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FARMING UNDER THE MILPA SYSTEM

The Case of British Honduras (Belize)

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INTRODUCTION

In British Honduras agricultural production for the domestic market lies mainly in the hands of peasants who farm on relatively small acreages. There is an important difference, however, between the small farms in British Honduras and those in the Caribbean. The scarcity of land in the Caribbean Islands means that the small farmers must necessarily be kept relatively close to each other and they must practise a more or less settled agriculture; while the relative abundance of cultivable land in British Honduras results in widely scattered farms all over the country and the practice of shifting cultivation or what is known locally as the milpa system.

This system was probably first practised by the earlier inhabitants whose only means of clearing the forests was by slashing down a few acres with their machets and setting fire to the dried trees and branches while the tree stumps were left standing. The crop is planted between the stumps and, occasionally, the milpero (as the milpa farmer is called) may visit the milpa to check on weed-growth. In most cases only annual food crops are planted - rice, corn and red-kidney beans. Usually, a milpero has two milpas, one of about two acres for rice and another of one or two acres for corn. When the rice or corn is reaped, red-kidney beans, a three-month crop, may be planted on the same land. At the end of the crop year, the used land is abandoned for five years or so and the milpero moves on to a new plot of land for the next years's crops.

Why the Milpa System

It is understandable that the relative abundance of cultivable land makes possible the system of shifting cultivation. It is interesting to ask why such a system was adopted and how it has survived up to the present time. In the first place the milpa farmer seldom owns any land, for most of the milpa lands are obtained from large, absentee landlords who let their lands on an annual basis. Secondly, only relatively small, uneconomic plots of land can be rented and there is no certainty that the plot of land will be available to the same farmer again. It is obvious that such conditions of land tenure when coupled with inadequate marketing facilities not only rule out settled farming, but also discourage any kind of land improvement which may be desirable to promote more efficient production.

This system of farming is further supported by the relatively low cost of land clearing. The cost of clearing an average-sized milpa may be only a few days of labour. Obviously, such a plot could be easily abandoned without much loss. But it is also noted that when an area is cropped more than once the fertility of the soil is reduced and the growth of hardy weeds becomes abundant. Shifting to a new plot each year will solve the problems of fertility and weed-growth.

Nevertheless, milpa farming can be a very risky business in that the production process is entirely dependent on weather conditions. Adequate sunshine is necessary to dry the milpa before burning and rain must provide the moisture requirements of the crop. An untimely shower of rain could give the milpa a 'bad burn', thereby reducing the cleared area which would be cultivated; while an unusually dry spell during the crop-growing period could substantially reduce the output. But these uncertainties can be hedged against by planting the different crops at different times of the year so that if one crop fails, some income is still forthcoming. In addition, the milpero may keep a few hogs and chickens which would be fed on the milpa produce. Both the milpa crops and the animals are kept partly for home consumption and partly for sale on the local market. But during a poor crop a larger number of animals may be sold to supplement low crop yields.

The Decision to Produce

Although milpa farmers generally live in settled communities, the community has virtually no influence on production decisions. Traditionally, the head of the household is vested with all authority to make decisions and he decides what, when, why and how to produce. He also decides on the size of the acreage and the quantity of produce which must be stored for the family requirements. However, in making these decisions the family head must consider both the basic foodstuffs required by the family and what can be sold on the market. He cannot decide to make rice his most important crop if his

family is a corn-eating one. He may decide to produce rice for sale, but he must first be sure that the family requirements of corn are met.

The motivational influences in production are, therefore, consumer-oriented as well as profit-inspired. Price relationship thus fails to act as the ultimate choice indicator for the allocation of resources. For example, should there be an increase in the sale price of rice and a decline in the price of corn, the production of rice may be increased, but a corn-eating family cannot afford to discontinue corn production. A minimum quantity of corn must still be produced for household needs. The high priority given to family needs and security means that corn production will still be maintained even if this is less efficient in economic terms. No milpero will rely on purchases of corn even if the higher returns of other crops will enable him to do so.

The size and structure of the family must also be considered in making production decisions. A young family with many children would mean more hands to take care of animals, hence this family would concentrate mainly on producing the traditional grain crops (rice and corn) for home consumption and for animal feed. When this family grows up it would mean more hands for land clearing and emphasis may then be laid on producing a wider variety of crops for sale and for food.

With this background in mind, it is recognised that production decisions may lead to an allocation of available resources in such a manner that maximum economic efficiency may never be reached. But, this does not mean that the decision-maker is inefficient or 'shabby', for customs and traditions will not allow him to adopt new production methods readily, to reshuffle resources as prices change, nor to give lower priority to family needs and security. In effect, maximum satisfaction is the main goal and profit is only of secondary concern.

The Decision to Invest

The peculiar relationship between production for domestic requirements and production for profit results in a conflict over what portions of income should be allocated to current consumption and to investment. The fact that capital is limited makes this conflict very severe at times, for the less income a household possesses the more it must be concerned with investment which will facilitate later consumption.

The limited available capital also makes the milpero cautious in utilising modern farm inputs such as fertilizers and hybrid seeds, because there is no guarantee that there will be any returns on investments. Savings may, therefore, be hoarded and traditional practices maintained even where the investment of those savings could be highly remunerative with minimum risks.

Nevertheless, elements other than capital limitation do help to influence investment and production in the long run. For while low money incomes and economic uncertainty may cause current consumption to have greater value relative to future consumption, retirement considerations and the value system of the family can have opposite effects. Thus there is always a determined drive to accumulate some savings and, when better prices prevail, there is the desire to work harder and save more in order to possess some means of security against national disasters, sickness and old age. For these reasons cash savings at home become a necessity.

In a few cases where these savings are substantial, some may be invested in expansion of the hog-raising activity or in the purchase of land which could be improved and passed down to heirs or in some other known ventures which will benefit the family directly. However, the unknown or untried fields will seldom be accepted even where these may offer higher returns. In addition the decision to invest in permanent crops or fixtures on rented land is strongly discouraged by the system of tenure.

Milpa Productivity

Because of the general trend to disregard investment in soil improvement, farm implements and fertilizers, yields are relatively low, approximating 1,500 lbs. of rice, 1,000 lbs. of corn and 1,400 lbs. of beans per acre. The Government's Marketing Board offers a guaranteed market for these crops. The guaranteed market was thought to be an inducement to milperos to produce more for sale to the rest of the population. The prices for these grains are 7.2¢ per lb. of rice paddy, 14¢ per lb. of red-kidney beans and 4¢ per lb. of corn. Therefore, during a normal crop the total value of output of an average-sized milpa (2 acres rice, 2 acres corn, $\frac{1}{2}$ acre beans) would be $394.00. It is estimated that 20% of the milpa produce is stored for home consumption, hence the average annual earnings per family are some $315.20 cash, plus basic food requirements. Of course, the hogs and chickens which are kept at home may increase this income. Some milperos may also cultivate plantains, but since the market for this crop is uncertain, it is not being produced in great quantities.

It may be noted that the low yields per acre are due mainly to the poor farming methods and management and the reduction in the cultivable space in a milpa-acre owing to the presence of tree stumps and roots which abound on newly cleared land.

Since the scope for increasing acre-yields under the milpa methods of farming is limited, the desire to increase income must be pursued through an expansion of the total acreage. However, the constraint in this direction is the available milpa hands. The entire family is directly involved throughout the

production process. The size of the acreage will, therefore, depend not only on how much land the family can clear, but also on what quantity of produce they can harvest. It must also be remembered that unless the ripe crops are harvested in a given time, there can be severe losses. Thus the lack of harvest-hands is a major obstacle to expansion.

Resource Use and Some Recent Developments

The limited and insecure resources, the inefficient traditional methods that are being practised and family customs seem to form a framework within which not much can be done to improve the economic efficiency of the milpa. Nevertheless, there are some points on under-utilization of resources which are of general concern. Firstly, each acre of land is reduced by 10%-15% because of the presence of tree stumps and roots. Secondly, labour and tools are seldom fully occupied for more than about five or six months of the year. Thirdly, the unnecessary hoarding of cash continues while the milpa is starved of more productive inputs.

It is recognized that even with a ready market for milpa crops, the inefficient use of resources cannot be tackled without a general agricultural education programme. However, it must be an education which will prove by practical demonstration that better resource use can give sure and higher returns and also achieve maximum satisfaction. Although no such programme was consciously launched in any part of the country, the introduction of sugar by a foreign enterprise proved that modern farm practices could be relied upon and this was sufficient to induce some milperos to follow suit. Some milperos in the sugar areas have now formed Cane Farmers Associations through which credit (in the form of fertilizers) is available and these milperos have since been actively participating in cane production. Other benefits have followed the introduction of sugar cane, for since cane is a ratooning crop and because it can be grown densely (thereby reducing the invasion of weeds) it is not necessary to abandon each plot after harvesting. Some farmers now plant their food crops between the cane rows and these crops profit from the fertilizers used for the cane. Thus land may be better utilized and labour more fully occupied throughout the year. The result is that net earnings have been substantially increased.

The south of the country has not been so fortunate and traditional milpa farming is still the main activity. However, in two areas in the south, Government has established rice schemes where mechanized rice-farming is being practised. Some milperos in the area have also formed Rice Farmers Co-operatives which are encouraged to participate in the schemes at all levels of activity. The Co-operatives now have the opportunity to prove whether farming with modern inputs and practices is more profitable than farming under the old milpa methods. It is hoped that they will accept the new farming methods and, that as soon as they can operate the new equipment efficiently, the entire schemes will be passed over to them in the form of a loan and that they will be able to pay for the equipment over a period of years.

Concomitant with these developments are the continued efforts of Government to enable small farmers to obtain lands for themselves. In some areas large tracts of undeveloped land were acquired or reserved for distribution to farmers. Government's most important legislation in this direction was the Rural Land Ordinance of 1966 which was designed to induce owners of large holdings of undeveloped lands to develop their properties or to return their lands to Government so that others who wish to do so may purchase such lands for development. A major aim of Government in this direction is to encourage cultivation in particular areas (as opposed to scattered plots) in order to facilitate the provision and use of machinery and other infrastructural requirements.

These activities will certainly lead to a breakdown of the milpa system, but it will be some time before the break would be complete; for even today, the milpa system still controls some 70% of total rice production of the country, about 50% of the red-kidney beans and 50% of the corn produced.

Finally, with the constant developments in transportation resulting in the expansion of the market for domestic produce and with the exposure of the milpero to new types of consumer goods, there is a gradual turn towards giving more attention to production for cash. In many areas these developments have exposed the limitations of the milpa system in producing for cash, and this fact is being recognized. The time seems ripe, therefore, to organize more milpero co-operatives, to open up credit facilities for these groups and, gradually, to draw them into settled farming, adopting more modern and more efficient methods of production.