



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**PROCEEDINGS
OF THE
CARIBBEAN FOOD CROPS SOCIETY**



SECOND ANNUAL MEETING

BRIDGETOWN, BARBADOS

OCTOBER 19-23, 1964

VOLUME II

OFFICERS

1964

President : A. deK FRAMPTON
Chief Agricultural Officer
Ministry of Agriculture
Bridgetown, Barbados

Vice President : HUGH C. MILLER
Caribbean Organization
Hato Rey, Puerto Rico

Secretary/Treasurer : ARNOLD KROCHMAL
Virgin Islands Agricultural Program
United States Department of Agriculture
Kingshill, St. Croix
U. S. Virgin Islands

Directors :

H. AZZAM
Agricultural Experiment Station
University of Puerto Rico
Rio Piedras, Puerto Rico

JOHN PHILLIPS
Director of Agriculture
Department of Agriculture
Plymouth, Montserrat

F. APONTE APONTE
Agricultural Extension Service
University of Puerto Rico
Rio Piedras, Puerto Rico

CLAUDE PY
Agriculturist - I.F.A.C.
Fort-de-France
Martinique

R. OSBORNE
Banana Board
Kingston
Jamaica, W. L.

CHARLES HORTH
Chairman
St. Croix Growers' Association
Kingshill, St. Croix
U. S. Virgin Islands

CHAIRMAN OF COMMITTEES

1964

Finance : C. Horth

Economics and Sociology: P. Ruopp

Plant Introduction: H. Azzam

Technical Assistance : A. Krochmal

Plant Pests : G. Stall

Publicity : H. C. Miller

Programme : A. deK Frampton

CARIBBEAN FOOD CROPS SOCIETY
Second Annual Meeting
Barbados October 19-23
Business Session October 23

MINUTES

The Business Session of the Second Annual Meeting of the Caribbean Food Crop Society was held at the Aquatic Club - Barbados commencing at 10:30 a.m.

Opening

The meeting was called to order by Mr. H. Miller, Vice President in the absence of Mr. A. de K. Frampton, President.

Quorum

There were 32 members in attendance when the meeting was called to order and a quorum was formally declared.

Minutes of Previous Meeting

The minutes of the previous meeting were confirmed on a motion by C. Samuels seconded by R. Foreman.

The meeting decided to request the Board of Directors to ensure that in the future minutes of annual meetings be distributed to members at the same time as notices of the next annual meeting.

Secretary's Report

The Secretary's report was approved and accepted for incorporation in the minutes.

Treasurer's Report

The Treasurer presented a Financial Statement as of September 30, 1964. The Report showed a bank balance of \$1,303.17 at credit of the Society after deducting expenditure shown under sub-heads and totalling \$5,390.97 from total receipts shown as \$6,694.14.

The meeting requested that in future the item "Receipts" should be broken down to show active membership fees collected, sustaining membership fees and individual donations, and that an audited Financial Statement be presented.

Report of Plant Quarantine Working Committee

The meeting noted the circulation of a Report by G. Still, Chairman of the committee and referred it for the attention of the Board of Directors and appropriate follow-up action.

Resolution arising from Discussion Session on "Land Tenure and Agricultural Production"

The meeting noted that discussion had brought to light a serious condition existing in several countries of the area in which expansion of agricultural production is being hampered by:

- 1- Inflated land values arising out of the uncontrolled development of tourist resorts, the lack of development zoning and inadequacy of legal and other regulating provisions.
- 2- Sub-division of land into units of a size inadequate to provide full-time occupation or a reasonable annual income for rural families.
- 3- Use of valuable agricultural land for the establishment of large-scale housing settlements.
- 4- Insecure agricultural tenancy arrangements.

The meeting accordingly accepted the following resolution, which it directed the Secretary to transmit to Ministers of agriculture in the various countries which have shown interest in the activities of the Society.

"The Caribbean Food Crops Society at its Second Annual Meeting held in Barbados October 19-23, 1964

- a) Invites special attention by Governments and, in particular, by Ministers responsible for agriculture in the Caribbean area, to the serious threat to agricultural productivity posed by the developments noted above.
- b) Recommends the undertaking, where necessary, of surveys of national land resources with a view to the definition of areas which should be permanently conserved for agricultural production and
- c) Requests their co-operation in supplying to the Secretary of the Caribbean Food Crop Society copies of all laws and publications dealing with land tenure and land use in their countries in order that the Society may undertake a comprehensive study of these problems on a Caribbean wide basis.

Site of Third Annual Meeting

The meeting was assured of a strong desire on the part of the Puerto Rican members of the Society that the Third Annual Meeting should be held in Puerto Rico, and of the willingness of several agricultural agencies to offer support to ensure a useful programme of agricultural activities.

Subject to the approval of the State Department of the Government of the Commonwealth of Puerto Rico, it was accordingly agreed that the next annual meeting of the Society will be held in that country in July 1965.

Election of President

Dr. Hassan Azzam of the University of Puerto Rico was unanimously elected President of the Society as from October 23, 1964 to the date of the Business Session of the next annual general meeting, or until a successor shall have been duly appointed in his stead.

Election of Vice-President

Mr. R. A. Foreman of Jamaica was unanimously elected Vice-President.

Election of Board of Directors

The Secretary read a letter from C. Horth, a member of the Board of Directors, sending his resignation in view of pressure of business matters in the U. S. This was accepted.

The chairman pointed out that in addition there would be one vacancy for replacement of Dr. Azzam who had been elected President and that Messrs. J. Phillips and C. Py were retiring by rotation, but were eligible for re-election. Thus there was a need to elect four persons to serve on the Board of Directors for 1964-65.

The meeting unanimously elected the following:

H. Miller - Caribbean Organization
V. Royes - U. W. I. - Trinidad
J. Phillips - Montserrat
R. Bond - U.S.V.I.

and the Board of Directors was requested to determine the period for which each member should serve before retiring, in conformity with the rules of the Society.

Balloting for Prize Awards

Ballots were opened and closed for the following awards:

- a) The Cornelli award of \$100 by the Cornelli Seed Company for the best paper on Vegetables.
- b) The Harvey award by Harvey Aluminum, Inc. for the paper which offers the most valuable contribution to problems of food production in the Caribbean area.

The ballots after examination indicated majority decisions as follows:

For the Cornelli award - Dr. Hassan Azzam
For the Harvey award - Paper by N. Davies and A. J. Vlitos on
"Coconut fiber waste as a basic medium
for the production of Vegetables in Trinidad".

Election of Honorary Members

The meeting unanimously elected to Honorary Membership in the Society the underlisted persons who were considered to have made an outstanding contribution to food production in the Caribbean area.

Mr. Leo Harvey - Harvey Aluminum, St. Croix, U.S.V.I.

Mr. Arturo Roque - Former director of Agricultural Experiment Station
U.P.R., Rfo Piedras, P. R.

Mr. Roberto Huyke - Director of Agricultural Extension Services of
the U.P.R., Rfo Piedras, P. R.

Any Other Business

Mr. D. Basil Williams of the U.W.I., Trinidad, informed the meeting that early in 1965 the Government of St. Vincent would be celebrating the second centenary of the establishment of the Botanic Gardens in that country and suggested that the Caribbean Food Crop Society should be officially represented on that occasion. It was agreed that the Board of Directors be requested to arrange for appropriate representation of the Society at these historic celebrations.

RESOLUTION

WHEREAS the Barbados Government through the kindness and generosity of the Premier, the Hon. Errol Barrow, made available to the Caribbean Food Crops Society free secretarial and transport services for the holding of the Society's second meeting in Barbados, during the period 18th to 23rd October, 1964, without which it would have been extremely difficult for the Society's meeting to be held;

BE IT RESOLVED that the Caribbean Food Crops Society in session at its second annual general meeting held at the Aquatic Club, Bridgetown, Barbados, on the 23rd October, 1964, record its sincere and grateful appreciation for the many courtesies and kindnesses as well as assistance afforded the Society by the Barbados Government during the meeting of members of the Society which began on the 18th October and ended on the 23rd October, 1964:

BE IT FURTHER RESOLVED that a letter be sent to the Honourable Errol Barrow, Premier of Barbados, expressing the Society's appreciation as herein stated.

Adjournment

The meeting adjourned at 12:45 a.m.

PROPOSED ESTABLISHMENT OF A CARIBBEAN
REGIONAL PLANT PROTECTION ORGANIZATION

BACKGROUND:

- 1- All of the Caribbean countries depend very largely on agriculture for sustenance, for export trade or for both.
- 2- The already extensive travel, and trade in agricultural products between the Caribbean countries is constantly increasing.
- 3- There exist throughout the world numerous pests and diseases of plants that have not reached the Caribbean region, and others that occur in some, but not all of the Caribbean countries. Spread of these pests and diseases into and within the region would have a serious and in some cases a disastrous effect upon agriculture in the Caribbean countries. This is particularly true in those countries in which diversification of crops is being stressed.
- 4- Few of the Caribbean countries have adequate and up-to-date plant quarantine legislation. Still fewer have adequate staff and facilities to enforce such laws as they have.
- 5- In other parts of the world there exist Regional Plant Protection Organizations, embracing countries with common problems and engaged in agricultural trade with each other. An outstanding example is OIRSA (Organismo Internacional de Sanidad Agropecuaria) in Central America and Mexico, which has been instrumental in assisting in developing plant protection and plant quarantine programs on an international level, and has clearly demonstrated the success that can be achieved by an organization of this type.
- 6- International Organizations, especially the Food and Agricultural Organization of the United Nations, have regularly provided assistance in the establishment of Regional Plant Protection Organizations, and have provided technical assistance once the Organization has been established.

THEREFORE, BE IT RESOLVED:

- 1- That the Caribbean Food Crops Society request the assistance of the Food and Agricultural Organization of the United Nations in the formation and establishment of a Regional Plant Protection Organization for the Caribbean Region, and in the preparation of a Convention, which shall serve as the basis for the establishment of said Organization.
- 2- That the Caribbean Food Crops Society, in collaboration with the college of the Virgin Islands, sponsor a meeting to be held on St. Thomas, V. I.

during the period 21st to 25th March, 1965, at which time the Ministers of Agriculture of the Governments of the Caribbean Region (or their duly accredited representatives) will study a model of the Convention prepared by FAO for the establishment of a Caribbean Regional Plant Protection Organization, in order that this Convention may be approved during the course of the meeting.

- 3- That a detailed background paper, clearly justifying the need for a Caribbean Regional Plant Protection Organization, on the basis of existing plant protection problems in this area, be prepared by one of the officers of the Caribbean Food Crops Society, for presentation at the meeting to be convened in March, 1965.
- 4- That the Caribbean Food Crops Society respectfully ask the Ministers of the Governments within the Caribbean Region to request the Food and Agricultural Organization of the United Nations for its co-operation in the preparation of the Plant Protection Convention previously mentioned and in the establishment of a Caribbean Regional Plant Protection Organization.

This report was prepared by the Working Committee on Plant Quarantine:

R. M. Bond, U. S. Virgin Islands

F. del Prado, Surinam

A. G. Naylor, Jamaica

Harold Bowman, Puerto Rico (USDA)

George Berg, San Salvador (FAO)

No. A.G. 11/T.2.

IN REPLYING THE ABOVE NUMBER
AND DATE OF THIS LETTER SHOULD
BE QUOTED.

*Ministry of Agriculture, ~~Land~~ & Fisheries,
Crumpton Street,
Barbados.*

23rd October, 1964.

Sir,

I am directed to refer to the report on Plant Protection in the Caribbean Region which was referred to this Government on 22nd October, 1964 for consideration, and to inform you that the Government has agreed that it would -

- (a) support the proposals for the establishment of a Caribbean Regional Plant Protection Organisation;
- (b) agree to send a representative to the proposed meeting to be held in St. Thomas, Virgin Islands from 21st to 25th March, 1965 to study a model of the Convention which it is proposed to request the Food and Agricultural Organization to prepare for the establishment of a Caribbean Regional Plant Protection Organization; and
- (c) support an application of the Governments within the Caribbean Region to the Food and Agricultural Organization of the United Nations for its Corporation in the preparation of the Plant Protection Convention mentioned above and in the establishment of a Caribbean Regional Plant Protection Organization;

2. It is assumed that you will keep this Government informed of developments.

I am,

Sir,

Your obedient servant.


for Permanent Secretary. ap.

The Secretary,
Caribbean Food Crops Society,
Aquatic Club,
ST. MICHAEL.

CARIBBEAN FOOD CROPS SOCIETY

SECOND ANNUAL MEETING

Opening Remarks
by
Vice President - H. C. Miller

The Hon. Errol Barrow, Premier of Barbados
Hon. Capt. George Ferguson, Minister of Agriculture and Fisheries
Other Hon. Ministers of Government
Mr. Speaker of the House of Assembly
The Hon. President of the Senate
Other Distinguished Visitors
Officers and Members of the Caribbean Food Crops Society

I have the honour this morning to deputise for our President Mr. A. Dek. Frampton, one of the Co-founders of the Society, whose absence today is unavoidable and greatly regretted, and to call to order this Opening Session of the Second Annual Meeting of the Caribbean Food Crops Society.

It is also my pleasant duty on this occasion to extend a warm welcome to our members who have, at great personal difficulty, travelled from countries all over the Caribbean and from as far away as Canada, to attend this meeting and, in particular, those who have made it possible to contribute papers or who have agreed to take a leading role in our panel discussions, contributions which will provide the basis of our proceedings at this meeting.

On behalf of the Society, I must also convey to the Hon. Errol Barrow our profound appreciation of the active interest he has shown in our Society, our heartfelt thanks for his kind invitation which made it possible for us to be here and for the considerable assistance rendered by him personally, as well as by the Hon. Capt. Ferguson and members of their staffs, in the completion of the many and varied preliminary arrangements without which our meeting here would have been severely handicapped. Indeed, Barbados, its Government and its people have extended to us in full measure that welcome and hospitality for which this island is so famous, and the presence here this morning of so many distinguished representatives of all sectors of the community is ample evidence of this friendliness and interest which I am sure we shall all long remember.

On behalf of our Society, Sir, I ask you to accept our warmest thanks to you and to Barbados.

Since our last Annual Meeting, the Society has successfully carried out a number of practical measures which we are sure will make an important contribution to Caribbean agriculture. These include advisory visits made to several countries by qualified specialists, a study of the needs of certain countries of the Caribbean as regards quarantine restriction and the fuller

exchange of material throughout the area, and the organisation of a training course in Chemical Pest Control for Caribbean personnel. This course was completed last Friday and from all accounts it was an outstanding success and will greatly promote the efficiency of vegetable production in the area. The Society is indebted to the Vice-Chancellor of the University of the West Indies at the College of Agriculture in Trinidad and to Dr. Kasasian and Mr. Patrick Haynes, members of this Society, who were responsible for organising and conducting the course. We are looking forward to a year of increased activity following this meeting.

I now have the honour to call on Dr. R. Bond, First President of our Society and Chairman of our Board of Directors, to introduce the Hon. Errol Barrow who will later address us.

Welcome Address by His Excellency the Governor
at the Second Annual Meeting of the Caribbean
Food Crops Society

Honourable Ministers, Distinguished guest, ladies and gentlemen, first of all I would like to extend a very warm welcome to those delegates who have come from abroad. We have various delegates here from Surinam, Puerto Rico, Jamaica and Trinidad, San Salvador and the Virgin Islands and we are very delighted to see them. We did extend the invitation to the Governor of the U. S. Virgin Islands, Mr. Paiewonski and his lady, but unfortunately they are in the States on other business and it has not been possible for them to attend, but I am sure that they would have liked to be here if it had been possible for them to do so.

Now the choice of Barbados as the venue of the second annual meeting of the Caribbean Food Crops Society is a matter of more than passing significance and one which we in Barbados accept and appreciate as an honour. While it must be recognised that statistics taken in isolation can often be misleading, Barbados by virtue of its size and population constitutes a subject for special study when viewed in the context of self-sufficiency in food production. Adequacy of land and its complementary endowments are usually considered as an indication of the potential resources of a country; and one which boasts of over 1,400 people to the square mile will not easily escape attention in the world at large or in this particular area.

How many times casual visitors to Barbados have said to me with little knowledge of the implications and difficulties - "Why don't you grow more food crops?" "You should not depend on sugar entirely." So right. Here we have a problem which deserves further study. The problem of feeding the world's millions has come most prominently into focus in the 1960's with the declaration of the period by the United Nations as "the development decade" and in assessing the social and economic levels of countries, conclusions have been drawn testifying to the prerequisite of adequacy in food supply, both as regards quantity and quality, for orderly development. It is in support of this widely accepted view that the Freedom from Hunger Campaign has been launched in recent years and which has led the Economic and Social Council of the United Nations to promote its World Food Program as one of the prescriptions for economic mal-adjustments from which millions the world over still continue to suffer.

The emphasis which has been placed on global food production in the post-war era is amply reflected in the existence of the Food and Agriculture Organization which can boast of being one of the oldest members of the United Nations family of Organizations as presently constituted. Initial action taken in 1943 led to its formal constitution in 1945, and I think it would be appropriate on an occasion such as this to reflect on certain principles of its policy as laid down in the preamble to its constitution.

Member nations accepting the constitution of the Food and Agriculture Organization agreed to promote their common welfare by furthering separate and collective action on their part for the purpose of contributing towards and expanding world economy. This objective was to be achieved firstly by raising the levels of nutrition and standards of living of the peoples under their separate jurisdictions; secondly - by securing improvements in the efficiency of the production and distribution of all food and agricultural products; and thirdly - by bettering the conditions of rural populations.

It has been estimated that the total world population is about 300 billion and that more than half of this number is either under-nourished or mal-nourished. We are told that one child out of every three born has no chance of living a normal life, and the situation is getting worse because population is increasing rapidly and food production is not keeping pace with it. These are terrifying thoughts which must jolt us out of our complacency. However, it is considered that there are means at hand to meet this challenge if properly used, and that the possibility of a world free from the miseries of hunger is attainable. From studies and projections made, it is believed that world food supplies must be trebled by the turn of the century if the world population, which is expected to double itself by then, is to have enough to eat.

The gravity of the problem has been stated in no uncertain terms by the Food and Agriculture Organization in one of its publications in which the prevalence of hunger in the world is high-lighted and at the same time condemned. Its enormity and consequent evils which it inflicts upon society are incorporated in this description of a hungry man -

"A hungry man is a social liability. He cannot work effectively on a hungry stomach; he cannot study and learn as he should to improve his conditions of life; he cannot think beyond his immediate needs, of which food is dominate - in short, because he can be counted in millions, he retards not only the economic and social development of his country, but also the prosperity of the world."

The same publication defines hunger. This, it states, connotes either under-nutrition or mal-nutrition implying that insufficiency of food or inadequacy in the balance of diet is in either case a threat to life and social and economic progress. It is against the background of the world problem on which I have so far dwelt that I wish to bring your society with its regional commitments, into perspective.

It is known that the objectives of the Society are to advance Caribbean food production and distribution in all their aspects to the end of improving levels of nutrition and standards of living in the Caribbean. This would seem to indicate that there exist special common factors hindering the achievement of this goal in individual territories, and it is heartening to think that countries in the area will benefit from the collective experience and expertise of persons who have made such problems their study. The territories have in the past concentrated on the development of certain specialised crops for which there was a great export demand. While this is understandable from the point of view of developing trade, the opinion is now widely held that in the face of ever-growing population pressures over the world in general, a country's self-sufficiency in basic agricultural products is essential if development is to proceed at a reasonable and increasing pace. The establishment of your Society signifies that there is

need to intensify efforts for the region in satisfaction of its special needs. But we can view this as promoting efforts which should redound not exclusively to the benefit of the countries of the Caribbean but as contributing to the solution of a world problem.

Your society is still in its infancy, and your interest in promoting food production, processing and marketing in the area will, I hope, be rewarding. The strenght of any organization springs from its members and I hope that you will be able to attract to your list a greater number of active as well as sustaining members. The Caribbean Food Crops Society was born out of enthusiasm and if this enthusiasm is sustained and leads to definite action in the stimulation of food crops in the area, I have no doubt that the Society will grow from strength to strength. It is at annual meetings such as this that you will find scope for stock-taking and making plans for the future, and what is most important, exchanging information on research.

I have therefore much pleasure in extending to you all a very warm welcome to Barbados, and hope that on your departure you will take with you memories of an enjoyable stay. I wish you fruitful deliberations and every success in the conduct of the business of your meeting, and I have much pleasure in declaring this Second Annual Meeting of the Caribbean Food Crops Society now open.

Address by the Honourable Minister of Agriculture
& Fisheries at the Second Annual Meeting of the
Caribbean Food Crops Society

The agricultural policy of the Government of Barbados is aimed at increasing productivity, diversifying agricultural production, and improving the system of marketing local produce with a view to a more efficient use of the island's land resources in order to meet the needs of its rapidly growing population. This involves a modification of the established pattern whereby most of the arable land has been geared to the production of sugar cane. In speaking to you on the "Government's policy in reference to food crops expansion", I will necessarily have to confine myself to the field of vegetables and root crop production; but I may mention in passing that the promotion of livestock and fisheries is considered a complementary essential in catering to the island's food needs, and that steps are being taken simultaneously in this direction in support of efforts to expand food crops.

The arable acreage in Barbados is about 68,000 acres, and it has been a policy established during the days of the last war, to require that all estates over 10 acres should plant a certain percentage of this acreage in food crops. The present percentage is 12 per cent, except in the cases of estates in the area known as the Scotland District which are required to plant 7 per cent. These estates have more grasslands than the average estates, hence the difference. In compensation, however, the estates having the mandatory food crop cultivation of 7 percent are required to increase their livestock production. The purpose of the stipulation of a food crop cultivation percentage was to ensure a minimum supply of vegetables and root crops in the face of war time shortages and the relatively good prices obtaining in the sugar industry. The mandatory requirement, while ensuring a minimum supply of food crops locally, could not be expected to bring about self-sufficiency in this field, which is the Government's ultimate goal. It was not intended to do so. Consequently, large quantities of vegetables and ground provisions which can be produced locally have been imported yearly.

It has been found that with improved technology in the sugar industry, greater emphasis can be placed on food crops production without impairing the returns from the sugar industry and the island's economy. This view is strengthened by the fact that food crops production yields a higher net revenue and offers more constant employment than sugar cane. In the light of this therefore, our policy in promoting the expansion of food crops has been stated in the current Development Programme as follows:

Firstly: A reduction in the dependence of the economy on a single export crop which is supported by a guaranteed market and a guaranteed price, and an increase in the quantity of locally produced foodstuffs to help feed the rapidly growing population and the tourists.

Secondly: The replacement, as far as is practicable, of the imports of those vegetables and food crops which the island can produce as economically as abroad, and the development of an export trade in vegetables.

Thirdly: Provision of jobs in agriculture or in enterprises based on agriculture, in order to help relieve the unemployment situation in Barbados.

Fourthly: Encouragement and promotion of efficient management of soil in order to preserve and raise its productivity; and

Fifthly: Conservation and protection of existing land resources by arresting the process of soil erosion in certain parts of the island.

In seeking to promote increased food production in the private sector, Government has taken a number of positive steps. We feel that peasant farming should be given every encouragement. With this in view, Government has for some years had in operation an Agricultural Credit Bank which provides loans at nominal rates of interest to enable small land-holders to effect improvements and finance cultivation. In addition, free grants are made to small-holders in cases where they are desirous of introducing irrigation systems. The Government wishes to encourage greater use of this facility than has so far been made, and so the minimum grant under the scheme has recently been increased in order to induce a greater number of small-holders to take advantage of the scheme.

It is realised that the greatest problem facing the small-holder is lack of capital and so in addition to offering the facilities just mentioned, the Government has introduced a tractor scheme under which plots are ploughed at relatively low charges. The tractors are owned and operated by Government, and in effect the scheme is a means of subsidising the production of the small farmer. By these methods it is hoped to stimulate food crops production among small farmers in place of traditional sugar cane cultivation which is a less tedious method of land utilization.

Because of the factor to which I have just referred, Government realises that more is needed than the provision of capital. Traditional methods die hard, and if change is to be brought about, demonstration must play an important role in effecting it. For this reason, the Government continues to provide agricultural extension services over the island by which new crops cultivation and techniques are brought to attention.

We are aware that small farmers also face certain disadvantages in economies because of the small size of their operations, and we are attempting to overcome this difficulty by means of producer co-operatives. The Government is therefore actively engaged in promoting and supporting the functioning of co-operative societies as a means of shielding the small farmer from extreme risks.

It is realised however, that sole reliance on the efforts of small farmers will not go far towards the attainment of self-sufficiency in food crops. If the island is to satisfy its present needs and cater to its growing population, increased cultivation of food crops on a large scale will be

essential. It is considered that there is much marginal sugar cane lands which could be profitably diverted to food crop production, and so to this end Government intends to demonstrate the feasibility of mixed farming and crop cultivation on a large scale. A number of estates has been acquired by Government for operation on a large scale basis, and plans are afoot for the establishment of an Agricultural Development Corporation for the management of all Government-owned lands. The functions of this corporation will be two-fold; firstly, to stimulate food production among privately owned large estates by demonstration and avoid the possibility of fragmentation; and secondly, to augment the island's total supply of food crops.

It is hoped that a further step towards food crops expansion in Barbados will follow from soil conservation work now being undertaken in the area known as the Scotland District in the north-east of the island. For centuries the Scotland District which comprises one seventh of the island's land area has been undergoing a process of severe erosion. Much valuable surface soil has been washed into the sea, thereby ruining the land, destroying agriculture, and leading inevitably to the decay of several communities in the area. The object of this work is to check further erosion by reclaiming and rehabilitating the land to enable it to make its contribution towards increasing the productivity of the island, and so to improve the social and economic conditions of the people who live in the area. Preliminary research indicates that land in this area is marginal for sugar cane and would be more suitable for food crops. The scheme involves rehabilitation of private as well as Government-owned lands, and this affords opportunities for demonstration and research.

It is realized that any attempt to encourage increased production and diversification of agriculture must take into account the need of the producer for favourable price and easy outlet for his produce. And so, in endeavouring to cope with this problem, the Government established within the last two years a Marketing Corporation with a view to providing price support and a guaranteed market for producers' food crops. It is expected, therefore, that the Corporation which is provided with modern facilities for the cold storage of vegetables and fruit, will afford the necessary stimulus for increased production and improved quality.

Research to discover new cash crops which are technically and commercially feasible in the island, and ways and means of reducing loss caused by plant disease and pests, is basic to any programme of Agricultural expansion. Although research into these problems is only on a comparatively small scale at present, there are plans for expansion in this vital area in the near future. In this field we welcome the aims and objects of the Caribbean Food Crops Society, and realize the benefits likely to accrue from its work.

Barbados is a territory which has tremendous respect for the results of agricultural research, as the maintenance of the efficiency of its sugar industry can be attributed to intensive and sustained research over three-quarters of a century. The fact that the island is densely populated and that there are pressures on the limited land available for agricultural cultivation, demands that production must be intensive rather than extensive. If we are to reach our goals of adequate and cheap supply of locally grown food, production must be as efficient as modern technology affords.

Message to
The President, Officers and Members
of the
Caribbean Food Crops Society
at their
Second Annual Meeting - Barbados
by
C. G. Beauregard, Secretary-General of the Caribbean Organization

Dear Friends of the Caribbean Food Crops Society,

I greatly regret that pressure of urgent business makes it impossible for me to attend in person this Second Annual Meeting of your Society which is being held in the beautiful island of Barbados.

Barbados is well known for its natural attractions and for the warm friendliness of its people. These I have myself enjoyed on previous visits, and I am sorry that I shall not be able, on this occasion, to share this privilege with you.

I am happy that it has been possible to arrange that Mr. Hugh Miller, your Vice-President and our Development Officer for Natural Resources, will be able to represent our Organization on this important occasion. The Caribbean Organization recognizes in your Society a tremendous potential for improving the economic well-being of the peoples of the Caribbean area.

No problem looms more menacingly on the Caribbean horizon than the rapid increase of population and unemployment on the one hand and regularly recurring unfavourable balances of trade on the other.

At the present time, there are still too many countries in this area which devote their resources almost exclusively to the production of one or two traditional crops for markets outside the area. As you know only too well, the area has little or no say in the prices it receives for these crops. At the same time, most of these same countries are importing an increasing volume of their food requirements from countries outside the area - again at prices over which they have no influence. This subjects the economies of countries of the area to factors beyond their own control, and this is far from being an ideal situation.

Development of production of fruits and vegetables and other food crops for intra-Caribbean trade, as well as for extra-Caribbean markets, can provide the means to improve this situation and can secure changes in resource utilization which will enhance agriculture's contribution to the current problems of unemployment, low nation income and unfavourable trade balances.

The countries served by the Caribbean Organization spent in 1963 over U. S. \$180 million to purchase from non-Caribbean sources fruits, vegetables and animal products, the bulk of which can be produced within the area. This sum is 50% greater than the total deficits in the trading balances of the 12 countries of the area, including Barbados which depend primarily upon agriculture for their national income.

Clearly the task to which your Society has dedicated itself is a worthy one, deserving of the vigorous support of all Governments and all those interested in the economic emancipation of the area.

The Caribbean Organization was happy to share with you sponsorship of the short course held last week in Trinidad with the cooperation of the Agricultural College of the University of the West Indies and under direction of two of your active and competent members; your several projects which are laying a sound foundation for the expansion of production and marketing will continue to have our full support and cooperation, and, on behalf of the Organization and its Secretariat, I extend to you on this occasion our warm congratulations on the results already achieved and our best wishes for the continued success of your Society in its future work.

CARIBBEAN FOOD CROPS SOCIETY

Countries of residence of members

1964

<u>Countries</u>	<u>Active</u>	<u>Sustaining</u>
Antigua	3	0
Barbados	17	0
British Guiana	1	0
British Virgin Island	1	0
Canada	1	0
Dominica	2	0
Dominican Republic	2	0
Guadaloupe	1	0
Haiti	2	0
Jamaica	16	3
Martinique	1	0
Mexico	1	0
Montserrat	2	0
Puerto Rico	40	6
St. Lucfa	1	0
St. Kitts	2	0
San Salvador	1	0
Surinam	3	0
Trinidad	11	3
U.S.A.	8	2
U.S. Virgin Islands	18	3
Venezuela	1	0
	<u>135</u>	<u>17</u>

CARIBBEAN FOOD CROPS SOCIETY

Sustaining Members

1964

Agricultural Development Corp., Jamaica

American Foundation, Cleveland

Caribbean Organization

College of the Virgin Islands

Cornelli Seed Co., St. Louis

Chemical, Inter-Amer., Puerto Rico

Esso Standard, Jamaica

Federation Chemicals, Trinidad

T. Geddes Grant, Trinidad

Grand Union de Puerto Rico

Harvey Aluminum, St. Croix

Jamaica Agricultural Society

Productos Libby, Puerto Rico

San Miguel Fertilizers, Puerto Rico

The Shell Company, Puerto Rico

St. Croix Rotary Club

University of the West Indies, Trinidad

PARTICIPANTS AT SECOND ANNUAL GENERAL MEETING OF THE
CARIBBEAN FOOD CROPS SOCIETY

BRIDGETOWN, BARBADOS

October 18, 1964

<u>Name</u>	<u>Address</u>
1- F. M. Alie	Department of Agriculture DOMINICA
2- Francisco Aponte Aponte	Agricultural Extension Service University of Puerto Rico Rfo Piedras, PUERTO RICO
3- Andrew, Arthur	Committee of Management Barbados Agricultural Society Ridgeway Plantation St. Thomas, BARBADOS
4- G. C. Armstrong	Edgecumbe St. Philip BARBADOS
5- H. Azzam	Agricultural Experiment Station University of Puerto Rico Rfo Piedras, PUERTO RICO
6- George Berg	FAO El Salvador SAN SALVADOR
7- Julio Bird	Agricultural Experiment Station University of Puerto Rico Rfo Piedras, PUERTO RICO
8- Jim Blaut	College of the Virgin Islands ST. THOMAS
9- R. M. Bond	Kingshill St. Croix U.S. VIRGIN ISLANDS
10- H. Bowman	Plant Quarantine Division USDA San Juan, PUERTO RICO

<u>Name</u>	<u>Address</u>
11- Peter Butland	Butland International Ontario, CANADA
12- J. M. Cave	Acting Chief Agricultural Officer Ministry of Agriculture & Fisheries P. O. Box 505 BARBADOS
13- Juan de D. Cubero Vega	Kings Hill St. Croix U.S. VIRGIN ISLANDS
14- José Cuevas Ruiz	Puerto Rico Nuclear Center College Station Mayaguez, PUERTO RICO
15- Norman Davis	Tate & Lyle Research Station Waterloo Estate TRINIDAD
16- Arthur Donelan	U.W.I. TRINIDAD
17- G. Davis-Isaacs	Ministry of Agriculture & Fisheries P. O. Box 505 St. Michael BARBADOS
18- C. J. L. Dupigny	Ridgefield Estate DOMINICA
19- Linnell Edwards	Ministry of Agriculture ST. KITTS
20- I. Evans	Department of Agriculture Tortola VIRGIN ISLANDS
21- Clarence Field	c/o T. Geddes Grant BARBADOS
22- A. de K. Frampton	"Lisbon Vale" Silver Sands Christ Church BARBADOS

- 23- R. A. Foreman
Agricultural Development Corp.
83 Hanover Street
Kingston, JAMAICA
- 24- Geoffrey Harford
Committee of Management
Barbados Agricultural Society
Norwood Plantation
St. James
BARBADOS
- 25- W. Headley
Ministry of Agriculture
& Fisheries
P. O. Box 505
St. Michael, BARBADOS
- 26- Ernesto Hernández
Agricultural Experiment Station
University of Puerto Rico
Rfo Piedras, PUERTO RICO
- 27- A. Krochmal
U.S.D.A., Kingshill
St. Croix
U.S. VIRGIN ISLANDS
- 28- D. B. Linden
Puerto Rico Nuclear Center
College Station
Mayaguez, PUERTO RICO
- 29- John M. Mayers
Barbados Marketing Corporation
Princess Alice Highway
BARBADOS
- 30- C. E. McKenzie
Senior Vice-President
Barbados Agricultural Society
Kowen's Plantation
St. George, BARBADOS
- 31- H. C. Miller
c/o Caribbean Organization
(Animal Husbandry)
452 Avenida Ponce de León
Hato Rey, PUERTO RICO
- 32- A. G. Naylor
Ministry of Agriculture
JAMAICA
- 33- William Pennock
Agricultural Experiment Station
University of Puerto Rico
Rfo Piedras, PUERTO RICO
- 34- B. Persaud
Institute of Social and Economics
(Eastern Caribbean)
Extra-Mural Center
The Pine
St. Michael, BARBADOS

<u>Name</u>	<u>Address</u>
35- J. C. Phillips	Department of Agriculture MONTSERRAT
36- Frank del Prado	Ministry of Agriculture SURINAM
37- G. A. Ramsay	Barbados Marketing Corporation Princess Alice Highway BARBADOS
38- Ian S. Robinson	President Barbados Agricultural Society Constant Plantation St. George, BARBADOS
39- Guy Rouanet	I R A T Neufchateau GUADELOUPE
40- Phillips Roupp	College of the Virgin Islands ST. THOMAS
41- V. Royes	R. R. C. Foodcrops U. W. I. Augustine, TRINIDAD
42- George Samuels	Agricultural Experiment Station University of Puerto Rico Rfo Piedras, Puerto Rico
43- Calvin E. Sides	P. O. Box 628 C Bridgetown BARBADOS
44- Antonio T. Sifontes	Agricultural Extension Service University of Puerto Rico Rfo Piedras, PUERTO RICO
45- L. Walter Van Whervin	Entomologist Ministry of Agriculture & Fisheries P. O. Box 505 BARBADOS
46- Louis Ward	Committee of Management Barbados Agricultural Society Mount Gay Plantation St. Lucy, BARBADOS

<u>Name</u>	<u>Address</u>
47- D. A. Weekes	Jordans St. George BARBADOS
48- D. B. Williams	Regional Research Center University of the West Indies JAMA'CA
49- Roy Woodbury	Agricultural Experiment Station University of Puerto Rico Rfo Piedras, PUERTO RICO

C O N T E N T S

	<u>Page</u>
Officers -----	1
Minutes of the Business Session -----	2
Proposed Establishment of a Caribbean Regional Plant Protection Organization -----	6
Support of the Barbados Government for the Establishment of a Caribbean Regional Plant Protection Organization -----	8
Second Annual Meeting Opening Remarks by Vice-President, H. C. Miller -----	9
Welcome Address by His Excellency the Governor of Barbados -----	11
Address by the Honorable Minister of Agriculture and Fisheries, Barbados -----	14
Message from Honorable C. F. Beauregard, Secretary-General of the Caribbean Organization -----	17
Countries of Residence of Members -----	19
Sustaining Members for 1964 -----	20
List of Participants -----	21
The Surinam Agricultural Experiment Station Story, by F. del Prado -----	29
Food Plants which may also serve as Ornamentals, R. Woodbury -----	31
Agricultural Applications of the Puerto Rico Nuclear Center Co ⁶⁰ Gamma Irradiation Facility, J. Cuevas Ruiz and D. B. Linden -----	34
Further Evidence on the Need of Magnesium for Pineapple in Latosols (Abstract), E. Hernández -----	39
The Compulsory Planting of Food Crops on Sugar Estates in Barbados, J. M. Cave -----	42
Plantain and Banana Mosaic in Puerto Rico, J. Bird, F. L. Wellman and F. Aponte -----	44

	<u>Page</u>
White Rust a New Disease in Surinam, F. A. del Prado -----	47
Pineapple Mealybug Control in Puerto Rico, M. E. Pérez Escolar -----	49
Yield Components in Pigeon Peas ' <u>Cajanus cajan</u> ', Vernon Royes -----	50
Extending Shelf Life of Mangoes with Irradiation (Abstract), D. B. Linden -----	57
Tomato Breeding for the Tropics, H. Azzam -----	56
Promising Weedicides for Use in Food Crops, L. Kasasian and A. Donelan -----	60
The Sweet Potato in Caribbean Agriculture 'Some Aspects of its Improvement by Breeding, D. Basil Williams -----	65
Mineral Deficiency Symptoms of Bananas, G. Samuels and Héctor Cibes Viadé -----	67
Experimental Production of Several New Sweet Corn Varieties for Canning, and for Fresh Market Use in Trinidad, W. N. L. Davies and A. J. Viltos -----	73
Morphological Differences Between Guava Clones, W. Pennock -----	88
A New Disease of Papaya in St. Croix, J. Bird and A. Krochmal -----	90
Coconut Fibre Waste as a Basic Medium for the Production of Vegetable Crops, W. N. L. Davies -----	95
The Marketing of Food Crops in Barbados, Towards a Concept of Food Distribution in the Caribbean, J. M. Mayers -----	123
Tour of the Scotland District of Barbados, J. Cumberbatch ---	126
Survey of Plant Pests in the Caribbean, G. Stell -----	129
Papers and Films Presented (No Abstract)	
Do Not Bring your Enemy Home, H. D. Bowman -----	134
Planning for Small Holder Food Crops Production in Densely Populated Areas, D. Edwards -----	134

	<u>Page</u>
Planning for Small Holder Food Crops Production in a Sparcely Populated Area, Particularly Venezuelan- Guayanan Area, J. Blaut -----	134
Picture Story of Cassava in Thailand, A. Krochmal -----	134
Slides and Exhibits of "Solo" Papaya Production and Marketing in the Caribbean, A Krochmal -----	135
The Hidden Menace, G. Berg -----	135
Regional Organizations in Plant Protection and their Importance, G. Berg -----	135
Investigation of Control or Possible Eradication of the Med. Fly by the Use of Irradiation, G. Berg -----	135