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THE RED KIDNEY BEANS INDUSTRY OF BELIZE: SCOPE AND PROGRAMMES FOR EXPANSION

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Background and Objectives

Although red kidney beans is a basic foodstuff in Belize large quantities were imported until the late 1960's when as a result of the efforts of immigrant farmers' production increased sharply. However, after the bumper crop of 1969/70 production declined sharply once more resulting in the importation of large quantities.

The main objective of this paper is to "examine the reasons why producers failed to maintain the 1969/70 level of production and to explore the possibilities of increasing production not only to that level but also to obtain a surplus for export".

Several factors accounted for the low level of production after the 1969/70 crop. The most important of these appeared to be the system of controlled prices and the relative lack of supporting inputs.

In an attempt to keep the cost of living as low as possible, a system of ceiling prices was fixed for both wholesale and retailed red kidney beans. Apparently, this was inadequate. As a result, in order to take account of the rising cost of production, producers turned to alternative activities, particularly the production of corn. Corn production thus rose sharply after 1970, whilst that of red kidney beans declined.¹

With regard to supporting inputs, it was not always possible for producers to obtain red kidney bean seeds readily while few farmers (except the Mennonites) could afford storage bins to keep the crop from deteriorating. Furthermore, beans are too expensive to use as animal feeds when prices are so low. On the other hand, corn seeds may be carried over from the previous crop while storage facilities are easily constructed to keep corn for at least one year without the fear of storage losses. Corn is also a suitable feed for chicken and pigs which most farmers keep. Under these circumstances, the shift of production from red kidney beans to corn, therefore, appears to be a reasonable response by producers.

The Scope for Increased Production

A large potential market exists for red kidney bean producers. The domestic market suffers a shortfall of roughly one-half million pounds. In the Caricom territories, Jamaica alone has a market of some five million pounds while the two neighbouring republics of Guatemala and Mexico import some one million pounds annually.^[1]

¹The retailed price of corn was not subject to price controls as was the case of red kidney beans.

In attempting to produce for these markets, Belizean producers are most favourably endowed with large tracts of cultivable land [2]. Although some unemployed may be drawn into red kidney bean production, a more likely possibility is that existing farmers could work longer hours¹ and adopt more modern farm practices, particularly the groups of farmers through the D.F.C. Government has constructed feeder roads in most of the producing areas.

The productive factors are available. It appears that a rigorous re-organization of the marketing and pricing systems and a concentrated and organized programme or programmes are necessary to increase production.

Programmes for Expansion

Given that there is a large potential market, that the productive factors are favourable and assuming that prices offer reasonable returns, the rest of this paper attempts to provide guidelines towards increasing production by both the Milperos who practise traditional agriculture and the Mennonites who adopt more modern practices.

Increasing production by the Milperos may be had through at least two programmes as follows:-

Programme I: Increasing the cultivated acreages

The Milpero cultivates an area of an average size of about half-acre. This is so partly because of the physical difficulties of clearing a larger area within the limited period available and partly because of the high costs of improved seeds which he could ill afford. In an attempt to induce him to expand his area of cultivation, it is therefore proposed to:-

- (a) provide a guarantee income for any area additional to the normal size area he cultivates. This could be based on the average yield per acre at a special price above the going market price;
- (b) provide credit (limited to the guarantee income at (a) above, for the hire of labour, and the purchase of additional quantities to seeds, pesticides etc.; and
- (c) provide adequate extension and supervisory services to ensure that the conditions of the guarantee income are met, e.g. that the credit is in fact used for the desired purposes.

Since the carrying out of this programme will require additional administrative overheads, it is proposed that additional areas to be cultivated should be concentrated in one particular locality adjacent to existing cultivated areas, e.g., near a large village.

Programme II: Establishing modern farm practices

As in the case of Programme I, it is proposed that farmers'

¹Small farmers normally work less than 6 hours per day (see the Frampton Report on Agriculture, 1958).

groups be organized in particular localities for the increased production of red kidney beans. A model proposed for the Programme is as follows:-

- (a) clear a large area of say 100 acres or more mechanically and subdivide this area into smaller plots manageable by small producers, particularly since reaping must be done by hand;
- (b) allocate these plots to members of farmers' groups with specific conditions, some of which may be as follows:-
 - (i) that cultivation practices must follow the desired standards of husbandry;
 - (ii) that payment for land development must be made on agreed terms;
 - (iii) that output must be marketed through the Marketing Board; and
 - (iv) that attempts to cultivate red kidney beans under the traditional Milpa system must be abandoned. (The reason for condition (iv) is that some farmers may seek small plots separately and sell output from their improved plot claiming it is from their separate plot.)

Although it may be feasible to carry out both programmes simultaneously, it is proposed to carry out Programme I first as a pilot project because it requires only limited improvement on the existing Milpa System. Furthermore, this approach would provide useful experience before embarking on Programme II as there may be time-lags before confidence in the extension services can be established.

The Mennonites - A Programme for Expansion

The Mennonites have adopted modern farm practices and are relatively efficient as compared with the traditional Milperos. Available evidence also indicate that they can expand their production significantly even though they must cultivate their crops during the same season as the Milperos. However, interviews with several Mennonite leaders revealed that apart from the unattractive prices available, large crops such as those obtained in 1968/69 and 1969/70 presented serious storage problems as the market was unable to absorb large quantities immediately after harvesting. It was recognized that although export markets were available it was necessary to obtain export licences to reach these markets. In any case, these licences may be had only when the Government is satisfied that the local market demands are fully supplied. Furthermore, exports may only be made through the Marketing Board which offered fixed wholesale prices which producers thought were unremunerative.

Attempting to overcome their pricing and marketing problems, the Mennonites established expensive storage bins to store their output. But storage was too costly to keep their produce until it could be absorbed by the market. Furthermore, while imported red kidney beans may be sold much in excess of the controlled prices during the off-season periods, their locally produced crops did not get this advantage even if stored and sold during these off-season periods. It follows therefore, that a programme for expanding red kidney beans through the Mennonite farmers must seek to provide appropriate pricing and marketing systems. They do not have production and organizational problems as do the Milperos.

The following proposals seek to provide guidelines as to what may be done to induce the Mennonites to expand production:-

- (a) provide a special retail price for red kidney beans sold during the off-season periods. This price may approach that obtained for imported beans and must take account of the cost of storage;
- (b) producers should have direct access to export markets when the Marketing Board is satisfied that domestic supplies are adequate;
- (c) price controls on wholesale quantities may be relaxed upwards during off-season periods to cover a reasonable cost for storage; and
- (d) the Marketing Board may make contracts with farmers to purchase at higher than normal prices, specified quantities at specific times to ensure continuous supplies to consumers. (For example, if it is estimated that roughly 200,000 pounds are consumed, monthly contracts for various farmers would sum up to this quantity monthly.)

More than one of these proposals may be experimented with as a pilot project to induce Mennonite farmers not only to produce more but also to maintain adequately stored quantities for off-season periods. Alternatively and perhaps less acceptable politically, price controls may be abandoned shortly after the harvesting periods allowing prices to reach their own levels. This alternative would, of course, be advantageous both to consumers and producers alike as consumers would benefit when supplies are plentiful and while producers may also benefit from high prices, in times of scarcity (e.g., poor crops) consumers may turn to alternatives.

References

1. F.A.O. *Production Yearbook*. Vol. 26, Rome, 1972.
2. Wade, N.E. and Link, J. *Growing Red Kidney Beans in Belize*. Dept. of Agriculture, 1969.

Appendix Table 1. Production, Imports and Exports of Red Kidney Beans for the period 1961-1973

Year	Production	Imports	Exports
	('000 lb.)		
1961	226	1,127	-
1962	n.a.	1,036	-
1963	n.a.	1,400	-
1964	1,270	1,342	-
1965	1,500	1,250	-
1966	1,507	455	2
1967	2,787	338	500
1968	2,809	140	7
1969	3,419	531	31
1970	4,050	50	537
1971	2,000	600	150
1972	2,500	800	200
1973	2,500	1,200	10

Sources: 1. Ministry of Agriculture, *Agriculture in Belize, Facts and Figures*, Belmopan, 1972.
 2. Customs Department, *Annual Trade Reports, Belize*.

Appendix Table 2. The Production of Red Kidney Beans, Corn and Poultry Meat for the period 1961-1973

Year	Red Kidney Beans	Corn	Poultry Meats
	('000 lb.)		
1961	226	7,515	-
1962	n.a.	n.a.	-
1963	n.a.	6,667	-
1964	1,270	9,107	-
1965	1,500	12,051	-
1966	1,507	6,742*	60
1967	2,787	14,800	150
1968	2,809	15,473	300
1969	3,419	17,000	375
1970	4,050	25,000	1,450
1971	2,000	35,000	2,175
1972	2,500	32,209*	2,500
1973	2,500	30,000*	2,700

* In 1966 and again in 1972 and 1973 the corn crops suffered from adverse weather conditions (hurricane).

Sources: 1. IBRD, *Basic Report on the Economy of Belize and Its Projects*, Washington, D.C., 1972.
 2. Ministry of Agriculture, *Agriculture in Belize, Facts and Figures*, Belmopan, 1972.
 3. Ministry of Economic Planning, *Economic Surveys for the Years 1972 and 1973*.

Appendix Table 3.

A. Cost and Returns of Red Kidney Bean Production (1 acre); 1972 and 1973

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	(\$)
(a) <u>Costs:</u>	
Land clearing (1 acre)	30
Seeds (50 lb. @ 50¢)	25
Planting (5 days @ \$4)	20
Cleaning (2 days @ \$4)	8
Harvesting (5 days @ \$4)	20
Shelling and drying (3 days @ \$4)	12
	\$115
(b) <u>Returns:</u>	
Yields (600 lb. @ 23¢)	\$128
Reward to Management = (Returns - Cost)	
= \$128 - \$115 =	\$13

B. Cost and Returns of Corn Production (1 acre); 1972 and 1973

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	(\$)
(a) <u>Costs:</u>	
Land clearing and burning	20.00
Seeds (5 qts. @ 25¢)	1.25
Planting (½ day @ \$4)	2.00
Cleaning (1 day @ \$4)	4.00
Harvesting (2 days @ \$4)	8.00
Shelling and drying (3 days @ \$4)	12.00
	\$47.25
(b) <u>Returns:</u>	
Yields (1,200 lb. @ 7¢)	\$84.00
Reward to Management = (Returns - Cost)	
= \$84.00 - \$47.25 =	\$36.75