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#### DISCUSSION

(on Papers by Persaud, White and Twyford)

## W. Phillips (Trinidad):

I would like to direct two questions to Mr. Twyford. There is no doubt that there has been some information coming from the Winban Research Scheme and some of this has been used successfully. I've seen elsewhere that with advice from Winban (you'd correct me if I'm wrong) that farmers on poor soils could achieve some 7 tons: farmers on moderate soils some 8 to 10 tons; and on good soils from 14 to 16 tons. The average yields on the other hand are something like 2 to 3 tons. Could you suggest some reasons for this discrepancy? Is it that the farmers are unwilling to make the necessary investment; or is it that the soils in the area are so diversified that the results you get in any one area cannot be duplicated in other areas? This is the first question. The second one is in reference to fruit quality.

You talk about the inherent characteristics of the fruit and losses suffered in handling and transporting. It seems to me that as regards the inherent characteristics there may be some areas which are definitely not conducive to banana production. You probably might get a banana bunch but this is highly susceptible to bruises. I don't know if this is so. The second factor is in regards to handling and transporting. I wonder, apart from the fact of the method of carrying the bunches, whether in some cases the system of payment isn't indirectly responsible for the poor quality fruit. I know for instance in some areas in Grenada you carry a bunch of bananas on a small pad made from the banana trash, which just fits the head. There is a system of payment whereby for every banana brought in, the carrier is given a chit, so that the more you bring in the more money you would collect for the day. Now I have seen cases of people running down very hilly land which of course causes the banana to jog. I am sure that this contributes to some damage of the fruit.

## I. T. Twyford:

The reasons why the production is so low: the fact of the matter is that up until recently production of 2, 3 or 4 tons per acre was to many persons profitable; you put almost nothing in and in fact you made a good living out of it. This is I think one very important point.

Secondly, and I am going to stick my neck out here, I believe that in the Windward Islands, the average person has not got high enough demands for a better standard of living. I think there are many people in the Windwards who seem to be content with bringing in 15-20 dollars a week. In other words, we all talk about per capita income being so low. Many people, certainly in St. Lucia, seem to be content with having a low per capita income. If you offer higher wages, say, in offering two tasks instead of one for the day, people just won't do it. They've got enough money to go and drink a little rum and be happy; they won't do any more, and I think there is this thing: people are satisfied with too little, and I do believe that one thing we do need in the Windward Islands is commercial television, so that new wants may be created, and until new wants are

created there will be little incentive for them to try and produce more or work harder. I think this has got a lot to do with it. Another point: I think the average farmer anyway is not aware enough of new methods. I don't think (I am saying this though I know many Extension people are here) the Extension Services have reached them enough.

Now the other point about fruit quality. I think there are undoubtedly some areas in the Windward Islands where you get inherently poor quality of fruit. A deficiency of boron is almost certainly associated with low quality fruit, and I think this deficiency may well be the situation in some parts of the Windwards.

On the question of heading bananas, I don't see any reasons why a farmer or a carrier should not make enough money by using trays instead of carrying a single bunch on a pad on their heads. (These padded trays which we've been trying have given the best results when three bunches have been carried on a tray, better than two and better than one.)

#### M. White:

Mr. Twyford has made certain statements on productivity, on the attitude for instance, of the farmer, which is something that no Windward Islander could ever possibly accept — that he is content with a low standard of living and that is why he does not adopt the principles of research.

## J. Cropper (Trinidad):

We've heard from Mr. Twyford how, if the banana growers apply the techniques which he is advocating, yields would be increased. I'd like to ask what would be the effect on price if we got even a doubling in yields, and what would be the effect on the U. K. market.

#### B. Persaud:

Well, we have seen that there is a great difference between realised and potential yields. I think this serves to indicate there is scope for increasing returns from the addition of capital, labour, and so on, which may mean that your average cost of production could go down. Now, whether you would make additional profit would depend on what effect your yields, and hence your increase in production, had on price. This is why I advocated that we should control production so that, whatever increase in production we get it should come from yields, rather than on an expansion of cultivation. We have not worked out closely the effect of additional production on prices, but I think because we get increasing returns, it would increase farmers' profits.

# M. Alexander (Trinidad):

My remarks are directed to Mr. Persaud. I'd like some clarification on an earlier point in your paper, where you say that even if the elasticity of demand is above one, there may be gains from diversion because of different factors. I'm under the impression that any gains from diversion would come from difference in elasticities, but not as you've explained here from 'the balance from loss', because if your elasticity is above one, increases in sales increase revenue, contraction reduces revenue. This has to come

from differences in elasticities in different markets. I'd like your comments on that.

Secondly, you make a rather strong statement that 'there is hardly any hope, then, of Windwards being able to compete with Latin American producers in open markets such as the United States' and you base this on the poor competitive position of Windward Islands using the farm gate price." May I suggest that the farm gate price is no index of cost of production. There is a great income component in our prices because of the small scale level of production, so I don't think we can make any statements about competitive position based on farm gate prices.

Now the question I want to ask is how does price stabilisation affect the competitive position of bananas, given as you say there is an increasing supply of apples, and oranges in the U.K. market. Wouldn't this have the effect of movement away from bananas?

#### B. Persaud:

Well, we have several points here. I appreciate your point that profitability from stabilisation would depend on the different elasticities. But I was talking here about the elasticity in the market to which you divert supplies. Now, if your elasticity is above one, it means that additional supplies would give you additional revenue. Compare this with what happens in the British market where you have the elasticity of one. Your additional supplies are not increasing your returns. Now you divert these supplies, and the returns you get as long as it's more than the cost of diverting the supplies, should really increase farmers' returns.

Now your question on farm gate prices. I know that farm gate prices are no indication of the cost of production, but we do not have data on the cost of production. Farm gate prices are some indication of the cost of production.

Now your third point which I can't seem to remember.

## M. Alexander:

It's the question about the attempt to stabilise price in the U.K. market. I'm asking what does this attempt on price stabilisation have on the competitive position of bananas vis-a-vis oranges and apples when in an earlier section of your paper you said that supplies of these fruits are buoyant.

#### B. Persaud:

Now, obviously if the elasticity of demand is just one or below one, you don't want to increase supplies because you are not getting increasing revenue. But we notice from the agreement that while you are controlling supplies to the market, to the U. K. market, you are not controlling production, and the proceeds from the amount exported have to be divided between available supplies, so that stabilisation in the British market does not necessarily mean stabilisation of prices to producers.

## G. Southwell (Grenada):

I would like to direct my question to Mr. Twyford, because he talked about the economic importance of the quality of bananas. It does seem strange that after so many years of growing bananas in the Windwards, and handling them that we should be getting worse rather than more efficient in our method of handling them. Now I know that there is an opinion held that within recent years that our principal buyer has actually been demanding a better quality banana, and has actually raised his standards of grading. Now this brings us to the question: what is a good quality banana? I know the sugar people can measure quality of sugar in terms of sucrose content, but it's a question that's often been raised by the cocoa growers, for instance, what do the manufacturers mean by quality cocoa? I wonder whether Mr. Twyford would care to comment on this question.

## I. T. Twyford:

Mr. Chairman, I think that Mr. Southwell's point about Geest raising his standards may well be a good one, but whether he has or not, his standards are the ones the Windwards have to meet and for which we get paid a high price. The fact of the matter is that the quality of our bananas has been deteriorating and this poses a very serious problem indeed, because we don't know why.

Now, as to what is a good quality banana. Well, first of all, it obviously has to taste like a banana; it has to be acceptable in taste, but the variety which we grow is generally acceptable in taste so that this in fact doesn't count any more, and all that simply does count is the question of appearance. In what he called his 'specials', his specially selected, he does not allow any kind of blemish on the fruit whatsoever. There must be no rotting, nor marks, except perhaps on a cluster of four or five fingers there may be one mark; almost mark-free. In his 'bests', which is his second grade, he allows a few marks, but no rotting, and the lower grade has increasing number of marks and rotting. And the fact is that rightly or wrongly this stuff that looks good is apparently what the house-wife likes to buy and pay a high price for, however much we may feel that this is in error.

# R. Pierre (Trinidad):

I'd like to ask Mr. Twyford two questions. One hinges on the other, so to speak. I want to find out if there is some measure of seasonal variation in the sort of deterioration of fruit, I mean fungi in the deterioration of fruit. Has this been looked into at all? I'm thinking particularly of what they call latent infections which occur in the field and which become evident later as the fruit begins to ripen.

# I. T. Twyford:

There is undoubtedly a seasonal fluctuation. We get monthly out-turn reports based on Geest's grading and over many years it worked out that the best months are April, May and June and the worst months are October, November and December. The thing goes in a cycle. It declines from June to October and then it goes up again from December to April. Now as to what this involves: We ourselves have not done any work on this. The Jamaicans have, and the French people in Martinique and Guadeloupe are doing quite

a lot of work on this business. It appears that the fungi which leads to poor quality fruit, rots, etc., are introduced inside the fruit beneath the skin at a very early stage of the fruit's development. Now if you carry your fruit, from cutting it to getting it into the ripening room in England without damaging it in any way, the fungus inside the skin may very well stay latent and you end up with a good looking banana. But if you bruise it or damage it or strain it in any way, you get openings and the air gets in and the fungus starts to proliferate.

This is apparently what happens. Now, coming back to the question about seasonal variations: the wetter months of the year in the Windward Islands as you know are really from June to December, and we assume that the fruit contains more water in the wetter months (than in the drier months), and this makes it softer, I mean softer as measured just by a hardness test, and if it's softer it's just that much more liable to damage.

## B. Yankey (Dominica):

As far as I can see there are two issues arising 'rom the banana industry in the Windward Islands. The first is a trade issue and the second is the question of productivity - the relationship of value of output to cost of production. In looking at Mr. Twyford's Table 1, I have noted that the productivity in tons per acre is surprisingly low. Of course, both Mr. Twyford and myself have certain reservations about the statistics involved and not only that, we know that Dominica for instance has a percentage of 3.7, which implies that the productivity per acre is not as low as 1.3. However, what I have not seen on the Table is the cost relationship, and as such, the tables do not give any true picture of the profitability of production. Referring to Mr. White's paper, I would say that the banana industry is not something that we should consider as hazardous, but we would say that it is an industry which should be rationalised. And this can be done very effectively if we make optimum use of lands which are suitable for banana production. As such, the industry could be exploited to great advantage for development purposes and we know that Dominica and many of the other Windward Islands have used income from bananas for specific purposes, and this has stimulated quite a lot of development, particularly in the commercial sector.

Analysing the scale of productivity per acre in Dominica, one could find production of 14 tons per acre and production of 1 ton per acre. And what is happening there is that you have production on very good lands, production on marginal lands, and production on sub-marginal lands. My argument is this: that we need to rationalise the use of land for production of bananas. I would take this position if I were to make a recommendation for the rationalisation of the industry. I would say that since credit is not available for agricultural purposes in the commercial banks in most of the Windward Islands, Governments should introduce conscious policy to provide agricultural credit but directing that credit to the allocation of capital for agricultural development in specific crops: crops suitable for lands allocated on our Land Use Capability classification.

The second point I would raise is that we need the establishment of an efficient marketing organisation which would promote the effective disposal of the 'other crops;' We know that a lot has been

placed on the banana industry. It has a very effective marketing organisation, but the other crops do not enjoy that privilege of an efficient marketing organisation. And my third suggestion would be that the marketing organisation should increase the per unit weight of bananas acceptable on the market so as to force the industry to raise its standards. I would like to hear some comments on those three suggestions.

## I. T. Twyford:

Mr. Chairman, Mr. Yankey has raised some very important points. It's very easy when you are doing agronomic research work to, not overlook, but sort of relegate this question of costs and profits. However, Mr. Persaud has done some work in St. Lucia on farmers as they operate and I'm sure that he can talk about this better than I can.

The fact is we've got 110,000 acres of land in the Windward Islands which are covered by bananas. Well, it simply is too much. We say that our average production is only 11/2 tons per acre on these statistics which we know are subject to a certain amount of doubt, but supposing the figure was raised to 5, 5 tons per acre, on, don't even say 110,000 acres; say we knocked it down to 80,000 acres, this would then be 400,000 tons of fruit. How could we ever dispose of it? Well, the fact is if you are ever going to raise your productivity you'll have to reduce your acreage. And I would think taking an average of 5 tons per acre, the sort of acreage which we must have in the Windward Islands is 40,000 acres, — this is a big difference from 110,000 acres. But I would think that if we could aim at 40,000 acres producing 5 tons an acre, we shall be in some reasonable situation.

### M. White:

The problem is that Mr. Yankey did not quite define the term rationalisation. I think the rationalisation of the industry, taking Dominica as a unit, has gone pretty far. Everything is rationalised in the sense that from the producer right down to the final consumer everything is organised and in order, but my title 'The Dominica Banana Industry — An Economic Hazard' seems to have misled him. Now this is just a pointer. I'm not saying that we should suspend the production of bananas on every possible cultivation in Dominica. I'm not suggesting that at all. But I am suggesting a move from the present 70% export emphasis on this crop to something closer to a more realistic figure where you can, to use Mr. Twyford's term, break even in terms of input and output which is not being done now. And credit would not help the industry—the banana industry is already loaded with credit.

### B. Persaud:

I would comment on some points raised by Mr. Yankey and Mr. White. First of all, I would like to touch on the point about yields. Mr. Twyford's figures differ from my figures, and there is a reason for this, my acreage figures are adjusted acreages, adjusted according to the density, so my figures are really for pure stands or pure acreage equivalent.

I'm expected also to say something on cost. We did some costing

work and found that costs range in the Windward Islands from about 2.8 to about 4.5 cents per pound.

On the question of credit I don't support Mr. White's point that the farmers have got credit. Credit provision in the past has been very piecemeal, and only recently have efforts been made to establish credit institutions. I think about two years ago a credit bank was set up in Grenada, and one was set up recently in St. Lucia. I don't think there is a credit bank as yet in St. Vincent, and I know that there isn't one in Dominica.

Now, as to the setting up of marketing organisations for the other crops, a lot has been said on this. I don't think that marketing would help so much. It is a matter of the demand prospects, I think, for these crops. I'm not sure that marketing could help. After all marketing organisations have already been set up in some of the other islands, and they haven't made any great impact.

## C. Pilgrim (Barbados):

I'd like to agree with certain comments made earlier by Mr. Twyford on incentive to produce. I think there is a case and one which should not be forgotten that whenever, particularly with small farmers, the profit motive is not intense, you very often have to 'create' dissatisfaction with the present conditions before they are prepared to move forward.

And mow a question: Mr. White, you stated that the demand which Dominica can anticipate for its product will be restricted by geographical and political factors. Would you care to enlarge on the political factors?

#### M. White:

In the first case, which is the geographical factors, the difficulties of transhipment and the proximity to external markets vis-a-vis the other potential producers may be cited. In the second case i.e. the political factors, the awarding of quotas within politically associated groupings (potential or existing), the erection of tariff barriers or outright embargoes to protect the groupings — this is what I meant, really.

# LAND-USE PLANNING AND POLICY

Chairman: Mr. V. O. Ferrer1

#### Introduction

Distinguished delegates, this afternoon we move on to the subject of Land Economics. There are five papers listed for presentation. The first paper is to be delivered by Prof. Sauer who is a Professor of Rural Extension at the University of Illinois, U.S.A. and now a Visiting Fulbright Professor in the University of the West Indies. We are very glad to have Prof. Sauer with us this afternoon to speak on the "Economics of Soil Conservation, Reclamation and Rehabilitation." A discussion on soil conservation is most timely in the West Indies, and particularly in Trinidad where we are wondering whether we should or should not reclaim a vast area of land which is now under swamp.

Our next paper will be delivered by Mr. Cacho who was formerly the Economic Secretary in British Honduras. He is now attached to the University here in Trinidad. The title of Mr. Cacho's paper is "Agricultural Development with Unlimited Lands with specific reference to British Honduras." This is a rather interesting and intriguing subject, because in the rest of the West Indian territories there is always a difficult man/land ratio, but in this case of British Honduras, the situation is entirely different, and it will be interesting to hear what happens in a case somewhat different from the rest of the Caribbean territories.

Mr. Mathurin, who is Assistant Superintendent of Agriculture and Head of the Extension Division in St. Lucia presents the third paper. His paper, which is entitled "An Extremely Unfavourable System of Land Tenure, the case of St. Lucia," deals with a situation somewhat in contrast with the situation to be dealt with by Mr. Cacho. Mr. Mathurin throws light on a situation where the man/land ratio is quite different from that obtaining in British Honduras.

Then finally, we have two papers dealing with Farm Planning and Land Capability. The first of these papers is by Mr. Diaram Toolsie, Agricultural Economist who once worked in my division in the Ministry of Agriculture, but is now an Assistant Commissioner of Valuations, Rural Division, in the Ministry of Finance, Trinidad. His paper is entitled "Agricultural and Farm Planning

<sup>1</sup> Senior Agricultural Economist, Ministry of Agriculture, Trinidad and Tobago.

on the Basis of Land Capability Survey with particular reference to Trinidad and Tobago."

The last paper this afternoon continues with the consideration of Farm Planning on the basis of Land Capability, and this is to be presented by Mrs. Ruth Rawlins, who is a statistician with the Central Statistical Office, Trinidad.

At this point, I have great pleasure in asking Prof. Sauer to come to the microphone and deliver his paper.