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## SUBSIDIES TO SMALL FARMERS: BOON OR BANE?

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Some years ago, here in Jamaica, government offered a cash subsidy to farmers for building stone barriers, along the contour, on cultivated sloping fields. Extension officers in one district recounted to me their experiences with a group of small farmers who cleared their field of stones, constructed beautiful contour barriers, then applied for and received their cash subsidy.

Was this a success story? Surely to the extension workers it was. They had succeeded in inducing the small farmers to adopt soil conservation measures on steep cultivated slopes. Their reports indicating the many chains of contour barriers constructed painted a rosy picture. The subsidy had been a successful means for achieving a desired end.

Not long after this, however, a government road building project was started in the valley. Stones, as well as workers, were required on this project. The farmers quickly saw and seized the opportunity. They dismantled their contour barriers, sold the stones to the road project and themselves took on jobs working with the road gang.

Was this still a success story? To the disappointed extension workers it was not, but to the small farmers this was a fantastic success story. The subsidy provided some compensation for their labour used in clearing their fields of stones. The cash received would help them meet some of their family needs, the fields cleared of stones would be easier to cultivate. And now this cash windfall through the sale of the useless stones (soil conservation was of no immediate concern) and a job on the road for a few weeks!

Subsidies for small farmers: bane or boon? It depends, among other things, on the eyes of the beholder.

### PURPOSE OF AGRICULTURAL SUBSIDIES

Subsidies for small farmers in the developing countries are generally used in an effort to improve the efficiency of peasant agriculture. Weiner<sup>1</sup> reports two schools of thought on the means which can be used for achieving this "lessening of inefficiency" in peasant agriculture:

1. that attitude and value changes must come first, and
2. that opportunity and incentives should first be provided and the desired results would automatically follow.

It is possible to find examples of both these approaches being attempted in the same country. For example in Puerto Rico, the Agricultural Extension Service associated with the Land Grant University of Puerto Rico is concerned with educating farmers to adopt desirable farming practices, i.e. attempting to create changes in their knowledge, attitudes and values and hence achieve changes in their behaviour. On the other hand the Commonwealth Department of Agriculture of Puerto Rico aims at achieving agricultural development through the provision of services and incentives.

It was reported that the Commonwealth Department of Agriculture in 1965 offered a subsidy of \$75 per acre to bring abandoned fields back to sugar cane or bring other crop lands under sugar cane. This subsidy was tied to the cultivation of specified recommended varieties of sugar cane. The Department claimed that the results of this system were favourable, when compared to purely extension education efforts, in inducing an expansion of the acreage under sugar cane and the cultivation of improved varieties of the crop.<sup>2</sup>

In the Caribbean, generally, agricultural subsidies are used as a means of achieving one or more of the following:-

- (a) modernisation of small farming through farmer adoption of recommended improved practices,
- (b) agricultural diversification,
- (c) increased agricultural productivity,
- (d) increased production of an export commodity,
- (e) reduction of the national food import bill,
- (f) simulation of the production of a new crop or livestock,
- (g) conservation or preservation of the country's natural resources.

The governments of the Caribbean countries have for many years used subsidies, in the form of cash or production inputs, in an effort to achieve their policy objectives. Deane<sup>3</sup> reported that in 1974 the government of Trinidad and Tobago was paying subsidies for some 12 agricultural operations which included soil conservation, land preparation, pest and disease control, crop establishment and rehabilitation, livestock production, and price support for fertilizers and other production inputs.

Severin<sup>4</sup> states that from 1978 to 1984 the government of St. Lucia offered subsidies for some 21 farming practices, which covered the above listed areas and included such other operations as farming in snake infested areas and the building of farm roads. The current Agricultural Incentives Programme of the Ministry of Agriculture, Food and Consumer Affairs in Barbados<sup>5</sup> lists more than 20 areas under which subsidies are offered to farmers and are grouped in categories such as spraying equipment, irrigation, pasture development, establishment of silos, assistance to registered agricultural cooperatives and income tax rebates on the purchase of agricultural machinery.

A consideration of their desired outcome will show that agricultural subsidies, no matter what their form, are meant as incentives to influence some change of behaviour among farmers. In order to receive a subsidy, farmers are required to adopt some recommended technology. To help us evaluate the efficacy of subsidies for achieving behavioural changes it may be useful to review briefly some relevant theories of behavioural change.

## INFLUENCES OF CHANGES IN BEHAVIOUR

Lippit et al pose that in every conceivable situation there exist forces which may increase or decrease an individual's readiness to change his behaviour. These they call "change forces" and "resistance forces". A change force has its origin in any aspect of the existing situation which increases the willingness of the individual to make the proposed change. A resistance force has its origin in any aspect of the situation which reduces the individual's willingness to make a change in behaviour.<sup>6</sup> Every specific situation creates its own constellation of change and resistance forces.

Leagans<sup>7</sup> advances a similar Behavioural Model of change in which change is seen as resulting from

"the interaction of two sets of opposing forces:

1. change incentives, and
2. change inhibitors."

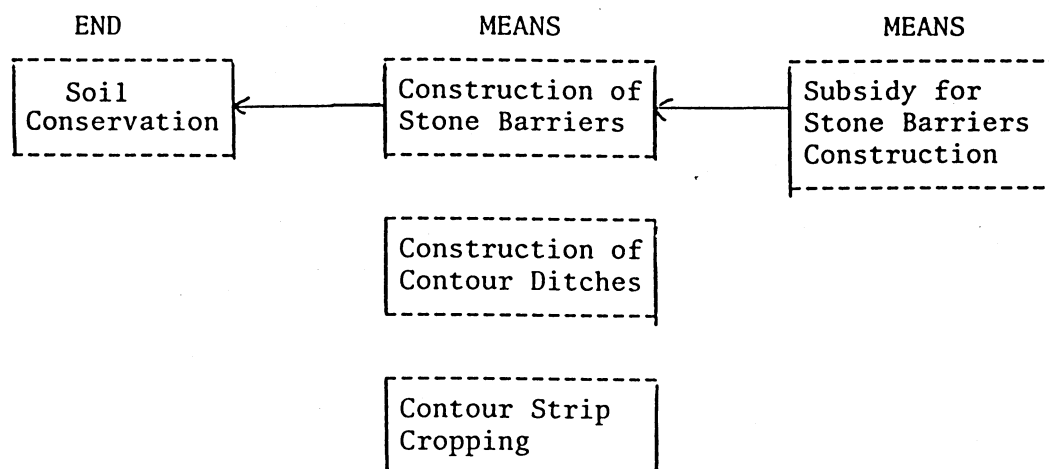
Leagans postulates that these influences create tension that motivate action and result in change. Each set of influences at any given time and in any given situation may consist of certain manifestations of physical, cultural, economic, psychological, technological, etc. forces. The extent and direction of change in behaviour will depend upon the relative strength of these two opposing forces (incentives and inhibitors) acting on the individual.

In the case of agricultural subsidies one may look upon them as change incentives or an economic nature introduced into the existing situation in order to increase the strength of the forces needed to influence change in the desired direction. However, since the individual farmer is free to change or not to change his behaviour and has personal and family needs and goals which he is attempting to achieve through his farming, to him the strength of a change incentive will depend on his perception and interpretation of the attractiveness to him of the preferred incentive.

## SOME CARIBBEAN EXPERIENCES WITH FARM SUBSIDIES

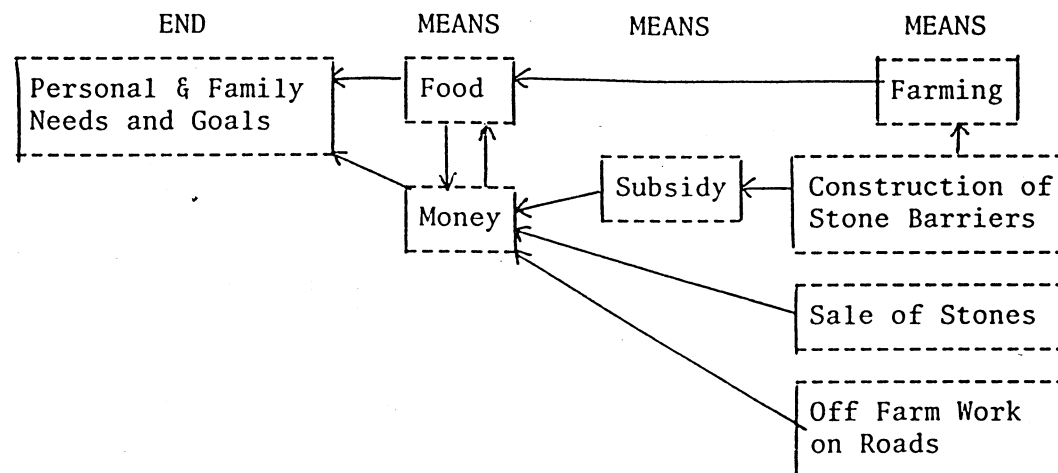
Let us examine and attempt to analyse some Caribbean experiences with farm subsidies. First, let us return to our initial example of the Jamaican small farmers and the cash subsidy for constructing stone barriers. From the policymakers' and the extension officers' point of view, the case is a simple one of using a cash subsidy as a means of inducing farmers to construct contour stone barriers which is one of several means of preventing soil erosion on the steep slopes. This relationship is illustrated in Figure 1.

FIGURE 1: Policymakers End-Means Conception of Contour Stone Barrier Subsidy Programme



From the point of view of the individual farmers in the valley, the cash subsidy is merely one element in a complex inter-relationship of several elements which serve as means to the achievement of his ultimate personal and family goals. A simplified flow chart as Figure 2 illustrates some of the inter-element relationships in the farmer's farm-home-environment complex.

FIGURE 2: A Farmer's End-Means Perception of the Inter-relationships of Some Relevant Elements in His Farm-Home-Environment Situation



As a farmer his major means for meeting personal and family needs and achieving personal and family goals or aspirations is farming to produce food and other farm products, some of which is consumed in the home and the rest sold to provide money which can be used to help meet other own and family needs, including the purchase of food which he cannot produce on his farm.

The cash subsidy for the construction of contour stone barriers is perceived as having two plusses. In the first place the subsidy will provide some money which can be used for meeting his desired ENDS. In addition to this, however, removal of stones from his fields in order to construct the stone barriers will provide conditions in which field cultivation and farming in general will be less difficult. The change incentive force will therefore be strong and the farmer is likely to construct the contour stone barriers.

Once this has been done and the farmer has received his cash subsidy, the stone barrier is of no further value. Soil conservation is of no immediate concern to him. Therefore, when an opportunity arises to sell the stones he sees this as another means of obtaining money to help meet his ends and embraces the opportunity with alacrity. Similarly, any opportunity for some off farm employment to augment whatever cash he makes from his farming is very welcome.

From his viewpoint the farmer does not understand and has no sympathy for the extension officer's concern about his destruction of the stone barriers. In fact, he sees the subsidy, the sale of the stones and the few days of employment on the roads all in the same light: as government's reluctant and petty contributions to the rural dweller's welfare. As Severin found out in his study of users and non-users of farm subsidies in St. Lucia, the reason many farmers participated in those subsidy programmes was "to get their share of the perks offered".<sup>8</sup> The farmer in fact sometimes expresses his irritation at having so many small subsidies attached to each of several farming operations, e.g. a few dollars attached to each of:

- (a) land clearing
- (b) lining and mound preparation,
- (c) weed control,
- (d) maintenance of field,
- (e) fertilizer application, and
- (f) pest control.

Farmers complain about the effort required and time spent in qualifying for and receiving these many small cash subsidies, and consider them more bane than boon. Asked for their preference for the form which incentives should take, farmers in Severin's study in St. Lucia by a large majority expressed a preference for a system that guarantees them an assured market and a reasonable price for their products. Their second preference was for a system which enables farmers to purchase production inputs more cheaply.

Several other important observations and conclusions about the provision and the consequences of the use or non use of agricultural subsidies in the Caribbean have been recorded.

An evaluative study of the Cocoa Rehabilitation Scheme in Trinidad by Aina in 1964 underlined the need for the careful selection of the cultivation practices to be subsidized if increased production is the objective of a subsidy programme. Aina found that one practice, i.e. field drainage which was not included in the package of practices required to be adopted for the receipt of assistance under the subsidy scheme was probably more powerful in influencing increased cocoa yields than several other practices included in the package. He stated that "some proprietors with low adaptation scores had higher average yields per acre probably only because their fields were well drained by comparison with others with high adoption scores but poorly drained fields."<sup>9</sup> The same study revealed that the removal of the subsidy on

some practices, (e.g. the use of fertilizer, which previously has been supplied under the subsidy scheme) led to the stoppage of adoption of that practice. This supports the earlier observation that some farmers may perceive the subsidy as an end in itself, as a "perk" rather than a facilitator of trial use which leads to practice adoption.

During the 1960s a subsidy attached to the price paid to farmers plus a guaranteed market for all that they produced resulted in greatly increased production of pigeon peas in Trinidad and Tobago. When the price subsidy was removed, although there was a guaranteed market for all the peas which could then be produced, production of the commodity dropped very drastically. This supports the earlier reported preference by farmers not only for a guaranteed or assured market but also for a reasonable price for their produce.

In a study of the factors related to the adoption behaviour of food crop farmers in Trinidad, Andrews<sup>10</sup> found that the main reasons given by farmers for their adoption of selected, recommended planting materials were related to economy gains. His data showed that the greatest number of farmers adopted these planting materials because they were assured of a guaranteed market for their produce.

Similarly, the reasons advanced to Andrews by farmers for their having adopted the use of fertilizers was increased yield which resulted in economic gain. The major perceived disincentives to the adoption use of fertilizers were also of an economic nature, viz. "see no benefit" and "fertilizer too expensive". The main disincentives advanced by farmers for the non-adoption use of chemical weed control were also economic in nature: "inputs too expensive", "perceive no benefit", and "perceive no increase in yields" in that order.

Although the Andrews study is not directly concerned with subsidies, it provides some valuable leads to the types of subsidies which are likely to succeed as incentives for the adoption of practices by farmers. The findings of the study in fact support an earlier reported preference by farmers for, first, a system which guarantees them an assured market and reasonable product price, and second a system which enables the purchase of production inputs "cheaply".

Deane's study in 1978 sought to determine whether subsidies lead to greater adoption use of improved farming practices.<sup>11</sup> His test samples consisted of 90 farmers who had qualified, applied for and received subsidies for three recommended practices (viz. mechanical land preparation, fertilizer use, and purestand establishment of improved grasses) and a matched group of 90 farmers who had not applied for or received subsidies for these practices. He found a less than 20% difference in the proportion of subsidy users and non-users who had adopted the subsidized practices (87.7% adopters and 68.8% adopters, respectively). Such a relatively high adoption use among non users of the subsidy suggests either lack of careful discrimination in the selection of practices to be subsidized or an intentional decision to provide some "perks" to the farmers.

Severin investigated the influence of subsidies on the practice adoption in St. Lucia of three recommended practices, viz. chemical weed control, fertilizer use and contour drainage. He found that 68% of the respondents perceived the subsidy as government's effort to help farmers meet labour and other production costs. Only about 2% of farmers perceived the subsidies to be incentives for improving agriculture or increasing production.

Among coconut farmers there was an 80% discontinuation of fertilizer use after withdrawal of the fertilizer subsidy. However, among orchard crop (e.g. citrus) growers more than 90% continued using fertilizers after withdrawal of the subsidy. Severin also found evidence that on the whole where subsidies were provided as production inputs rather than cash there was a greater tendency for continued adoption of the associated practice after withdrawal of the subsidy.

## CONCLUSION

Evidence from observation and studies conducted in the Caribbean show that the use of agricultural subsidies is widespread in the Caribbean. The stated objectives of these subsidies is usually to encourage adoption of improved agricultural practices for increasing production of crop and livestock produce or for conservation of natural resources. The subsidies are provided in the form of cash, production inputs and, more recently, as rebates on income taxes.

One observation from the data is that there are many rather small cash and other subsidies in several practices. These subsidies are so small that small farmers do not perceive them as incentives to practice adoption but rather as snippets of assistance or dole provided by government to farmers. This perception, plus the disproportionate amount of energy and time small farmers must exert in order to obtain these small subsidies, can create in them feelings of irritation and frustration. As a result they tend to perceive these small subsidies as needed nuisances, more bane than boon.

Overall, Caribbean farmers are market oriented and respond to meaningful monetary incentives. Given a choice they would prefer to have an assured market and a "reasonable" price for their farm produce rather than an array of small subsidies. Failing this they would prefer the availability at reduced prices of production inputs which they perceive or have experienced as leading to increased production of marketable produce. These, in the view of small farmers as reported in the cited studies, could be Boon No.1 and Boon No.2 for agricultural development in the region.

## REFERENCES

1. WEINER, M. (1978): Modernization: The Dynamics of Growth. Basic Books Inc., N.Y. 1966. Quoted in David A. Deane, "The effect of some social and economic factors on the success of the subsidy programmes on agricultural development in Trinidad". M.Sc. Thesis, UWI, Trinidad, p.14.
2. HENDERSON, T.H. (1965): A Visit to the Northern Caribbean. UWI, Trinidad, p.17.
3. DEANE, David A. (1978): "The Effect of Some Social and Economic Factors on Success of the Subsidy Programme on Agricultural Development in Trinidad", M.Sc. Thesis, UWI, Trinidad, p.13.
4. SEVERIN, Kerde M. (1984): "The Influence of Subsidies on Adoption Behaviour of Some Selected Crops in St. Lucia", Diploma in Extension Thesis, UWI, Trinidad, p.11.
5. Barbados Ministry of Agriculture, Food and Consumer Affairs (undated): "Agricultural Incentives Programmes", Mimeo.



6. LIPPIT, R., WATSON, J. and WESLEY, B. (1958): The Dynamics of Planned Change. Harcourt, Brace and World, Inc., N.Y., p.71 et seqq.
7. LEAGANS, J. Paul (1974): "Model Building for Development Change throughout Repatterning the Human Behavioural Variable", Dept. of Education, Cornell Univ.
8. SEVERIN, Kerde M.: Op. cit., p.105.
9. AINA, E.A. (1964): "An Evaluative Study of the Cocoa Rehabilitation Scheme, Trinidad and Tobago", M.Sc. Thesis, UWI, Trinidad.
10. ANDREWS, J. (1975): "Factors Related to the Adoption Behaviour of Food Crop Farmers, Crown Lands Development Programme, Trinidad, W.I.", M.Sc. Thesis, UWI, Trinidad.
11. DEANE, David A.: Op. cit.
12. SEVERIN, Kerde M.: Op. cit.