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The peasant agricultural system
in Eastern Maputaland -
A development strategy

by

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THE PEASANT AGRICULTURAL SYSTEM IN EASTERN MAPUTALAND -
A DEVELOPMENT STRATEGY.

I. Introduction

This paper is based on work done with farmers in Eastern Maputaland during 1982 and 1983. The purpose of the study was to investigate the existing agricultural system and in participation with farmers to develop an appropriate strategy for improvement.

The area under discussion is situated between the Mocambique border and Lake Sibayi near the Northern Zululand Coastline. The residents are predominantly the Tembe-Tonga, interspersed in the west and south with their Zulu neighbours. The women and children still use Tonga as the spoken language in the home, but Zulu has been adopted by the men as the official language. The southern branch of the Tembe-Tonga occupies the region between the Pongola/Maputo River and the sea on either side of the international boundary. In the past, people crossed the border freely. After the Frelimo take-over in Mocambique the border was closed, effectively cutting the tribe in two.

The area is an extension of the flat, sandy Mocambique coastal plain where it reaches into South Africa. The rainfall is up to 1200 mm along the coast, declining rapidly in parallel belts to 400 mm in the centre of the plains. The inter-seasonal rainfall variation is high with frequent droughty hot spells.

The soils belong almost exclusively to the pale grey to white sands of the Fernwood Form. This soil is inherently infertile with a low moisture capacity. During the dry spells the sand dries out rapidly and young plants succumb to moisture stress and burning.

The dryland fields of maize, cowpeas, groundnuts, sorghum and millet are grown on these sands. Because of the inherent low fertility of the soil, one field can only be used for 2 or 3 successive seasons, after which yields decrease rapidly. New

fields are then opened by slashing and burning off the vegetative cover. The old fields are left fallow for years. This results in large patches denuded of perennial vegetation and loose sand blown about by the wind. In areas of relatively higher population densities such as the vicinity of Maputa, not enough land is available for this practice to continue. In order to stabilise the existing cultivation practices it is crucial to find appropriate and inexpensive means to maintain the fertility of the soil.

The tall, thick swamp forests associated with the Kosi Bay river systems are habitually cleared for cultivation. The soil here resembles a thick layer of brown to black compost overlying material saturated with water. This is the organic O horizon which belongs exclusively to the Champagne Form. These soils necessarily contain a high proportion of organic matter, have a high moisture capacity and are relatively fertile. These clearings are used mainly for bananas, but a large variety of vegetables are grown, as well, often as cash crops. These vegetable gardens comprise the most reliable source of agriculture practised in the area, providing both food and income to those farmers who have access to these forests. Because of the perennial water supply, these areas are especially valued during times of drought.

In the depressions near the coast the fluctuating water table is near to or above the soil surface, creating the numerous swamps and ponds so characteristic of the area. Near the edge of the water farmers construct mounds by scooping surface sand and grass-cover together. These mounds are surrounded by trenches to drain off excess water. Some organic matter is contained within these mounds due to the grass included. A large quantity of sweetpotatoes are grown on these mounds.

Due to the relatively low population density away from the main villages, extensive grasslands are available for cattle ranching. The veld, however, is subjected to a haphazard grazing system whereby cattle are allowed to graze selectively over extensive areas. This causes severe degradation of the natural veld, but because of the relatively low stocking rate, the destruction has not yet reached the proportions it has in other parts of KwaZulu. Unless a suitable veld management system is found more damage is inevitable.

2. The problematic nature of rural development

2.I. Who benefits from large schemes?

For some decades this area has attracted large capital -intensive projects. The CED has established large cotton estates at Makatini and Ndumo. Large forestry plantations have also been established north and south of Lake Sibayi. Further north near Kosi Bay coconut and cassava pilot projects have been established but have not been pursued in spite of very ambitious initial plans. At present a powerful business company is investigating the possibility of establishing forestry north of Manzengwenya.

Large schemes such as these are necessarily directed towards making the most productive use of land in the area. Productivity, however, in this case is measured as the return to outside capital invested in the land. The single most important impact these schemes have on the local population is that some farmers have to move off their own land. Beyond the employment of a limited number of labourers drawn from the local population, large schemes such as these have little meaning for local farmers. In the case of the proposed forestry scheme, local farmers have expressed an interest in using the services that might become available to grow their own timber lots. Forestry normally occupies large consolidated blocks of land and a pragmatic arrangement benefiting both the company as well as the small farmer is unlikely, but not impossible. In Sokhulu (Reserve 4 north of Richards Bay) for example, small farmers are making a success of small plots of timber by using services provided by the adjoining forestry industry.

Some development planners argue that the establishment of such model schemes will lead to neighbouring farmers adopting the technologies used on these projects. To do this however, important resources such as trained personnel, infrastructure, extension services and finance are necessary. Until such time as these are available to the small farmer, he will be in no position to adapt to a more efficient system. It is necessary to look at the overall agricultural system, and not merely one aspect of it.

2.2 Risk and uncertainty

All agricultural systems suffer from risk and uncertainty. Even if crops or animals survive the drought, floods, pests and diseases, there is always uncertainty attached to marketing and especially prices. Small farmers are particularly vulnerable, as many of the risk-reducing technologies such as irrigation and crop varieties which are resistant to pests, disease and drought are not available to them. Neither do they have access to the risk-reducing institutions such as crop insurance and marketing boards which play such a major part in modern agricultural systems. The result of failure is not merely a financial setback either: without alternative sources of income subsistence farmers actually stare starvation in the face in times of drought or floods.

An aspect seldom discussed by development planners and agricultural experts is the social and political uncertainties which small farmers face. The very definition of peasant farmer inevitably includes the marginal position these farmers occupy in a hierarchical society. In South Africa in particular, rural people are subject to innumerable laws and restrictions from central and homeland governments that create instability and uncertainty. Two obvious examples are the instability of migrant labour and the massive population removals. It must be pointed out that merely the potential threat of a removal introduces a depressing air of despair into a community, and it is impossible to work on long term plans in such an environment.

Within the tribal area also, the nature of the present day tribal authority system places the ordinary farmer under the arbitrary rule of a powerful elite. The position of this elite is so entrenched that development agents and researchers can only reach the ordinary farmer through these authorities. In traditional areas, the converse applies as well in that farmers will only deal with an outsider once he has cleared himself through their induna and chief.

The unfortunate result of such a system is that many development agents channel their projects through the local elite, with the result that the people least in need of development get the benefit. It also means that instead of the ordinary farmers'

business activities being governed by mutually understood regulations and procedures, his actions are continually subject to the goodwill of a tribal authority member or his/her social standing within the community.

One of the important reasons for representative farmers' organisations is exactly to increase the control of farmers over their social environment. It is fortunate that the local tribal authority at Maputa has shown a keen interest in the agricultural development of its area, and many of the indunas are also good farmers through their own efforts. It will nevertheless require some diplomacy to encourage the growth of autonomous farmers' organisations to represent the interests of farmers, and not merely the interests of the development agents or local elite.

3. The present agricultural system.

3.1 The Homestead

The development strategy that will be discussed here is essentially a reinforcement of farmers' attempts to improve their present agricultural system. In this northern region the population density is relatively low and the natural environment is still reasonably intact. A significant proportion of farmers in the area are wholly or partially dependent on agriculture and this environment for their existence. As such they show a keen interest in agricultural progress. Because the present agricultural system is the starting point of such a strategy, the most salient aspects of this system will be outlined.

The basic unit of the present agricultural system is the homestead. Apart from the responsibility of land allocation which rests with the tribal authorities, there are no other social institutions which effectively manage the agricultural system. Recently some farmers' organisations have been created, and the tribal authorities have taken an increased interest in agricultural development. None of these organisations however, has been effective in promoting necessary change as yet. The homestead therefore is the land-holding unit, with the head of the household in authority. Each member of the household is expected to contribute to the economy of the household by supplying either labour or money. All members of the homestead, whether they contribute or not, have the right to subsist off the homestead.

The improvement of the present agricultural system will inevitably involve more off-the-farm activities, and it is usually assumed that outside institutions or the tribal authority will manage these activities. Both are false assumptions: the government extension service is hopelessly understaffed and unmotivated to assume these responsibilities, and there is no precedent whereby whereby tribal authorities have traditionally managed an agricultural system - they have neither the training nor the experience for the task. Furthermore, because these traditional leaders have not been elected to their positions, it cannot always be expected that they will act in the interests of the farmers. The farmers themselves will therefore inevitably have to shoulder some of these responsibilities until suitable services become available.

This is only possible if they can be trained to co-ordinate their activities through viable and soundly structured representative organisations set up around a specifically stated goal. Group action by farmers therefore plays a far more crucial role in a situation of underdevelopment than in a modern system where farmers enjoy the benefits of tiers of government services, education and training as well as cheap labour.

Because of the influences of the modern economy, pure subsistence agriculture does not exist anymore. Most households have intermittent or regular access to incomes derived from migrant labour or local employment. Most of this income is spent on food, schooling and other household expenses. Some of this income however is invested in the farm or in cattle. It is thus not uncommon to find that the larger farmers have either worked for extended periods themselves, or they still have sons or daughters sending remittances. The "subsistence" economy is therefore closely linked with the so-called "modern" economy, and in future most homesteads will continue to rely on a strategy to secure an income both from the land and from employment.

3.2 The homogeneity of small farms

Because of the isolation of this area, improved varieties of seed and other agricultural requisites are not freely available. Farmers are therefore forced to rely on the traditional crops available in the area, such as Zulu-maize, cowpeas, groundnuts, sorghum and millet. The cultivation, planting and weeding season falls within the period of September to November. Because virtually all farmers follow almost identical dryland cultivation practices, there is an extreme demand for labour during these few months.

Cultivation is still done mainly by hoe, which is a backbreaking slow job. Only a minority of homesteads own cattle, and even fewer a span of trained oxen. At present there are only two tractors in the area, one belonging to the tribal authority and the other to the driver of this tractor. The hiring charges for tractors in this area are exorbitant, and very few farmers are inclined to use them.

From the preceding discussion there are two obvious strategies to break this extreme seasonal labour demand: diversifying the enterprise mix on and between farms, and introducing labour-saving devices for cultivation and weeding. To some extent the farmers have already attempted diversifying their farms, and some are growing rice and fruit trees.

Considerable success is also being made of the vegetable garden grown near water. Vegetables are mostly perishables and require little processing, so they make ideal cash crops. Because they are grown in winter, vegetable gardening does not compete with the summer field crops for labour. By introducing appropriate irrigation technology, this activity can be considerably expanded.

Introducing appropriate implements for soil preparation, planting and weeding is an essential, but longer-term solution. In this regard it would be fruitful to look at the tremendous advances made in other third world countries such as Botswana in developing appropriate equipment to fit in with the entire agricultural system.

3.3 The marketing function

Most farmers plan their production for home consumption only. Only when there is a surplus do they attempt to market their produce. Unfortunately, when climatic conditions are favourable, large numbers of farmers produce surpluses simultaneously, creating a glut of a particular crop, and it becomes difficult to sell without having good storage facilities. Amongst these farmers there is only very limited use of outside agricultural requisites.

A significant number of farmers are, however, planning their production specifically with the aim of selling their produce. These farmers are well known, as they hire labour from neighbouring homesteads because the labour supply within their own homesteads is too small to cope with the large fields. People also go to their farms to buy produce for their homes, and also to resell at the informal markets at Maputa and other busstops, thus acting as marketing agents.

The most severe bottleneck experienced by these farmers is the lack of agricultural supplies and transport. There is thus a definite pressure towards the commercialisation of farms. The increased use of inputs is normally paid out of the savings of the farmer, but in the long run these costs can only be met by an increased cash income produced by the farm. A strategy aimed at the commercialisation of farms must pay simultaneous attention to the supply of agricultural requisites, transport infrastructure, storage facilities and the market place. It is the entire agricultural system that must work, not just part of it.

Fortunately, the local demand for produce still exceeds the supply to such an extent that local marketing is a viable option for the foreseeable future. Farmers have expressed a keen interest in constructing a marketing stall at Maputa, where large numbers of people pass every day. A number of small bridges have also been completed by several communities with only minimal outside assistance. Finding appropriate means of transport is still a challenging problem for the future.

3.4 The importance of staple crops

Much attention is paid by extension officers and other development agents to the production of vegetables. Vegetables, as mentioned before, make suitable cash crops because of the minimal processing required before they are eaten. Cabbage, spinach, onions, tomatoes and carrots only provide some minerals and vitamins to the diet however, and very little of the life-essential carbohydrates and protein. It is for this reason that homesteads spend so much energy growing and processing the important cereals, such as maize, sorghum and millet. Together with groundnuts, cowpeas and other legumes they comprise the important staples which people need to live. These crops are grown as land-extensive dryland field crops, and require more labour and are far more risk-prone than vegetables are. To the staples can be added sweetpotatoes, amadumbes and cassava, all important root crops that store well in the ground, but although rich in carbohydrates, are very poor in proteins.

At present, the extension officers and other development agents spend their efforts mainly on vegetable production and very few programmes look seriously at dryland field production. Yet in many African countries the ministries of agriculture do notable research and spend much effort on the production of the staples. It is time that serious attention be given to the field crops in underdeveloped areas in this country as well.

4. Towards a development strategy

4.1 The central role of the farmer

The crucial role of the person working on the land is often overlooked when development plans are formulated. The rural poor are amongst the most disadvantaged and powerless people in this country, and their future prospects are not good at all. They are at the same time the people most in need of upliftment as well as the main participants in any agricultural development project. The farmers are therefore the people who must have the motivation for change, as well as the confidence that they will reap the benefits of their hard labour.

Rural development is by its nature a complex, slow process. The addition of limited outside resources to an existing largely subsistence agricultural system will not result in immediate radical change. But it is possible to support farmers in their efforts to improve their standard of living. In participation with these farmers, men and women, the most serious bottlenecks thwarting progress can be identified. A process of adaptive research can then be used to overcome these obstacles. In this manner, the direction of change should be closely allied to the direction in which people want to move, obviating to some degree the disorientation and disruption inevitable in the development process.

4.2 The role of the development agent

Under present circumstances, the agricultural system in this area has been approaching the stage where further efficiency becomes progressively more difficult to achieve. Appropriate outside assistance is therefore desperately sought after by almost all farmers. The most common requirement is the supply of agricultural requisites to implement new technologies, transportation and an improvement of marketing facilities.

Innovation, however, depends on human institutions, and apart from the homestead, there is a dire shortage of organisations to implement change in these isolated areas. The most crucial role of the development agent is to stimulate viable farmers' organisations

based on specified objectives. A considerable amount of guidance and training is necessary to ensure that these organisations are democratic and truly representative of the farmers.

Because of the high risk attached to agriculture, the technical changes advocated by farmers are often directed at risk reduction rather than at a drastic increase in production. In particular, pests and diseases need to be controlled, irrigation practices introduced and drought resistant crop varieties made available. In order to be accepted, the introduced technology should nevertheless achieve substantial benefits compared to the costs. A useful approach here would be to co-operate closely with farmers in experimenting with a range of appropriate technologies in order to create a growth process that is an educational experience for both the participants and the development agent.

The prepared "blueprint" approach is inappropriate within such a strategy. Instead of confining the development process along a predetermined path, the development agent rather creates the environment where farmers can gain the power and confidence to expand their choices.

4.3 The maximum participation of farmers

The temptation to concentrate only on the most progressive homestead is ever present. Development is meaningless if just a small proportion of people can enjoy the benefits. In this regard it is crucial to look at the major role women play in agriculture - in homesteads where the head of the homestead is present as well as where the senior males are migrant workers. Again the importance of organisations suited to their needs cannot be overstressed.

There is little justification for ignoring either the progressive farmers or the poorer struggling farmer. It simply means that the development programme should be flexible enough to accommodate a range of different categories of homesteads, each with different needs and capabilities.

4.4 Development as a growth process

The strategy advocated here is aimed at a progressive process rather than a final product. Technical change is not viewed as the objective but as an indispensable tool to be used by farmers and not to control them.

A new technology may have unforeseen ramifications that are not apparent at the time of its introduction. On the more positive side, the process of change exposes hidden talents and opportunities that were previously hidden. The individual projects should therefore start on a small scale in a number of locales where failure can be an educational experience rather than a catastrophe.

This approach must be viewed in contrast to development plans drawn up by the experts, complete with maps, drawings and a model of how the final product will look. The physical shape of the programme suggested is open ended: it assumes that people can think and decide for themselves, but that they need to be provided with the opportunities to implement their ideas.

5. The Maputa Project

The University of Zululand has been directly involved with the Mpukanyoni Project based on cassava production for some time. It has recently become possible to expand this active role to the vicinity of Maputa. Because this area is so isolated from industrial processing plants, it is envisaged to follow the strategies outlined in this paper.

Three major components emerge from this outline:

- i) The stimulation of representative farmers' organisations
- ii) Production on the land
- iii) The marketing function.

It will be the goal of this project to build up a small self-sustaining economy which would have a measurable impact on reducing poverty in the area.