

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA

DEPARTAMENTO DE PRODUCCION VEGETAL

/// AROID CROPS IN CENTRAL AMERICA

✓  
R. Hawkins, J. Jiménez and W. Rodríguez

Documento preparado en "Taro and other aroids for food, feed and genetic resources". Feb., 16-19, 1982, CATIE, Turrialba, Costa Rica.

Turrialba, Costa Rica

1982

## AROID CROPS IN CENTRAL AMERICA

R. Hawkins, J. Jimenez, and W. Rodríguez

### INTRODUCTION

In most municipal markets in Central America, aroids can be seen for sale as a vegetable. However, quantifying the production of these crops is difficult as they are mostly grown in garden plots and do not figure in any official agricultural statistics of the region. Since 1982, CATIE has been investigating aroids and other tropical root crops with funding from the IDRC. The rationale for such a project is both the little knowledge of present cultivation of these crops and the potential they represent in the low humid areas of the isthmus where grain production is difficult. The objectives of the project are thus to describe present cropping systems involving tropical root crops, and to design and test better production technology. Preliminary activities of this project consisted in a reconnaissance of Nicaragua, Costa Rica and Panamá to determine areas and quantities of present production. This was followed up by a more formal survey of farmers in each major area to establish a data base for present production practices. The following presentation is a summary of the results of the initial reconnaissance phase conducted in Nicaragua and Costa Rica, the two countries where there is significant cultivation of aroids.

### NICARAGUA

The principal aroid crop in Nicaragua is Xanthosoma, known locally as "quequisque" ("tiquisque" in Costa Rica). Small quantities of Colocacia spp are also found, both as dasheen ("malanga") and eddoe ("ñampí") but

mostly as garden crops. The major production zones of Xanthosoma are the areas around Masaya, between the lakes Nicaragua and Managua, and around Nueva Guinea in the South-east of the country (see fig. 1).

The Masaya region is located at about 300 m altitude, average temperature around 26°C, and average yearly rainfall of 1,200 - 1,600 mm distributed in one rainy season from May to November. According to the National Development Bank, some 260 ha were financed in 1981; however the majority of producers (small scale farmers) do not use credit facilities. In this area it is very common to find the Xanthosoma associated with other crops, especially with maize and cassava as a 3 component intercrop. The product is either sold at the farm, or in nearby Managua markets, for national consumption.

The Nueva Guinea region provides a climatic contrast to that of Masaya. Here the annual rainfall is about 2,800 mm, distributed more evenly throughout the year. The region is also lowland, with average temperatures about 24°C. The major problem for the development of this region is the poor communication (unpaved roads) with the populated and commercial centers of the country. In this area financial assistance from the National Development Bank is much more the rule, some 360 ha being financed in 1981. Monocropping is the most widespread cultural practice, although some farmers do intercrop with maize. It is considered to be a profitable crop, in spite of what is regarded as exploitation by the middle men who deliver the crop to Managua.

## COSTA RICA

In Costa Rica, the two major production areas of aroids are located in the Atlantic lowlands, at the foothills of the volcanoes of Arenal (San Carlos) and Turrialba (Guapiles). Both these areas are low humid areas, with temperatures around 24°C and rainfall of between 3,000-4,000mm distributed throughout the year.

In San Carlos both Xanthosoma ("tiquisque") and Colocasia ("malanga coquito" or "ñampí") are grown. Again the number of farmers and the area grown are difficult to quantify, but commercial sowings probably do not reach the hundreds of hectares. Most of these plantings are in plots of between 1/4 and 3 ha, as monocultures, although some intercropping with maize, plantains or cassava does occur. Management levels are generally low, with little fertilizer use and machinery limited to the flatter plots. Paraquat is sometimes used as weed control, which appears to be one of the major problems with the crop. The product from this area is consumed nationally, being sold either at the farm or at local and metropolitan markets.

Cultivation of Xanthosoma in Guapiles is relatively recent (since 1980) when local companies began exporting the crop to North American markets. In 1982 there was estimated to be 60 farmers in the area with about 120 ha of crop planted. The farmers in this region are given a certain amount of technical assistance by the exporting company and hence management levels are generally higher than in San Carlos. Monoculture is generally the rule, although occasional intercropping with maize is found. Land preparation is effected mechanically and fertilizers are common. Weed control is achieved by several applications of paraquat. One problem noted is the rejection of produce as less than export quality a factor which has led some farmers

declare the crop uneconomic in the face of high input costs.

#### SUMMARY

Traditionally, aroids have been grown in Central America for home consumption, or in limited quantities for domestic markets. Due to the low preference for aroids as foods amongst people of the isthmus, it seems unlikely that this market will show any substantial increase in the near future. However there do exist possibilities of expanding production for export, although this market has yet to be quantified. Research needs to develop this export market will involve looking for ways to increase both the quality of the product, and at the same time maintain costs at an acceptably low level.

FITO No. 2032-84  
18 de junio de 1984

BIBLIOTECA  
Centro Interamericano de Documentación  
e Información Agrícola  
IICA - CIDIA

