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Economic Development of Tribal Agriculture in Malawi

by

P. BROWN*

Ministry of Agriculture, Zomba

The traditional agricultural sector in most of the under developed areas of Africa will show to a greater or lesser extent the following characteristics:

- (i) considerable experience of local crops, soils and climate, but little understanding of how they work;
- (ii) very limited vision as to the improvements possible in the area, or incentives to embark on them;
- (iii) land which is often inherently poor, or, if fertile, densely populated;
- (iv) a negligible amount of capital, except in so far as time, energy and the resources of countryside can be regarded as such;
- (v) a conservative and leisurely social system which makes heavy demands on the family's time;
- (vi) a high level of debilitating disease and malnutrition;
- (vii) a low level of prestige attaching to the actual cultivator of the soil.

Though some improvement can be obtained by changing for the better one or two of the above characteristics, no major breakthrough is likely unless all limiting factors are ameliorated together.

This gives rise to one of the major policy decisions confronting Ministries of Agriculture with limited means, namely the position to be taken up between the following two extremes:

- (a) One could create an efficient extension service to as wide a sector of the farming public as possible using residual resources to improve such basic essentials as the marketing organisation, seed, tools and fertilisers. This technique aims at widening the vision of the population as a whole, getting them to apply what spare resources they have in return for cash, and relying on small increases in production over a wide front, with very little capital input.

If successful, this technique can produce considerable short run increases in production, but is limited by the extent to which spare resources of time and labour can and will be committed by the farmer. It also suffers from the publicity angle in that the face of the country is not markedly changed, the effects being noticeable only in reduced mal-nutrition and rising trends in crop surpluses which can be marked by seasonal fluctuations due to weather and farmer confidence.

- (b) Alternatively, one could concentrate one's resources on the potentially most responsive areas and men, leaving perhaps 90 per cent of the farming community to subsist as best they can. This technique aims at a breakthrough on most if not all of the seven characteristics, leading to large increases in production over a limited front. This technique usually implies a considerable capital input, but if successful should ensure a steadily increasing expansion of production after a probably initial period of adjustment and confusion. The resultant development can usually be seen on the ground -- a good publicity point - but this is achieved at the cost to somebody of a substantial debt, as the high yields acquired imply the mobilisation of resources from outside the area. Any fall in market prices for the commodities produced may leave the economy unable to pay off this debt, though one would hope to be able to service it.

In economic terms it is a question of deciding the extent to which one can safely become indebted today in the hope of greatly increased returns in the future - and in the agricultural sector the future must be reckoned in terms of ten to twenty years.

There are very few major agricultural export products for which one can at the present time envisage a rapid increase in future demand and a steady or increasing unit price, and most of these are in "luxury" sectors that require considerable capital and skill in their production. Under these conditions the farmer in debt will be at a disadvantage vis a vis the farmer who owns his own capital, and the country which has to borrow abroad to finance its agricultural development programme will be at a disadvantage vis a vis the country that has been able to create its own capital reserves from mines, industry or

* Mr Brown could not attend the Conference and his paper was read by Mr J.E. Harrison.

booming commodities, and has sunk these in its countryside.

In an increasingly competitive market, the stress must increasingly be placed on low cost combined with quality production.

As Malawi is a fairly densely populated and landlocked country with no rich mineral deposits or major industrial facilities for speedy generation of local capital, one would be inclined to place her nearer the low input, broad front end of the spectrum, though this does not preclude the greatest unexploited potential, to act as spearhead demonstrations to the rest of the country of what can be done given the will to work and co-operate, and the backing of adequate funds.

How then should one plan one's strategy for agricultural development.

1. THE SOCIAL BACKGROUND - VISION

One of the most fundamental steps to be taken is to enlarge the villagers' concept of what farming can be. They know it can be both hard and unrewarding work and it is not enough merely to spread knowledge of the three R's and leave the newspapers, radio and improved transport system to lure the more intelligent young away to the towns and cities. Through radio and newspapers, through primary school curriculum and through party political pep talks, the atmosphere must be created wherein agriculture is regarded as an honourable occupation in which money can be made by the energetic and skilful and in which even the mediocre have a patriotic duty to do their best on the land allotted to them. Such a campaign must of course be backed by solid assistance in advice, markets and incentives.

2. AGRICULTURAL EDUCATION - KNOW-HOW

In primary school education the syllabus can be given an agricultural flavour without necessarily having agriculture as a subject. New primers may have to be written, but this can be done. Nature study can be used to instil some of the basic principles of crop and animal production, e.g. the importance of adequate nutrition to man, beast and plant. What must not happen is that agriculture becomes equated to a penal hour hoeing the school garden.

In secondary schools and universities, facilities must be provided for taking agriculture as a full subject with a view to providing the future specialist advisors and innovators in the agricultural sector.

Reputable Colleges of Agriculture must be established for the training of farm managers and field advisory staff.

Last, but by no means least, facilities must be provided for giving short courses to practicing farmers who show the willingness and ability to innovate. Skilful use of the radio and the printed word can be one of great assistance from quite an early stage in the development from subsistence agriculture to a cash economy, and its effectiveness should increase as the standard of living and education rise. These media must work in the closest possible liaison with the extension workers.

Without a sufficiency of adequately trained local manpower, development projects will not produce their maximum benefit, or will do so only on the unstable basis of unquestioning obedience of local workers to the detailed instructions of a skilled expatriate.

3. INCENTIVES - THE MARKET PLACE

Though patriotism and pep talk may spur a man to action, it is unlikely that this action will be maintained unless some tangible benefit results from it. Money is not likely to be regarded as a benefit if it immediately flows away into the pocket of the debt or tax collector or if the farmer finds nothing desirable for sale in his vicinity. There may also be the added complication of the extended family system which tends to result in the unlimited liability of him that hath to provide for him that hath not. However he that has distributed a lot is possibly better off in terms of power and respect than he who has distributed nothing.

There are two markets which must be organised to provide an incentive to the farmer as well as profit to the entrepreneur, and these may or may not be closely linked.

The first is the market where the farmer can sell his crops; the second is the market in which he can buy his farm inputs and his consumer goods. Both are essential and desirable. In an agricultural sector consisting largely of smallholders emerging from subsistence farming both markets should if possible be within easy walking distance say 4 or 5 miles apart. The marketing of crops can and frequently does take an inordinate amount of time. While most of the larger crop markets will have their attendant cluster of stores, these are not always well stocked and there are many villagers who take their crops to temporary markets which have no stocks of trade goods at all for sale.

Price is a very potent factor for stimulating production even amongst smallholders emerging from subsistence agriculture, and as they become more sophisticated so will it become more important. Experience in Malawi has indicated that the acreage planted of any cash crop is markedly affected by the previous season's price. Two consecutive seasons of low prices can have near disastrous results. As peasant farmers, unless well regimented by tradition, are a notoriously expensive tax base for the purpose of raising Government revenue, there is a great temptation, where statutory Marketing Boards exist, to try to raise development capital from the sector by applying a forced export price. There is a delicate balance ensuring a margin of 'saving' that is neither so high that the farmers get restive, nor so low that the marketing organisation has to be subsidised. One solution would be a stable basic price to the farmer which will give him a moderate return for his labour, and which looks as though it can be maintained on average over the next 10 years, together with a bonus payment in years of exceptionally good prices or when it is particularly desired to expand production the following year.

Too often in agricultural development projects the organisation of a market for farm inputs and consumer goods is forgotten, the project management being expected to distribute the absolute essentials with its own resources. It is admittedly difficult to find openings for entrepreneurs in broad extension campaigns to increase production, but wherever there is a concentrated expenditure of Government money, in an irrigation or settlement scheme for instance, then suitable entrepreneurs should be encouraged to set up and be helped and guided if need be, if no co-operative enterprise is to be organised. In Malawi co-operatives have fallen on evil days through the lack of trained managers and accountants, and where the local populace does not have an inborn business sense, it is nearly as important to train business men and accountants as it is to train farmers for a developing agricultural sector.

4. INPUTS - THE MEANS OF PRODUCTION

Having established improved farming as a desirable objective and created the will to try and achieve it, it is necessary to ensure that the farmer has available the necessary means to achieve the goal. These means need not necessarily involve massive capital outlay per acre in machinery and buildings, but if the infrastructure of an area is poor or non-existent, the total cost per acre of an integrated project can be formidable.

First the farmer must have sound and accurate advice on how to grow new crops and improve the yields of his traditional ones. This advice on how to grow new crops and improve

the yields of his traditional ones. This advice should be geared to the optimum economic return to the farmer which should also give, if the pricing policy is right, the maximum benefit to the national economy. A bankrupt farmer with a flawless demonstration farm is no help to the cause of increased production.

Secondly the farmer must be able to obtain from a nearby source any essential tools, seeds, fertilisers, insecticides, machinery, livestock feed supplements, and building or fencing materials. Initially his needs will be simple and his purchasing power low, but he must not be prevented from taking the next step forward in sophistication through his being unable to get the necessary tools and materials. This very rapidly becomes a bottle neck if it is left to the extension service alone.

Thirdly the farmer and the local trader (or the co-op) will need credit in addition or as an alternative to subsidies on the new inputs required at each stage of advance. Credit must be supervised in the early stages and issued in such a way that it can only be used for productive purposes and that it can be recouped at the time the farmer gets paid for his crops. This supervision may be as expensive as a small subsidy, but it does not distort the market, creates at least short term jobs for men skilled in ledger work and accounting, and may in time train the farmers to accept the obligation to repay debts voluntarily at harvest time. Fourthly, the farmer and his family and hired help will need good health and strength in an economy which will rely very largely on human labour. Facilities for curative medicine are expensive to run, and tend to be a bottomless pit for the consumption of Government funds. That number of rural hospitals and dispensaries which can be afforded should therefore be used to point out that prevention is better than cure, and to act as centres for programmes of nutrition, education, hygiene and preventive medicine. The benefits of such programmes are hard to quantify in economic terms, but in Malawi, the few surveys of the health of rural populations so far carried out have shown such a high incidence of such debilitating diseases as infant malnutrition, bilharzia and hook-worm, that attempts are now being made to include preventive health measures in any major area development project. Much can be done through improved knowledge and self help, and in Malawi attempts are being made to realise this improvement through a model village programme for which the main external stimulus is the provision of a clean water supply and a community development worker.

There are thus certain fields in which one can embark upon development with fair singleness of purpose, namely;

- improved nutrition and sanitation,

- improved agricultural training and dissemination of agricultural knowledge,
- improved timeliness of labour input,
- improved seed, fertiliser use and pest control as a single package, and the provision of essential credit.

This implies, of course, that sufficient experimental work has been done to provide technical solutions to the problems involved.

There are other fields however in which the correct general line of development is much less clear, and I would like to refer briefly to three of these factors, namely;

- land tenure and holding size,
- mechanisation, and
- the marketing organisation.

Land tenure and holding size

Land matters touch a very sensitive spot on the body politic and it is usually necessary to move with greater caution when seeking to alter the pattern of tenure. At any rate this is so in Malawi to whose land situation I propose to limit my present remarks. In Malawi only about 4 per cent of the land area is alienated to individuals or companies as freehold or long lease. The rest of the land is customary land or public land, held in trust by Government for the use of the villagers and Government sponsored bodies respectively. On customary land, permission to use a piece of land is granted by a senior member of the community to whom the power is entrusted under clearly established rules. Members of the kinship groups forming a village may usually continue to occupy a piece of land for so long as they need it, and the right of user may pass to descendants by either patrilineal or matrilineal inheritance. 'Strangers' may be permitted to settle in the village and be granted user rights to vacant land, but such people (including husbands granted user rights of their own in matrilineal and matrilocal communities) may have to give up their rights if land becomes scarce or if they displease the community. Thus though there is no registered title to customary land, there is in fact considerable security of tenure so long as one is farming in one's family village, and so long as one is not disowned by one's own family (father's family in patrilineal and mother's family in matrilineal societies). This does mean however, that the greatest security of tenure occurs where there is also, usually, the most conservative and restrictive social milieu. The young man wanting to try out newfangled ideas may have to seek land as a 'stranger' in some more progressive village than his own, and, if he cannot marry

into the village, his security of tenure may not be great. For this reason settlement schemes are being established on public land to which progressive individuals can move on a normally renewable annual tenancy, which ensures that they can continue on the holding for as long as they can successfully cultivate it. In this respect Malawi lays considerable emphasis on the agricultural training of the Young Pioneer Youth movement, in which young men are disciplined, given basic training and sent back to the land to become the spearhead of agricultural progress, either in their own villages or on settlement schemes, in close liaison with the agricultural extension workers.

The average size of individual 'holdings' in Malawi customary land lies between 3 and 4 acres, though about 10 per cent of holdings are over 10 acres and comprise about one third of the cultivated acreage. Claims, under customary law, to several hundred acres have been known. 'Holdings' are on average split into two separated gardens. Customary land thus presents a patchwork of small plots with a considerable loss of crop land and soil resulting from boundary paths which gully easily. Some relevant statistics follow:

Total land area of	
Malawi	23 248 000 acres
Estimated cultivable	
land	13 114 000 acres
Estimated cropped	
acreage 1968	3 100 000 acres
Estimated rural population 1968	
3 896 000 people	
Estimated number of	
rural households 1968 ..	937 800 families

Thus the 'average rural household' consists of four people cultivating 3.3 acres under arable crops and having 14 acres of cultivable land available. The pattern of distribution is of course varied. Those areas with good land and water already carry from 100 to over 500 people to the square mile (i.e. from 25 to less than 5 acres of total land space per family) while the less densely settled areas suffer from poor soil, rugged terrain or lack of water.

Population is estimated to be increasing at approximately 3 per cent per annum and it is difficult to envisage the creation of a sufficiently large number of industrial and urban jobs - at present only about 30 000 in spite of the current development boom - to affect the increasing pressure of people upon the land.

In settlement schemes it is therefore policy to go in for units which can be managed largely by family labour, with some use of seasonal labour and a minimum use of large machines which cause a heavy drain on foreign exchange. Settlement sizes allocated at present range from 2 acres of double cropped paddy land, through 8 to 10 acres of good tobacco/maize land, to up

to 20 acres for mixed farming. Only in the case of flue cured tobacco are farms of the order of 200 acres being created for a limited number of intensively trained supervised farmers.

It is accepted that the more enterprising farmers may buy out and employ as labourers the less intelligent men, but it does not seem likely that this possible aggregation on settlements will greatly affect the national distribution of holding size.

A first attempt at land registration and the granting of legal title is being made in the Lilongwe Land Reorganisation Scheme financed by the International Development Association. It is interesting (and perhaps hopeful) to note that the registration unit agreed with the people is the extended family group holding, usually a block of between 50 and 200 acres. If it were possible to organise such areas as single production units run by one member of the family properly trained as a manager and responsible to a board of elders (directors) - as if it were a family firm - then there might be considerable opportunity for innovation, prestigious employment for the men folk, and a release of the women from bearing the brunt of the labour, except in peak periods of harvesting, weeding and perhaps planting. There is a long way to go, however, before this happens.

MECHANISATION

As mentioned earlier, there is steady pressure from the Malawi Government at the moment for the use of labour intensive as opposed to capital intensive methods within the country. This is not from choice but from necessity, and arises from the dense rural population, the very limited opportunities for employment in the urban, industrial and mining sectors and the shortage of capital and foreign exchange. This means that, for the mid future at least, the Malawi farm family will have to put in a lot of hard work, but it will be quite possible for them, under most soil conditions, to get high yields from small acreages without the use of tractor power.

The search will continue for better hand tools and storage bins for the family with less than four acres, which cannot justify ox or tractor mechanisation except where contractors may offer certain facilities at a rate sufficiently cheap to be borne by such high value crops as tobacco or cotton.

Ox drawn equipment is being developed for those with over 8 acres of arable land and a holding of not less than 15 acres.

The ox-cart is of course invaluable to farmers - large and small - and can bring in a useful income from local transporting business.

Tractor mechanisation can only be justified for large estates, for contract work or for such jobs as heavy clearing or the digging of drainage lines in bilharzia ridden swamps.

Malawi is particularly concerned to try to define the conditions under which a contractor could survive by rendering small farmers such services as ploughing, cultivating, fertiliser distributing, spraying, groundnut lifting etc. for prices that will not break the farmer. Experience to date (ploughing at £2.10.0d. per acre) has been too limited and not at all promising.

MARKETING

Malawi, having tried to market crops through private traders and co-operatives, now boasts a monopolistic, quasi-Government Farmers Marketing Board which buys nearly all customary land crops. The only major exception is cassava, which is bought by licensed traders. The predominantly estate grown crops, tea, tung and flue cured and Burley tobacco, have their own marketing organisations.

There are a number of private butchers buying in the livestock market, but here again a quasi-Government Cold Storage Commission acts as residual buyer for all stock offered.

Monolithic and monopolistic marketing boards have the advantage of control and can be made to provide a service in sub-economic areas, but it is not easy to keep them running efficiently with low overhead costs, and a very vigilant eye is needed by the management. From the farmers' point of view well run co-operatives would doubtless give a cheaper service, but of late the co-operatives movement has suffered from inadequately trained or unreliable permanent staff who have not been able to stand up to the unenlightened demands of members. The Board is however, organising itself on the basis of permanent area markets serving a radius of from 5 to 15 miles, each with a number of satellite temporary markets, the whole being controlled by their regional offices and a central headquarters with storage and processing depots. It is not outside the bounds of possibility that in the future, when farmers are more sophisticated and managers and accountants better trained, the area markets may form the basis of a series of farmers co-ops delivering produce to the central depots of the Board.

In conclusion then it may be said that Malawi, having very little surplus local capital,

must borrow abroad for development programmes, and must at the same time go in for labour intensive, low capital development projects. The policy is to get the people to help themselves as far as they can, to unearth the bottle-necks and limiting factors which hold the people back, and to give first priority, where the source of funds permits this, to the breaking of these limitations - knowledge, seed, fertiliser, transport, water, markets, disease control, credit, etc.....on a country wide basis. This will help to raise production on a broad front and bring some benefit to a wide range of people. Maximum use is being made of the example of progressive farmers and Young Pioneers, who receive priority in the nation wide field.

However, in certain specially favoured areas integrated rural development projects (or area development projects) are being mounted. The objective of these is to lift the whole popula-

tion of the area into the cash economy, improving infrastructure and social amenities, and paying for this with increased agricultural output.

Whether the area development method is more or less economically satisfactory than the bottle-neck breaking method is a matter that economists can argue over till the cows come home and I do not intend to state an opinion. The point is that having decided that a project is both feasible and advantageous and has had its implications worked out and cleared, it must be executed swiftly, efficiently and economically. Bad planning can be ameliorated by good management, but bad management can reduce all the economists' and planners' alternatives to failure.

Let us not forget that planning is only an aid to good management, albeit a potent one.