Welcoming Address on behalf of the Government of Colombia

Dr Josue Franco M.

Director General Instituto Colombiano Agropecuario (ICA)

The presence of recognized specialists at this symposium has a special meaning to Colombia, since edible root crops have always been a basic component of the staple diet of our people. Indeed the discovery in tropical America of food crops such as potatoes, cassava, sweet potatoes, yams, arracacha, malanga, sago, achira and others, dates back to the time of Colombus. However, improved technology has only developed in recent years as a result of population increases and worldwide food shortages.

Of those crops mentioned, potatoes have received the most attention. Scientists have studied them for more than a century because they passed the tropical and subtropical barriers and adapted to temperate soils. After the tragic famines in Ireland following the failure of potato crops in the last century, methods and systems to increase and stabilize potato production were designed.

Nowadays yams are regarded with particular interest because of the presence in some varieties of corticoid substances with widely known medicinal uses. Let us hope that the other plants you are studying with such dedication will contain equally important elements that will gain public attention, in addition to meeting the food needs of an ever-increasing population.

I think that the basic problem of the crops you are discussing here at this symposium is not so much the production of dry matter, but that of low protein content and poor quality. The percentage protein content of some root crops barely exceeds 2%. In experimental trials, ICA has obtained yields of 40–60 tons/ha from both cassava and potatoes. This illustrates the large potential that exists for increasing carbohydrate production. The same is true for yams, whose production can range from 20 to 30 tons/ha, although they have been subjected to relatively little scientific study. As you see, it is easier to solve the caloric deficit than the protein one. Thus, the efforts being made to produce cassava by-products with a high protein content through microbiological fermentation deserve further attention, and stress the need for new areas of research in the field of food technology.

The World Food Council has expressed the hope that "after ten years (1975– 1985) no child will go to bed hungry, no family will lack their daily bread, and no human being will be restricted by malnutrition in the future." However, increased crop production will only occur if there is a good economic return. In turn, this depends not only on the available technology but on the way it is applied, within a given economic and political framework.

I would like to mention that for the social, economic, and regional development of Colombia (1975–1985) considerable importance has been placed on a new Nutrition and Food Plan (PAN) which is part of the government's Integrated Rural Development Programs (DRI). The objectives of the Plan are to increase food production and to encourage better nutrition among consumers. Hopefully the knowledge gained at this symposium will reinforce existing technology so that it may better meet the needs of tropical countries. For us, the symposium has still another attraction. In Colombia, roots and tuber crops, with the partial exception of potatoes, are produced mainly by small farmers. The adoption of new technology has proved to be very difficult in the traditional small farm sector, and the Colombian Government has given top priority to this issue.

Welcoming Address on behalf of the Food and Agriculture Organization of the United Nations

Dr H. A. Al-Jibouri

Senior Officer, Field Food Crops Group Plant Production and Protection Division FAO, Rome, Italy

On behalf of the Food and Agriculture Organization, I am honoured to attend this symposium, and to extend the most sincere and warm wishes of the Director-General of FAO, Mr Edouard Saouma, for the success of this gathering.

Furthermore, I am particularly pleased to convey the enthusiasm and support of Dr Felix Albani, Director of the Plant Production and Protection Division, who has made it possible for several of his staff members to participate in and contribute to this meeting.

FAO is very pleased to be associated with this symposium, and has actively participated in the previous ones. Delegates may be interested to know of FAO's activities in the field of tropical root crop production and improvement since the Third Symposium. With financial aid from the United Nations Development Programme (UNDP), FAO was able to place a number of field experts in developing countries of the South Pacific, Asia, and Africa, to assist in programs related to the breeding, agronomy, and protection of root crops. UNDP has agreed, in principle, to provide more than US \$700 000 for a regional project on "Root crops development in the South Pacific." Another inter-country project for Africa entitled "Network of research stations on root and tuber crops" is also under consideration by the UNDP. Two publications, one on "Cassava — its importance in tropical countries" and the other on "Cassava processing" are in preparation by FAO and will shortly be published.

In the field of exchange of disease-free planting material FAO's role is to facilitate the shipment of such material from one country to another. Promotion of a network for genetic resources conservation centres, which include tropical root crops, is also one of FAO's regular program activities. A survey of root crops production and improvement in six countries located in the humid tropics of Asia was completed in 1974. A consultant was recruited in 1975 to prepare suggestions and guidelines for FAO's role in increasing and improving the productivity of tropical root crops in developing countries.

In many developing countries root crops are important energy sources which are easy to produce and which may have a processing or an export potential. To increase its support for root crop production especially in the tropics, FAO added a specialist in this field to its headquarters staff in 1976.

Welcoming Address on behalf of the International Society for Tropical Root Crops

D. G. Coursey

Tropical Products Institute 56-62 Gray's Inn Road, London, England

At the end of my term as President, it is an honour and a pleasure to welcome you on behalf of the International Society for Tropical Root Crops to this fourth International Symposium. This is the first truly international symposium on tropical root crops held in Latin America and it is most appropriate that Colombia is the host country. Other Latin American countries may have a higher production and utilization of tropical roots than Colombia, but this is probably the country of origin of one of the most important root crops — cassava. If the historians are not wrong, it was near this meeting place that cassava was first domesticated by man. Therefore, it is reasonable to expect that this symposium will devote considerable attention to cassava. But, we also find yam in Colombia, particularly in the coastal regions, while potatoes, sweet potatoes, ocumo, and other crops of the aroid group are abundantly produced here.

Colombia being the host country, it is most appropriate for the symposium to be organized in the magnificent facilities of CIAT, one of the newest institutions among those devoted to international research on agriculture. CIAT has started the most ambitious research program ever on cassava improvement, which although still young, already shows signs of great success, as in the case of the rice and wheat programs of the older international centres.

However, while looking ahead during the deliberations in this symposium, we should not forget the part which made possible our present development. It is nearly a decade since the first Symposium on Tropical Root Crops was held in April 1967 at the University of the West Indies in Trinidad. That was also the year in which, by coincidence, the classical study on production potential of tropical roots by de Vries, Ferweda, and Flach was published, attracting the attention of agricultural scientists to these long-neglected crops. Through this decade the attitude toward tropical roots has changed considerably in most countries of the world, and they are now more widely recognized as important producers of food both for humans and for animals.

We should be grateful for the foresight displayed by the organizers of the 1967 symposium, although I am sure they could not have anticipated how rapidly the subject would develop. That first symposium was a great success, and the participants realized the value in organizing another meeting and forming an association to maintain the contacts and interest.

As a result, the second International Symposium was held in August 1970 at the University of Hawaii. At that meeting the International Society for Tropical Root Crops was formally created, and it has subsequently made a great impact on the world of tropical agriculture. Ibadan, Nigeria, was the host of the third International Symposium on Tropical Root Crops in December 1973, organized by the Society with the cooperation of the International Institute of Tropical Agriculture. I would like to express our appreciation to CIAT for having offered its premises and facilities for this gathering. I also want to thank the Colombian government for its hospitality and help which have made this symposium possible. We are grateful as well to the authorities of Cali and Palmira and especially to the organizations which have financially supported the Symposium: CIAT, USAID, and IDRC, whose help has enabled many young scientists from developing countries to attend this symposium.