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CARIBBEAN FOOD CROPS SOCIETY

23

Twenty Third Annual Meeting 1987

Antigua

Vol. XXIII

How Jamaican Small Farmers view crop diversification

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There are many ways to look at the idea of crop diversification, and one perspective that should not be omitted is the traditional view of the farmers who are the object of various programmes aimed at agricultural development. The way Jamaican farmers traditionally think about crop diversification is primarily expressed in relationship to the practice of intercropping-the simultaneous growing of two or more crops in the same field. This paper looks at the cultural concept of crop diversification that is implicit in the practice of intercropping. For Jamaican farmers, the basic objective of this method of cultivation is not only efficient production but social independence.

Keywords: Crop diversification; Intercropping; Jamaica

Introduction

There are many ways to look at the idea of crop diversification, and one important perspective that should not be omitted is the traditional view of the farmers who are the object of various programs aimed at agricultural development. The way Jamaican small farmers think about crop diversification is primarily expressed in relationship to the practice of intercropping - the simultaneous growing of two or more crops in the same field. Today, a great variety of vines, herbs, shrubs and trees are intercropped in yards and fields throughout Jamaica and the majority of these plants have come to the island over the past five hundred years from all parts of the world. This paper looks at the cultural concept of crop diversification that is implicit in the practice of intercropping. For Jamaican farmers, the basic objective of this method of cultivation is not only efficient production but social independence.

For many Jamaican farmers, the cultural concept of crop diversification that is implicit in the kind of intercropping they practice, often results in what is referred to as a "food forest". According to the 1973 Agricultural Census (Vol 1, Part B), food forest was:

> *"The definition given to cases where a canopy of tall economic trees existed (breadfruit, star-apples, mango, avocado pear, etc.) in association with or without a lower canopy of cocoa, coffee, citrus and other small trees and crops, and in spaces where the light permits crops such as kale or calaloo".*

This food forest which is characteristic of the wetter parts of the island and is especially associated with the land around dwellings has also been identified in a number of other ways. Adams (1971) described it as an "artificial woodland" and an "arboretum" while Money (1971) saw it as a "tangle of productive vegetation". Clarke (1974) referred to it as a "polyculture" and as "mixed planting" and in a (Jamaica) Daily News article (Anon, 1976) it was identified as a "tropical jungle garden".

The basis for traditional mixed crop farming

If the cultural attititude toward crop diversification is ideally expressed in the traditional practice of food forest intercropping, then we must ask ourselves why Jamaican small farmers engage in this particular form of cultivation. In this paper I shall argue that food forest intercropping (especially in the form of food forest) is important to Jamaican farmers precisely because it allows them to accomplish many objectives simultaneously. These objectives can be divided into two basic types: (1) to produce efficiently and without interruption, a diversity of products for household use and for sale by growing different species and varieties of wild and domesticated vines, herbs, shrubs and trees and (2) to do this as the basis for a relatively independent way of life, free from forced labor and from dependence on charity and state welfare.

Much of the discussion of why Jamaica small farmers practice crop diversification through food forest intercropping has focused on the various ways in which it is efficient as a system of cultivation and not on its social and cultural value (Edwards, 1961). Here let me list quickly the reasons associated with efficiency that are usually given.

Efficiency in production identifies considerations such as the most productive use of labour; the intensive use of available space and the best use of the soil and other natural resources such as light, water and various topographical and microclimatic conditions; maintaining the fertility of the soil and preventing its erosion; insuring against risks resulting from pest, disease, theft, hurricane, drought, strong winds and fluctuating market demands; maintaining a favourable level of continuous harvest; the control by natural means of weeds and pests and other competing species that greatly reduces or eliminates the need for expensive and dangerous insecticides, herbicides and other highly poisonous chemicals; and the production of a diversity of medicinal, spice, beverage, food and timber crops for household use and for sale. This aspect of intercropping has long been recognized by researchers such as Mintz (1955), Edwards (1961), Blaut et al (1959), Miracle (1967) and others. Here the concern is largely with the ecology of intercropping and the techniques, technology and economics that are applicable to this kind of cultivation.

Social, political considerations

While it is easy to understand the various ways in which food forest intercropping is an efficient system of cultivation, the cultural, political and historical context of this traditional practice has not been as well appreciated; yet, it is clear that tradition and politics viewed in an historic framework are especially important in understanding the motivations of Jamaican farmers. In describing the history of small cultivators in the Caribbean, Marshall (1972) provides us with the appropriate context within which we can better understand the cultural basis of food forest intercropping as the traditional form of crop diversification practiced by many Jamaican farmers and by small farmers elsewhere in the Caribbean:

> *"In the main the peasantry's development has been characterized by economic activity-persistent efforts, both on an individual and co-operative basis, to secure an independent existence through cultivation of the soil outside of the dominant plantation society and sugar economy".*

In studies dealing with the history of small farming in Jamaica, it has long been recognized that owning land meant more than just

food; it meant above all, economic independence and the possibility of a dignified social life. Land, through crop diversification, meant the ability to produce a wide variety of one's needs which would in turn "free" one from complete dependence on an unsure market or on hostile social relationships. Food forest as a system of crop diversification meant a choice for a direct relationship to nature through self-provisioning.

I have been studying cropping patterns in rural Jamaica since 1975. At fist, when I asked small farmers why they practiced forest cropping, I expected them to mention only the things related to efficiency described earlier. It was surprising to hear many of them say that they practiced food forest intercropping not only for these reasons, but for other reasons that are not often mentioned in the literature. They wanted to be free of the market so they would only have to "buy a few things"; they wanted to be able to "save money" to help themselves, and to "be independent". In fact many farmers did not see themselves as practicing a system of food forest cultivation. Some were unsure of such terms as intercropping, mixed cropping and multiple cropping and did not fully understand what I meant until I asked why they planted all the different plants all "mixed up" in the same field.

In my effort to understand the traditional perspective of Jamaican small farmers, I found it more useful to ask them why a particular plant - say a guava tree - was planted just where it was and not somewhere else. When the question was put to them this way, the answers were always precise and very enlightening. Some trees like pimento, mango and various timber trees grew where they did because they were volunteers and the seedlings were protected. June plum trees were planted so that the ripe fruits would fall on soft soil rather than on hard limestone rock which would make them worthless for marketing. Yams were planted around trees so that poles on which the vines could climb would be rested against the tree trunk. Dasheen were planted in wet areas. Other crops were planted in areas because the soil was good or bad or because the location was sunny or shady or because they were less likely to be destroyed by animals or stolen by people passing by, or damaged in the harvesting of other crops. There were many reasons why individual plants were located in particular areas but the overall reason for practicing this form of crop diversification was always related to the broader picture of social and economic independence.

Crop diversification and cultural orientation

Let me conclude by saying that a comprehensive approach to crop diversification, as an important component of a policy aimed at agricultural development, must take into account the cultural orientation of the farmers involved. I hasten to add that this is clearly not a new idea. In fact, it is by now a well recognized concept that has long been accepted. For example, Oliver, who was very familiar with Jamaican agriculture, expressed this point well, as early as 1929, when he wrote (Oliver, 1929):

> *"The Government of Jamaica began its attempts to improve the African peasant agriculture of the island by direct methods: setting up demonstration plots, sending Kew-trained gardeners to lecture; distributing pamphlets. Such measures were as ineffectual as the like have been when attempted by the Board of Agriculture in this country for the improvement of British farming. The contempt of the negro planter for all this kind of "buckra foolishness" was hardly less complete than is that of the British farmer for Whitehall agriculture. It is a mistake to suppose that British-trained*

agriculturists can see at a glance what is wrong and what is right with African methods, the product of long traditional experience. Instructors had to be found who did not appear as officers of the State or agents of the employing class, but were men who understood and sympathized with the lives of the people and loved to work with them. They proceeded experimentally, not on Government demonstration plots, which to the negroes meant nothing, but by inducing them on their own grounds to try methods of improving things good and useful for themselves".

The idea that the farmer's culture must be taken into account is well known and generally accepted but it is not as widely applied as I think many people believe. That is why in his review of David Edward's classic study of Jamaican small farmers, Augelli (1962:372) wrote:

"Edwards focuses on items which are generally given a cavalier treatment by geographers. These include such potentially important criteria as farmers' life histories, their social positions and relations, the ways in which the farmer learned his farming techniques, the influence on managerial decisions exerted by the farmer's wife and the community in which he lives, the financing schemes involved in production, and the psychological reaction of farmers to given economic conditions and to potential change".

Of the many ways to look at crop diversification, the cultural view of Jamaican farmers which is expressed through the traditional practice of food forest intercropping is one perspective that should not be omitted. It is certainly an important aspect of our concern with crop diversification from a national point of view, especially when our concern is linked, as it usually is, to a preoccupation with broadening the basis of export production. Small farmers are already major contributors in this regard, they are capable of doing a great deal more.

References

Adams, D.C. (1971) The Blue Mahoe and Other Bush: An Introduction to Plant Life in Jamaica, McGraw Hill Far Eastern Publishers, Ltd., Singapore

Anon., (1976) "Praedial Larceny - One of the Most Difficult Problems of Farming", Daily News, Jamaica, Jan. 14, 1976

Augelli, J. P. (1962) Review of 'An Economic Study of Small Farming in Jamaica, *Economic Geography*, 38(4) 372-373

Blaut, J.M. (1959) The Ecology of Tropical Farming Systems of the New World, Pam American Union, Washington

Clarke, C. (1974) Jamaica in Maps, University of London Press, U.K.

Marshall, W. K. (1972) "Peasant Movements and Agrarian Problems in the West Indies: Aspects of the Development of the Peasantry". *Caribbean Quarterly* 18(1) 36-46.

Mintz, S. (1955) The Jamaican Internal Marketing Pattern: Some Notes and Hypothesis, *Social and Economic Studies*, 1 273-281.

Miracle, M. (1967) Agriculture in the Congo, University of Wisconsin Press, Wisc. USA.

Money, D. C. (1972) Patterns of Settlement: Human Geography in Color. - Evan Brothers Ltd., London

Olivier, Lord (1929) The Improvement of Negro Agriculture, *Journal of the Royal Society of Arts*, 77(3980) 396-419