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AN ASSESSMENT OF THE SECOND INTEGRATED  
RURAL DEVELOPMENT PROJECT

PART II

ASSUMPTIONS AND GOALS:  
A REVIEW OF THE PROJECT PAPER

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## INTRODUCTION

In the companion report to this one, Norbert Powell and I assessed the impact of the Second Integrated Rural Development Project upon farmers. In particular, we looked at the maintainance of the soil conservation treatments and at the adoption of the cultural practices associated with increased agricultural production. Our findings were not encouraging. After two years of participation in the project, many farmers are not showing the signs of progress which should have been achieved: treatments are generally not being maintained, and improved cropping practices have not been adopted.

In this report, I will argue that this lack of progress is due not to bad management, poorly trained field officers, or insufficient resources, but rather to a Project Paper which a) set unrealistic, undesirable, or contradictory goals, b) proposed inappropriate technology, and c) made assumptions about the agricultural sector which are not valid. In other words, the IRDP is a programme with basic intrinsic flaws in its concept and design.

The management of the project has made significant progress in trying to overcome the deficiencies of the Project Paper. Components such as marketing and credit have been added; timetables have been adjusted; more realistic goals have been set; and administrative procedures have been established. Yet while advances have been made, the project is still suffering from the faulty assumptions and unrealistic goals established in the Project Paper.

As a method of organization, I will focus on five fundamental project goals:

- Goal #1: To control soil erosion in the Pindars River and Two Meetings watersheds.
- Goal #2: To increase agricultural production by 250 percent, thereby raising the income and standard of living of farmers.

Goal #3: To generate long-term employment opportunities.

Goal #4: To stem the flow of rural-to-urban migration.

Goal #5: To enlist 100 percent farmer participation in the project.

GOAL #1: TO CONTROL SOIL EROSION IN THE PINDARS RIVER AND TWO MEETINGS WATERSHEDS

There is no question but that soil erosion is a serious problem in the two watersheds and that preventive measures need to be taken to conserve the productivity of the land. In attempting to solve this problem, however, the Project Paper adopted a technology which is inappropriate for both the farmers and the project.

1. As we observe in our study, there is a problem relating to the maintenance of the soil conservation treatments. Many farmers are not investing the time and energy which are required to ensure their effectiveness over the years. Although hillside ditches may be technically optimal in controlling soil erosion on research stations, they are not feasible where farmers allow them to deteriorate after only two years.

2. As I have shown elsewhere (Blustain 1980), such capital-intensive methods are inappropriate on lands held under insecure forms of land tenure.

3. The methods currently employed by the project cannot be replicated by the farmer. Rather than encouraging him to establish soil conservation measures on all of his fields, the ditches and terraces make him dependent upon the technical expertise of highly-trained officers. Simpler and more appropriate methods, combined with effective extension, would allow the farmer to replicate treatments without the intervention of a project.

4. The current cost of soil conservation treatments all but precludes its replicability in other watersheds. Given current costs, replication of the IRDP for the estimated 150,000 hillside farmers in Jamaica would cost approximately

\$900 million (Armor et. al. 1981:25).

Since the Project Paper was written, the costs for establishing the various treatments has risen dramatically. By September, 1980, the per acre cost of machine-built terraces had risen from \$755 to \$1100; hand-built terraces, from \$1249 to \$2800; hillside ditches, from \$470 to \$490<sup>1</sup>; orchard terraces, from \$600 to \$1130. With labor and material costs continuing to rise, the prices of these treatments can only go up.

5. Preliminary studies from Olive River in Trelawny (IICA 1981) indicate that grass strips are a more effective means of controlling soil loss than hillside ditches. It is encouraging that the soil conservation component has set the goal of establishing 1500 acres in agronomic treatments such as grass strips, strip cropping, and mulching. Specifications are still being worked out, but evidence suggests that these methods can overcome some of the problems outlined above: they are cheaper (grass barriers cost about \$204 per acre; strip cropping would cost \$40 per acre); they can be established on insecurely-tenanted land; they can be transferred by the farmer from one field to another; and they are more easily maintained.

6. As a layman, I cannot claim that these alternative methods are the final answer for controlling erosion. However, given their apparent advantages, the project should conduct studies on the long-term benefits and problems of such treatments. Convincing evidence that they work would provide a soil conservation model that would be replicable throughout Jamaica.

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<sup>1</sup>The small cost increase is due to the fact that the Project Paper cost includes individual basins as well, whereas the current estimates are for the ditches alone.

**GOAL #2: TO INCREASE AGRICULTURAL PRODUCTION BY 250 PERCENT, THEREBY RAISING THE INCOME AND STANDARD OF LIVING OF FARMERS.**

The goal of the IRDP -- "to improve the standard of living of small hillside farmers in rural Jamaica" -- was based upon the logic that if the farmer produces more, then he can sell more; that if he sells more, he earns a greater income; and that if he earns a greater income, then he will be in a position to raise his standard of living.

1. With no apparent justification, other than it had been shown to be viable on government research farms, the Project Paper established as a goal a 250 percent increase in agricultural production. As Tom Davis noted in his report, however, the projected production level at the end of the project "is 2.5 times the base figure; but 2.5 times the base figure represents an increase of 150%, not 250%" (1981:11).

2. It is assumed that this 250 percent increase in production will translate itself into a similar rise in farm income (Project Paper, p. 20). Given expected free-market relationships between supply, demand, and price, the equation of production and income is questionable. It is further undermined, however, by the assumption (p. J 7) that expanded production will result in reduced consumer prices; unless government subsidies were anticipated, these two goals are contradictory.

3. The proposed cropping systems were based on studies done at government research stations; there is no evidence that the technology was developed on "real" farms or that "real" farmers made an input into its development. The Project Paper assumes, for example, that the "improved crop production budgets" will require a 100 percent increase in the "use of materials and production labour" over the traditional cropping systems (p. J 29). Except for blanket statements that the project income will allow the farmer to invest in these

inputs, no indication is offered that this has been verified through farm studies. Indeed, the Project Paper gives no details about the technology -- fertilizer types and quantities, sprays, crop spacing, etc. -- through which the projected production increase had been, or could be, attained.

4. More importantly, it is assumed that the desired 250 percent increase in agricultural production (supply) would meet a demand of similar magnitude. The Project Paper states categorically that "The availability of market outlets for farm produce is not judged to be a major constraint to increase production since both higglers and the AMC are active in the project area" (p. 38). Markets are viewed in terms of the mechanism by which the produce reaches the consumer, not the level of consumer demand itself.

In fact, there is at present an inadequate level of demand to meet even current levels of production: prices have dropped, in some cases below the level of production; farmers complain that there are not enough higglers around to buy their produce (and it is safe to assume that if the demand was there, the higglers would respond to it); and farmers are talking about taking land out of production.

This year the farmers have taken a beating on the marketing of their crops. This has been due to a variety of reasons, including the lack of an export market (ginger), weather (bananas), or lack of transportation (cane, citrus). In the case of food crops, the primary factor has been the lack of demand for these products; there has been an overproduction of yams, Irish potatoes, cabbage, pork, and poultry.

The immediate cause of the problem has been the government's importation policy, which has flooded the hops with rice, flour, sardines, chicken backs, and other items. A more basic flaw in the system is the lack of knowledge about the demand structure. The Project Paper could not have anticipated the change

of government and the current policies. Yet there is no indication that an assessment was made of the actual or potential demand for these items; rather, it was assumed that if the farmer produced more, he would automatically be able to sell more.

5. In one of its more glaring contradictions, the Project Paper establishes as a goal the adoption by farmers of "intensified farming techniques using higher-value crops" (p. 20). At the same time, however, it is stated that "Future crops in the two watersheds will not differ substantially from those grown there now" (p. J 7).

6. The IRDP is in the unenviable position of trying to convince farmers to produce more at a time when the farmers cannot dispose of what they already have. To make matters worse, the Project Paper's technology for achieving that increased production requires additional labor and expensive inputs. If farmers have not been responding to the call for increased food crop production, it is not due to a lack of will or capability; it is because they have no incentive to do so.

7. It is important that the project get clear signals from the government about what crops it should urge farmers to grow. This, in turn, requires a careful assessment of demand. This is difficult in the case of export crops, where the market is often beyond the control of the Government of Jamaica; with food crops, however, a long-term import substitution policy should be clearly articulated so that farmers will know what to grow and so that government programmes such as the IRDP can set realistic production goals.

### GOAL #3: TO GENERATE LONG TERM EMPLOYMENT OPPORTUNITIES

The Project Paper anticipates that "Long-term employment opportunities will be created by the increased need for labor generated by establishing continuous and intensified cropping techniques" (p. 19). Although the amount of labor that will be generated is never quantified, an analysis of the data presented in Annex J reveals that the improved cropping system requires twice as much labor as the traditional system.

1. Before the long-term goals can be met, however, the farmer first has to adopt the labor-intensive system. And for the farmer to use labor labor, he first has to recruit it. An examination of the two major sources of farm labor -- hired and household -- reveals the existence of significant constraints around the ability of the farmer to recruit twice his normal amount of labor.

2. In the case of hired labor, farmers are now being forced to compete for labor with project-related activities. This has resulted in a tighter labor supply situation and increased wage rates. Recruiting household labor also presents problems for the farmer in that working on the family farm provides insufficient rewards to the laborer.

3. Hired Labor -- Over the past two years, the project has generated over 160,000 man-days of labor. Much of that labor was employed directly by farmers and involved the cutting of ditches, the building of terraces, the planting of tree crops, the establishment of forestry plantations, and other project activities. On the surface, this short-term employment generation is a boon to farmers -- if he does some of his own labor, the farmer can hire labor courtesy of the project and earn a contractor's fee besides. In fact, however, it means that the farmer has had to pay higher wages rates; and the cost of labor is cited by farmers as the major deterrent to labor use.

Project-related wage rates are calculated on the basis of a \$13-a-day minimum wage, a figure significantly above the average daily rate. On some cases, where the laborers are paid directly by the project, this has had the effect of diverting available labor away from farming operations and toward the more lucrative project-related work. In British, for example, where the forestry component is establishing a 299-acre plantation on government land, the thousands of man-days generated by the activities have made the wage rate (\$10-12) for agricultural labor the highest in the two watersheds; and British is, by any reckoning, the poorest in the project area. With the labor force preferring to work on the better-paid forestry activities, farmers must offer higher wages if they are to recruit the labor they require.

Even though the farmers themselves do not pay their laborers \$13 a day, the greater overall demand for labor, combined with the increased expectations of laborers, have caused a rise in the wage rate. Evidence indicates that the daily rate for agricultural labor in the two watersheds is as high -- and usually higher -- than the rate in surrounding non-project communities. Around May Pen, for example, the rate is \$6-7; in Morgan's Pass, \$6-8; around Allsides (where there is another government project), \$8-10. The rates around the project area are: Kellits, \$9-10; British, \$10-12; Yankee Valley, \$6-8; George North, \$8-10.

While the farmer, therefore, can get short-term benefits from project subsidies, the lasting effect has been an increase in wage rates, either because the laborers can get more pay working directly for the project; or, because the farmer, who needs labor for his every-day operations, must now compete for labor with other farmers who are utilizing subsidized labor they would not otherwise employ.

This situation would not necessarily be bad if the farmer was getting a return on his crop which would allow him to meet the labor cost. Under present

conditions, however, prices have fallen, and the farmer is in the position of paying inflated wage rates while at the same time getting lower returns. Farmers, who are understandably unwilling to employ more labor, are therefore not intensifying their cropping system. Ironically, by creating short-term employment, the project is making it more difficult for farmers to hire the labor needed to adopt the cropping system which would generate long-term employment opportunities.

4. Household Labor -- A recent report from the Allsides project (IICA 1980) claims that its agricultural "techno-pack" (which is similar to that of the IRDP) would "create a demand for labour". Based on several (faulty) assumptions about household structure (e.g. 300 working days in a year, four persons in each household between 14 and 65 years of age who would be available for farm work, few school attenders in the rural areas), the report optimistically projects that with the exception of peak periods, the household could easily accommodate a cropping system which would double the current labor requirements.

In fact, however, harnessing household labor is a difficult task for most farmers. In our sample of 58 farmers, only 30 used any amount of household labor (excluding the farmer himself); even among these 30, many of them claimed that this help came only on the infrequent occasions when the children were not attending school or the spouse was not tending to domestic or higgling matters.

The difficulty with the Allsides study is the assumption that household members, particularly those in their teens and above, would be willing to work for free or for pocket money alone. Most young people would prefer to work outside the farm sector or, failing that, to work for wages on other farms; in many cases, farmers reported that they have had to pay their sons to work on the farm, thereby erasing the presumed advantage of "free" household labor.

A related factor militating against the retention of labor within the household is the fact that farmers control the land until they either die or retire from active work. Although the concept of family land allows for the sharing of land between members of a family, it is unusual for the son to exercise his claim while his father is still active. Assuming that the farmer is fifty and has fifteen more years of active life left in him, it is unreasonable to expect the son to hang around and work on the farm for the fifteen or so years it would take for his father's death to give him control.

5. The system of day-for-day exchange labor, while an important factor in meeting the labor requirements of some farmers, cannot supply the manpower needed for continuous intensive cropping. This system is more important in Pindars, where 12 of 39 farmers reported that they worked with partners at various times during the year; in Two Meetings, only 3 of 29 claimed to have done so. This is primarily due to the labor requirements of can-cutting, in which the crop must be moved off quickly; day-for-day is particularly suited to this sort of labor mobilization.

On the surface, labor exchange would seem ideal for farmers with little cash to invest in their farm operation; by giving a few days of his own labor, he can expect the same amount in return. Two factors, however, inhibit its more wide-spread adoption. First, many farmers claim that they have had bad experiences with it; labor given has not always resulted in labor returned. Second, many of them claimed that they only worked for other people when they needed the wage income; in other words, day-for-day does not offer the income generation which they sought when they decided to enter the labor market.

6. In summary, although labor is a crucial input in agricultural production, the Project Paper says surprisingly little about it. Most of the analysis is directed toward soil conservation activities, where it is stated that

Hiring labor is not expected to be a problem, however, for the target group, farmers under five acres. On the contrary, the considerable underemployment on small farms, especially during the drier seasons of the year when crop production activities are minimal, means adequate labor will be available.

The bodies are certainly there, but no investigation was made into the terms under which the farmers would be able to employ those bodies for non-subsidized activities.

Because of recruitment problems, the goal of generating long-term employment opportunities runs into some serious problems. Long-term objectives directly depend upon the ability of the farmer to initiate a labor-intensive cropping system in the short term. Yet farmers are being encouraged by the project to double their labor input at a time when they are experiencing a drop in the demand for their produce and at a time when the project is raising the cost of labor to the farmer through its own employment generation activities. Given the low return on his products and the high wage rates, the farmer is both unable and unwilling to increase his labor input. Without this immediate surge in labor use, the long-term prospects for increasing employment through more labor-intensive cropping are bleak.

7. The preceding analysis does not mean that labor generation through the adoption of high-value crops is not possible. One need only look at the ganja industry, where last year the farmer, who was getting up to \$60 or \$70 per pound of weed, was able to pay his laborers \$20 a day. Yams and bananas are not in this class, however, and both short- and long-term employment generation on a significant scale will have to await the introduction of high-value crops.

#### GOAL #4: TO STEM THE FLOW OF RURAL-TO-URBAN MIGRATION

The attainment of this goal is directly linked to the ability of the project to generate long-term employment opportunities; and as indicated in the previous section, it is unlikely that this will occur. What I will argue here is that reduced migration is not only an unachievable goal, but under existing conditions it is also an undesireable goal.

1. A drive through Kingston is evidence enough that too many people are living there. From the point of view of urban planning, keeping more people out of the cities makes sense; but in the articulation of this supposedly national goal, little consideration is made of the effect of increased population (and population growth) on the state of the rural areas. Reduced migration is only desireable when the increasing population can find productive employment in the rural areas. To have more and more people hanging around in the country parts with nothing to do would only transfer urban problems to the rural areas. Thus, the terms under which people stay is a crucial variable in the desireability of this goal.

2. It is plausible to assume that through its short-term employment generation, the project is, in fact, keeping more people in the area and engaged in productive activities. In this regard, it is interesting to note that between 1943 and 1960, one of the greatest increases in rural population growth was experienced in the Christiana Area Land Authority, where "massive infusions of investment aid" were given (Eyre 1970:36). People will readily respond to employment opportunities, regardless of whether or not they are aware that in doing so they are "reducing the flow of rural-to-urban migration". Once these subsidized activities end, however, it is doubtful whether the job opportunities will still be there.

With project-related activities at an end, it is more than likely that people will drift off in search of jobs elsewhere. Jamaicans are a very mobile people, and the historical records shows that they are more than willing to venture out and seek greener pastures, even if those pastures are in an urban ghetto.

3. As undesirable as it would be to have young people remaining in the rural districts with nothing to do, it would be just as undesirable to have them staying in the watersheds as farmers (as opposed to daily laborers). There are a few pockets of underutilized land, especially in Pindars, on which new farmers could settle. However, the overall population density of the project area is sufficiently great that any increase in the number of people wanting to own their own farms would stimulate the fragmentation of farms.

Evidence from farmers throughout the watersheds indicates that where land is inherited, it is divided through the principle of family land; simply stated, this means that unless the owner of the land specifically wills it out (which is usually not the case), it is the practice that all of his children inherit the right to use that land. Thus, if a farmer has four children, all of them will be able to claim a piece for their own cultivation.

Throughout this century, Jamaica has been fortunate in that overseas migration and off-farm employment has provided an outlet for people to leave the farm. If this safety-valve did not exist, over-population in rural areas would have been even more critical than it is at present. In the British area, for example, 8 of 10 farmers operating family land stated that all of their brothers and sisters (i.e. other claimants to the land) had left the farm either through farriage, migration, or employment opportunities elsewhere. In Kellits, 7 of 9 farmers made the same claim. Had any of these co-inheritors been encouraged to stay on the land and farm it, this would have effectively decreased the amount

of land which those remaining farmers are now operating. And with the average farm size in the project area being only three acres, there is little room for additional fragmentation.

4. Except in areas where idle lands would allow for further settlement, it is in the interests of the rural areas to have fewer people deriving their primary livelihood from agriculture. Stemming the flow of migration would help the urban areas, but it would have a detrimental effect on rural well-being.

5. The only feasible means of reducing migration in a positive way is a course which the IRDP is not currently pursuing. Although more people in agriculture per se is not desirable, the economy of the rural areas would be stimulated by an increase on the number of people engaged in off-farm employment. Agri-business, commercial establishments, cottage industries, light industries -- all of these would keep people in the country yet would not encourage them to claim their small patrimony and thus promote farm fragmentation.

#### GOAL #5: TO ENLIST 100 PERCENT FARMER PARTICIPATION IN THE PROJECT

Although the Project Paper is not very optimistic about getting all of the farmers in the project area to participate in the IRDP, it sets a target of 100 percent farmer involvement (p. 23). While it is indeed desirable to get as many farmers as possible in the development process, the mode of participation envisaged in the Project Paper is not adequate to ensure the achievement of sustainable development.

In this section I will deal with four inter-related issues. First, participation in the project is essentially an individual affair and does not involve community action. Second, the method of project implementation results in short-term participation; once a farmer digs his ditches or terraces, his involvement often

ceases. Third, "joining the project" necessitates no resource input from the farmer; indeed, the main incentive for the farmer to get involved is the fact that he can make money. Fourth, while the farmer derives benefits from his participation, he plays little role in project planning or decision-making.

1. A farmer gets involved in IRDP activities when he and a field officer draw up a farm plan. While the Project Paper recognizes the fact that cooperation between farmers of adjoining plots of land is essential (pp. 23, 55); there is no mechanism by which this cooperation can be ensured. Regardless of what his neighbors may think or do, the farmer participates as an individual, makes individual production decisions, and reaps individual benefits. There is no focus on community development.

There are, of course, Development Committees throughout the two watersheds, and these are playing an important role in the distribution of resources which benefit the whole community (farm tracks, entombed springs, marketing depots, and the like). Yet as I demonstrated in a recent report (1981), the activities of the Committees are not dependent upon the involvement of farmers. In every district there are a few leaders who display an interest in community affairs, and it is these people who are responsible for getting the resources into the community. In a very real sense, the leadership of the Development Committees is also the membership of the Committees.

2. Once a farmer gets his ditches dug, his coffee seedlings planted, and his subsidy in hand; there is little incentive for him to continue his involvement with the project. Other benefits may be derived through a supplementary farm plan, but unless the farmer actively pursues the matter, he is often lost to the project. Many farmers who entered the project in its early stages now complain that they never see a field officer. Under pressure to

draw up and implement more and more farm plans, the officers have no incentive to go back and check on the progress of farmers whose implementation is officially listed as complete. Even where implementation is not finished, the farmer's participation may come to an end. In our survey, Powell and I found that of 53 farms requiring waterways, 37 had not been built.

Development does not occur in a single leap or bound. Building a terrace will not in itself ensure future prosperity. Yet without adequate incentives for farmers and officers to work together over time, this is how the development is presently expected to occur."

3. Recent studies from around the world have demonstrated that development is more likely to occur when the farmer contributes his own resources to an endeavour" By committing something to the process, the farmer takes more interest and strives harder for success. Not only does the IRDP not require a tangible input from the farmer, but it allows the farmer to make money from his initial participation. This is not a feature unique to the IRDP; almost all government agricultural projects since World War II have given the farmer an "incentive".

The end result, however, has been the many farmers have come to expect these handouts as their rightful reward for constructing the soil conservation treatments. When asked what benefits they are receiving from the project, farmers will in most cases tell you how much money they made from their subsidy. The one farmer who bad-mouthed the project because it did not give him enough money to buy a car was an extreme case, but the welfare attitude is entrenched. In the Sandy River area of Pindars, where the pilot project provided subsidies of 100 percent, the reduction to a 75 percent cost-sharing resulted in farmers feeling that they were being ripped off.

Although incentives are needed to get farmers to participate, the present system neither encourages long-term interest in project activities nor long-term commitment to maintaining treatments.

4. There is little evidence that the Project Paper was conceived of or written with the input of farmers. Thus, farmers' participation is limited to deriving benefits; planning and decision-making are done by others. For example, there is no evidence that farmers participated in the development of the improved cropping system; or in the techniques of soil conservation; or in the establishment of the subwatershed boundaries; or even in the drawing up of project goals.

Project management is sensitive to the needs and problems of farmers, but many of the basic decisions were made before the present administrators came on the scene. In its crucial development stages, the IRDP was essentially -- and still is -- a top-down project in which decisions, goals, and technology were established for, not with, the farmer.

The leadership/membership of the Development Committees has played a role in identifying the priority needs of their communities and in determining where the resources should go, but both they and the project managers have been hamstrung by the need to limit their activities to the ideas and budgets contained in the Project Paper.

## SUMMARY AND RECOMMENDATIONS

As Powell and I outlined in our assessment report, the IRDP is having serious problems in meeting its goals. In a situation such as this, it is all too easy to blame the implementors for failing to provide the administrative guidance necessary for a successful project. In the case of the IRDP, such is not the case. With a project as large and as complex as this one, administrative kinks are to be expected. On the whole, however, the administration of the project has not been a deciding constraint or hinderance to its success.

Rather, the IRDP is confronting the reality that its goals and methodology have intrinsic flaws. The techniques of soil conservation are inappropriate for small farmers in that they are costly, complicated, unsuitable for lands held under insecure forms of tenure, and create a dependence upon skilled officers. The goal of increasing agricultural production by 150 percent may have been relevant in the mid-1970's when labor was cheaper and demand for locally-produced food was high, but those conditions do not exist today. Long-term employment opportunities are a desirable goal, but unrealistic where the farmer has not incentive to intensify his cropping patterns. Reducing rural-to-urban migration is a noble ideal, but it is not realistic and, if it fosters increased farm fragmentation, not desirable. The means by which farmers participate in the project all but precludes sustained progress and community development.

If the IRDP is to achieve progress in its overall goal of raising the standard of living of farmers -- and the human and material resources are certainly there for it to do so -- it will have to re-orient itself to more realistic goals and appropriate methods.

1. As Powell and I indicated, a greater stress on agronomic soil conservation techniques will enhance the probability of both reducing soil erosion and replicating the project.

2. Given present marketing conditions, farmers in the project area will not respond to the call for the increased production of their traditional crops. It is essential that the project get a clear signal from the government on the types of crops for which there is a market. And this must be done immediately. Even under the best of circumstances, it will take several years for farmers to adopt new cropping systems. The project is in a remarkably good position to be at the forefront of agricultural development -- its administrative structure is in place; its concentrated extension staff is in the field; its farmers are looking for alternative crops and are used to working with extension officers; the vehicles are there; and the marketing depots are being built.

3. Whatever decisions are made regarding soil conservation or crops, they must be made with, not for, the farmers. Basic research should be done on real farms, under conditions and constraints faced by real farmers.

4. Although it is too late in the game to change the system of subsidies, the project should, wherever possible, tie the allocation and distribution of benefits to resource commitments by farmers. Farmers will overcome their welfare mentality only when they realize that they have a tangible stake in the success of the project.

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