also, for the best domestic segars.

Agriculture and manufactures are in such an embryotic state on these Islands at present that the keenest Yankee who ever crossed the Sierra Nevada, could not guess what the result of skill, enlightened principles and industry will be in the course of time. One thing I

have no doubt of, and that is, that many members of this society will live to sit under their own vine and fig tree, and smoke Hawaiian "long nines."

## REMARKS ON FENCES.

BY REV. E. JOHNSON.

One subject of some importance to the agricultural interests of the Islands, I conceive to be that of fences. The building and repair of fences form a small item in the labors of the New England farmers. There, as in Old England, and other enlightened countries, fences in the form of ditches, hedges, wall or wood, are deemed essential to the protection of cultivated lands. The importance of this subject will doubtless increase in the estimation of the agricultural community, in proportion as the number of landholders increases, and the number of farmers and graziers multiplies. Already has a want of fences in some instances been seen to be a *\*pilikia* of some importance. The grazier is equally interested in this subject with the tiller of the soil, especially if actuated by the "Golden Rule" of loving a neighbor as one loves himself.

In glancing hastily over this subject, I shall attempt to answer briefly the two following questions, viz :—

1. To whom belongs the duty of building and repairing fences?  
2. What are the materials best adapted for the construction of fences in this kingdom.

1. To the question to whom belongs the duty of building and repairing fences, a diversity of opinion would doubtless be found to exist. While the planter may contend that his neighbor the grazier should be compelled to keep his animals within their own limits, unaided by himself, the grazier may as warmly contend, if not with as good reason, that the planter should aid him in the labor and expense of enclosing adjoining lands. In enlightened lands either wholesome laws or public opinion settle questions of this nature.

*\*Pilikia*, difficulty.

In New England I believe public opinion, if not the law, decides that persons owning lands adjoining each other, shall share equally the labor and expense of building and repairing fences. This rule would seem to be based on the fact of reciprocity of interest. There, each farmer is supposed to unite the cultivation of the soil with the rearing of flock and herds. That being the case, common sense would seem to dictate that the expense of enclosing adjoining lands be borne equally by the interested parties.

Now when we bring this principle to bear on the state of agriculture in the Islands, we fail, I think, to find that reciprocity of interest that would render the rule admissible here. The tiller of the soil may be inclined to enclose his cultivated lands as soon as the proceeds of his crops will allow, but he surely cannot be expected, in the infancy of his agricultural pursuits, to go to the expense of building one half of the fence that separates his land from the thousands of acres owned by his neighbor the grazier, merely to benefit the latter.

The Hawaiian Legislature doubtless took the same view of the subject when they enacted the law, imposing a fine of \$5,00 per head for the trespass of horned cattle upon cultivated grounds. The above law was afterwards altered to read \$1,00 per head instead of \$5,00. That, I believe, is the law now in force.

Leaving this part of the subject, that admits of much diversity of opinion, to be discussed by those better able to do it justice than myself, I pass to the next subject of inquiry, viz:—"materials best adapted for enclosing lands in the Islands,"

Here is a wide field for investigation. But little has been done in experimenting upon the shrubs best adapted for hedges, or by a trial of the best materials for fences.

I have but little or nothing to communicate by way of actual experience on this subject, still I may be able to make some suggestions that shall aid in experiments that may hereafter be made.

On the question, then "what are the best materials for enclosing our lands," I would say, that where stones are handy and abundant a good solid stone wall is the most durable, and in the end, far the cheapest fence. Where stones are abundant, two objects are gained by converting them into a wall, viz:—to remove them from the soil that the plow, cultivator, harrow, &c, may not be obstructed in their

labor-saving work, and also to enclose the land thus cultivated. But, unfortunately, many lands are almost or quite destitute of the durable fencing material, stone. In such case, either ditching must be resorted to, or other materials such as wire, shrubs for hedges, or other wooden materials must be used.

Of the practicability of ditching for enclosing lands, I feel hardly able to express an opinion. It is doubtless worthy of a trial.

As to the comparative cheapness and durability of wire fence, compared with that of wood, I do not know that experience enough has been gained in the Islands to warrant a decision. Indeed I know of only one case where a trial of wire for an enclosure has been made, and that is by our esteemed citizen, Her Britannic Majesty's Consul General, now a resident upon these shores.

For wooden fence, the *ki stick* is much used, and is found to answer to good purposes where free from the larger animals that feed upon its leaves, and destroy its health and its growth. Another material that has been extensively used for fences is the *Hau*, which I believe is a species of the *Hibiscus*. The usual manner of construction is this. A trench is dug, from 18 inches to 2 feet in depth, and the sticks of a suitable length placed perpendicularly and compactly together, so as to form two rows in depth, or if the sticks are large a single row is sufficient. This trench is then filled with earth, which is so compressed as to cause the sticks to take root. Where it does take root, its growth is rapid and the limbs sent out from the top in about two years afford material for filling up the portions of the fence where the *Hau* has decayed. One objection to using the *Hau* for enclosing arable land, is that the roots branch out nearly a rod on each side of the fence, greatly to the injury of the growth of vegetable production. The difficulty occasioned by the drying away of a part of the *Hau* sticks may be overcome by twining or intertwining the living twigs across the dry part of the fence, thereby filling up the space. I am indebted to my friend, Thos. Brown, Esq, of the falls of Wailua, Kauai, for suggestions on this subject. Various other shrubs have been at various times suggested as useful materials for hedges. Among them is the *Prickly Pear* or *Cactus*. I have tried no experiments with this plant, but I think that it might be used for a hedge on a tolerable dry soil, especially if kept well pruned. A species of prickly minora and

the lime have both been suggested as suitable for hedges, but I am not aware that a trial has been made of either.

There are several trees that I think might be used for enclosing lands, such as the Kukui or Candle Nut, and an East India tree commonly termed the "Pride of India." I have thought that the Kukui sowed in drills and kept well cultivated would answer a good purpose as a fence. It would require a few years, perhaps three, to get a growth sufficient to make it impenetrable for animals. I am not at all certain that it would answer a good purpose as the nearness to which the trees must stand to each other, would perhaps prevent a sufficient body to answer the purposes of a hedge.

The 'Pride of India' might perhaps be used for the same purpose ; and, if not in that near proximity, let it be planted say from three to six feet apart, and after three years growth is attained let durable rails be inserted into the body of the trees, fastened by a nail, if need be, and they would soon become so embedded into the body of the tree as to make a solid fence. These trees would of course become permanent posts, and the limbs would answer for rails, when the first set of rails had become decayed. These are merely suggestions and not the results of actual experience.

Here, with a few remarks, I will close this paper. My object in this brief essay has not been especially to enlighten this society, nor to communicate much information from actual experience, but merely to bring the subject before the minds of this body, who may possibly deem it important enough to elicit discussion from those better able than myself to do it justice.

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## REPORT RESPECTING THE AGRICULTURAL PROSPECTS OF THE DISTRICT OF HAMAKUA, MAUI.

BY A. W. PARSONS.

In the district of Hamakua, within three miles of my house, there are one thousand acres of sugar cane, three quarters of which should be manufactured within the current year. At present there are three sugar mills in operation, and five in process of erection. These, when complete, will enable the planters to manufacture at least six

hundred tons of sugar per annum. The average produce per acre has been ascertained to be about one ton. A careful account of the produce and expense of twenty five acres of cane, shows the following result, viz :—cost of planting and raising to maturity, ready for manufacturing, \$12 per acre. Cost of manufacturing and shipping to market, including commission for selling, &c., \$50. Total expense of raising, manufacturing and selling \$62. Avails from sales of the produce per acre, \$236. This sugar sold at an average of 10 cents. per lb., the molasses at about 30 cts. per gallon.

There have been raised in this district the past year, at least one hundred bushels of wheat, of a quality equal if not superior to any raised in Western New York. The quantity per acre I have not yet ascertained. Irish and sweet potatoes have been produced in great abundance and perfection, wherever proper attention has been paid to the crops.

Statement of exports from the port of Lahaina to California of domestic produce from Aug. 28, 1849, to Aug 10, 1850.

|                         |         |                     |        |
|-------------------------|---------|---------------------|--------|
| No of vessels,          | 55      | No of blocks coral, | 1,428  |
| “ bbls. Irish potatoes, | 26,421  | “ cords wood, -     | 55     |
| “ “ sweet do,           | 3,961   | “ doz. poultry,     | 22     |
| “ “ pickles,            | 535     | “ “ eggs,           | 504    |
| “ pumpkins,             | 47,640  | “ swine,            | 255    |
| “ cocoa nuts,           | 21,800  | “ sheep,            | 170    |
| “ lbs sugar,            | 211,408 | “ feet of lumber,   | 28,772 |
| “ bbls molasses,        | 612     | “ lbs. coffee,      | 8,000  |
| “ “ syrup,              | 743     | “ bbls. beans,      | 8      |
| “ bags salt,            | 1,812   | “ water melons,     | 5000   |
| “ bbls. lime,           | 87      | “ cabbages,         | 400    |
| “ “ onions,             | 1,203   | “ lbs. arrow root,  | 1,600  |
| “ “ yams,               | 28      | “ pine apples,      | 12,000 |
| “ “ oranges,            | 3,300   |                     |        |

Total value of the exportations \$132,079,37. 108 whale ships have arrived during this time. Each of these ships lay in as stores an average of 50 bbls of Irish potatoes and 500 pumpkins.

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