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CRITICAL REVIEW OF THE RURAL AGRO-BASED  
INDUSTRIES PROJECT PROPOSAL

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Introductory

It is very necessary to ventilate, precisely, the basic concepts of the project proposal, and the implications that flow from that conceptual base, in the context of the countries to which the proposal is addressed. The first portion of this review therefore extracts the main premises of the proposal and seeks to match them to the specific circumstances in the rural areas of the Eastern Caribbean Islands. It concludes with a summation of precisely what the project seems to be about, and the environment to which it is addressed.

In the second part attention is given to actions that are indicated, on the assumption that the findings of the first part of the review is correct. On the basis of the identified actions, judgements are then made about the nature and range of expertise that would be needed for a process of initiation.

In the third part consideration is given to the objectives that seem realizable within the scope of the resources and the one year time span that is assigned. Equally, consideration is given to objectives that are not realizable and the reasons stated. This obviously affects the expected outputs and possibilities for showing some results at the end of the one year period.

I

Premises, Implications and Environment

First Premise

"The experience of rural peoples is often one of surpluses for which they are unable to secure sales on the local fresh market but the volumes are such that they are unable to maintain the supply level required by a commercial marketing system".

Very clearly this identifies as the materials base the "residual" that remains on farms after sales to market have been made. It also indicates that this residual is not in commercial quantities, is unpredictable in terms of quantum, in terms of product, and in terms of periodicity. An important implication is that it cannot provide a base for a viable commercial enterprise, in the sense of maintaining an agro-industry sub-sector. The corollary is that whatever activity is based on this residual at farms must be of a nature that varies with the available quantum at any point in time, and varies also with the particular farm product.

### Second Premise

"... in which the rural people become the main participants ... offer opportunities for linkages ... realise value added ..."

Taking account of the on-farm nature of the "agro-industry" operation implied, it then must be an activity super-imposed on crop and livestock production. One immediate implication is that it is a farm-family, part-time kind of activity, that does not make significant inroads into the farming occupation. A relevant factor here is the nature of the farming population in the islands, and the high proportion of women who are small farm operators. The participants are therefore likely to be mainly women and rural youths, with a high proportion of primary school leavers and "drop-outs". This suggests primary school educational level and lack of specific skills. There is the further implication that the activity needs to be performable with equipment on farm and within the scope of the farm operator's income. Consequently the activity must be labour intensive, requiring no or low capital inputs.

### Third Premise

"... rural artisans to apply their traditional skills using indigenous materials to make containers and packaging materials in which to present various products".

Here there is the indication that the range of activities would not be limited to on-farm processing of food products, but also would include fabrication of non-food on-farm products. However this aspect though initiated in the life of the project could have only limited impact, for it implies product testing, market acceptance, etc. In fact the project proposal stipulates that conventional containers will be required by the project.

#### Fourth Premise

"Technology developed at UWI, CARIRI, JIDC are considered capable of being implemented by rural-based agro-industrial projects having the input criteria mentioned above. Further the technologists are available to provide necessary guidance during application of the technology to monitor, evaluate and supply additional information ..."

To meet this requirement, there are two initial problems - establishment of communication between the technologists and the farm operators, and secondly making the technologists physically available in the islands. This implies time and costs.

#### Appreciation

Summing up these implications, the project proposal is therefore directed to non-commercial small-farm, part-time, primarily female operations, based on periodic surpluses of uncertain quantum and products mix. It also has to be oriented to equipment already on farms, and the processes need to be within the skill capabilities of the participants.

Deriving from this one discerns that the orientation has to take account not only of the economic and technological aspects already identified, but also a range of sociological considerations.

Taking all these together, it is then necessary to consider the environment in which the proposed project would be implemented.

#### Environment

It is not to be presumed that there are not already agro-industries plants in the islands. In fact in every island there are a range of similar activities, from commercially oriented factory operations through to welfare and community development agro-industrial projects to home economics and improvement exercises.

The supportive bodies and institutions are about as diverse as the project activities. Among the external institutions involved are UNDP, ITC, CDB, BDD, OAS, US/AID, OXFAM; and national governmental agencies include divisions in Ministries of Agriculture, Ministries of Industry,

Youth Affairs, Community Development, Women's Desks, National Development Corporations, the mix of institutions ranging from island to island. Account has to be taken too of the many local voluntary bodies which are also involved e.g. Social League, Toc H, 4H Clubs, CADEC, etc.

Another aspect of the environment into which this proposed activity is to be projected, is the range of processing activities and products related to already on-going projects. In Dominica alone, for example, one finds at community or cottage scale, crystallized fruit project, green banana chip project, cassava-farine project, "cottage industries" project in wine making, banana-raisin, baked goods, handicraft. Invariably all these are based on simple kitchen type equipment. Even more common as product lines are nectars (mango, soursop, tamarind, paw paw), jams, jellies, marmalade, condiments (hot sauce, mango chutney, etc.), confectionery (guava cheese, coconut cake, tamarind balls), pickles, preserves, spices.

And in addition, account should be taken of past experiences of these numerous activities. For example, at Grenada the factory "Agro-industries Ltd.", did not itself make guava cheese, but instead contracted out to housewives in an effort to develop cottage industries. However, its production had to be discontinued because of the wide variation in quality.

## II

### Essential Information Base and Technical Disciplines

The conceptual basis, implications that derive from the premises, and the environment for the proposed project, covered in the first part of this review are essential bases for the formulation of a rational approach. If the appreciation of the nature of the proposal is inaccurate, then re-evaluation of these bases is a prior condition to any further examination. In what follows, the basic assumption is that the first section of this review is essentially accurate.

Obviously the first step is a matter of fact finding. This has to be done before any attempt can be made to determine what is feasible and what is not; what's duplicative and what is not; what is redundant and what is pertinent. But even this fact finding task is not as straight forward as may superficially appear.

The technical orientation of this fact finding would embrace:

- evaluation of the raw materials base, that is, the "residual" on farms (amenable to processing under farm conditions, with available on site equipment, part-time operation) with some general idea of quantum and periodicity, for regions in each country. This can be done only by conduct of surveys in the various islands, for which there is need to plan the nature/method/scope/resources/ in terms of the particular circumstances. Such field enquiry is not avoidable.

- evaluation of the human resources to be applied, taking account of capability and skills, interest and motivation, time allocation as between some proposed new activity and farming and domestic functions.

- inventory of ongoing similar projects, their nature, location, orientation, product lines, prior claims on the identified "residual" that is to be the materials base.

If the additional assumption is made that the proposed project is meant to be an impact activity, in the sense of stimulating other farm actions that will result in widening the processing base, (as the proposal in part suggests), then the fact finding phase should also embrace some way of judging the scope for increasing the materials base (quantum of the "residual") from subsequent crop cycles. The farm environment itself and its crop production capability become relevant and important basic data to be collected.

If the further assumption is made that the proposed project should not be just another duplicative activity, then the next step would need to be identification and selection of new and additional product lines. Ideally these products should have a complementary relationship to other ongoing related activities. Closely interwoven with this is the specification of the agro-processing technology that is to be applied, taking

account of the on-farm situation in terms of the materials base, human resources, capital availability, and time allocation. It would seem that some first approximations on the questions of product lines and technology would need to be made during the fact finding exercise, as they are not the kinds of judgements that can be made at some remove from the farm family.

Supplementary to the above, some market evaluation needs to be made, in terms of product quality requirements, presentation, and methods and channels of distribution appropriate to such an on-farm activity. First approximations like the prior existence of distribution link/channels that can be tapped would need to be checked in the field, particularly taking account of the low economic viability of the proposed activity. If marketing mechanisms need to be put in place, then this needs to be known in advance, because it would have to be subsidized in some way.

This still leaves open the question of determining the packaging/bottling appropriate to the product(s) and the circumstances. For example, if bottling is decided on, then cap sealing equipment will be needed and this is not available on small farms. If some collective services are decided on, then the products to which they apply and the spatial radius of the farms to be served will have to be determined. In this case there would even be the standardization of containers to be considered.

Directly relevant to these aspects is the premise that rural artisans might apply traditional skills using indigenous materials to make containers and packaging materials. For this purpose, it is necessary to identify and evaluate materials for packaging, in quantum and quality. Obviously the determination of what might be suitable packaging materials cannot be decided without some knowledge of the product to be packaged. And also, there would need to be some evaluation of handicraft capability and the indigenous technology, in terms of applicability and marketability.

Until this body of facts is assembled and collated, it is not possible to determine, precisely, what is feasible, and could constitute the core of an operational project. In short, the information is the input for a study of feasibility, which is necessary to the making of coherent decisions.



Linking the information needed to arrive at decisions on feasibility, with particular disciplines that are essential to reaching informed judgements, it is evident that four combinations stand out: agronomist/horticulturist, community development/sociologist, food technologies/processor, handicrafts (design)/community development. In every case there is need for good knowledge of the islands, and close familiarity with "cottage industries" and "artisan-type" operations at local level. To these must be added a statistician/economist oriented to conducting market enquiries.

Up to this point, the content of what might emerge from their conclusions as to specific activities that are feasible, would be even less than conjecture.

### III

#### Objectives, Outputs and Activities in the Proposal

The stated general or long term objective to establish rural agro-based industries with emphasis on artisan-type operations, gives confirmation to the assumption that what is sought is an impact activity expanding in subsequent crop cycles. The proposal also mentions that the project activity should serve as incentive to increase primary production; and in addition should allow for the mobilization and participation of rural people in their own development.

Implicit in this is the intent that the project activities would progressively develop to an economic viability. Such intention makes it even more imperative that the point of departure has to be a through-going assessment to determine feasible activities. In this light the groundwork postulated in the second section of this review, is not optional.

This finding confirms and underscores the immediate objective in the project proposal ... "to carry out a survey /on four of the small island states of the Eastern Caribbean/ to evaluate the potential that exists for the development of rural agro-based industries with specific reference to the food sector". The general nature and orientation of the information that is needed is discussed in the second section. But there still is the question of design of the survey or field enquiry.

There is the need too, to settle on the criteria for selection of the four islands. Two that might be suggested are that preference be given to: those that are production oriented, and where the socio-political motivations is favourable. But if such factors already exist, one would expect the proposed activities to have emerged - and therefore the obstacles to their emergence could merit prior attention.

From the standpoint of availability of processable materials, the superficial judgement would be to give preference to the more agriculturally oriented islands; but here again the expectation should be that systems would be more developed than elsewhere. Having regard to the nature of the project proposal however, the key factor is on the human resource side, which implies preference to be given to stable farm family situations.

Subjective judgements of this kind need to be supplemented by objective data, if economic viability is a long term aim. The detailed survey therefore should come after a fairly thorough preliminary assessment has been made. In short, the outcome could be prejudiced by the initial choices. Even so, regard will have to be given to the existence of ongoing similar related projects, especially as some would be competing while some others may have complementary characteristics.

The stated second immediate objective "to identify two islands which share comparative advantages for early development of pilot projects", depends entirely on the outcome of the detailed survey and identification of feasible activities.

The stated third immediate objective "to establish, on one of the selected islands, a project centre ..." is also seen in the project proposal as a major output. It is stated that while the range of activities of the centre would be determined by the needs of the project, the activities would be expected to include information, packaging, storage, sales and if necessary some processing.

Even if such a centre is a feasible undertaking, it certainly cannot emerge in the twelve-month span of the project proposal. Firstly, there is no advance basis for determining its activities; and secondly, there is no financial provision for it.<sup>1/</sup> In fact having regard to the economic non-viability of the project proposal activities, such a centre could hardly be put on stream, even if it were completely subsidized, until there is a positively accepted justification for it.

It would seem then that the first two of the stated immediate objectives could have possibility of realization. But none of the estimated project outputs are realizable in a twelve-month span. It is consequently, very questionable whether there can be a justified expectation that ... "at the end of the first year, all the necessary mechanisms will be worked out, initial output will be realized and the project activities will have progressed to the early part of its operational phase". In fact forming a concept of time frame depends entirely on the outcome of the survey, determination of what is deemed to be feasible, and decision on how it can be done.

As regards the range of activities to be undertaken within the project proposal, only those specified to be carried out in the first six months could seriously be contemplated; and for the reasons outlined in the second section of the review, they would not be considered to be sequential, if the best results are to be obtained. The elements are too inter-dependent to permit compartmentalization.

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<sup>1/</sup> A centre requires a building. If it is providing information services it requires staffing and overheads. If it is undertaking packaging, storage, and sales, this implies, transport, warehousing, equipment, staff, overheads. If it is doing training and demonstration then it needs to be planned at kitchen scale with locally available equipment (pots and pans, stoves, etc.), staff including food technologist, etc. A combination of these activities implies a substantial establishment.

### Practical considerations

Up to this point there has been reference to conduct of survey, which it has to be understood consists of several national surveys. The results of each would have to be examined separately and feasible actions in each country specified according to the findings of the national survey. A moot point is whether these surveys could be conducted, simultaneously, or whether they would have to be done sequentially, or in some combination of the two. The planning of these surveys would have to consider the technical aspects, the budgetary aspects, and operational aspects.

Sufficient was said in the second section concerning the range and inter-relatedness of the required information, to suggest that actual field surveys would be required. Mail surveys in the Caribbean have notoriously low response rates. A Mail survey in rural areas is a non-starter. Field surveys are expensive. The extent to which the budget can support the carrying out of national surveys is therefore a prime consideration. The cost of a complete survey in a single island would run to about US\$50,000 which has to be considered against the whole budget of US\$136,000.

The availability of personnel to conduct the survey is no less a problem. The fewer persons available, the longer time has to be allowed.

Obviously full national surveys would reflect instances where the proposed on-farm activity could be feasible, and instances where they would not be feasible. Having regard to the various limitations of budget, personnel etc., the only way to proceed is by conducting a pre-feasibility enquiry, thereby endeavouring to reduce the spatial scope of the survey. This pre-feasibility enquiry would depend on obtaining qualitative information from persons and institutions already involved in similar or related activities.

What therefore emerges, is that there should be a pre-feasibility enquiry for the various reasons indicated in this section; and on the results of the pre-feasibility make decisions on the design of the surveys, and decide on the specific composition of expertise required for analysing the survey results and determining the feasible actions.

The Pre-Feasibility Enquiry

The purposes of the pre-feasibility enquiry must be to:

- prepare an inventory (to the extent possible) of on-going agro-processing activities in each of the islands, giving the product lines and materials base, supporting institutions, and projects' orientations.
- identify the islands that offer the best possibilities for the impact development that is contemplated;
- select the regions within each of the islands that should be subject to detailed field survey, (bearing in mind that the proposed agro-industry activities are to be addressed to particular farm family situations, and not just the community at large);
- formulate the content of the field survey (including drafting of suitable "questionnaire") (or interviewer's guide);
- propose the best possible ways for conducting the surveys, in operational terms (taking account of the on-ground situation in the individual islands).
- specify the qualifications/briefing etc. for the enumeration exercise;
- suggest the mix of disciplines for making the feasibility evaluations that are to be derived from the results of the surveys.

Having regard to the nature of the proposed agro-industry activities, the population that is envisaged would perform them, the related sociological, technological and economic factors, it is necessary that there be careful selection for carrying out of the pre-feasibility enquiry.

