

EXTENSION RE-ORGANISATION FOR AGRICULTURAL DEVELOPMENT -

THE ROLE OF THE EXTENSION WORKER

by

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All developing countries are today launching nation wide programmes of change in an attempt to increase the standard of living of their citizens at the same time narrow the gap between them and the so called rich nations. The developing of Agriculture is a prime target of these programmes of change.

The planning of a programme for agricultural development, important as this is, is only the initial phase in achieving the desirable change. More important is getting the programme accepted, implemented, and moving in the direction which will ensure success. This is the job of the "change agent", who in an agricultural development programme is the extension worker.

FAO defines agricultural extension as "an informal out of school educational service for training and influencing farmers (and their families) to adopt improved practices in crop and livestock production, management, conservation and marketing. Concern is not only with teaching and securing adoption of a particular improved practice, but with changing the out-look of the farmer to the point where he will be receptive to, and on his own initiative, constantly seek means of improving his farm business and home."

Since the extension worker is the person mainly responsible for influencing the adoption decisions of farmers in the direction as required by the development plans, it is necessary and useful to understand the position of the professional extension worker within the social system in which he is to operate.

THE EXTENSION AND HIS SOCIAL SYSTEM

The professional extension worker can be best described as a "local level bureaucrat whose purpose is to

inject a cosmopolite influence to innovate into a client social system". His social position is located midway between the bureaucracy to whom he is responsible and the farmers whom he is to serve, and it is his function to act as a communicating link between these two social systems. In other words, the bureaucracy (or planners if we prefer) decide on national policies, set up incentives, guidelines and plans which it is hoped will lead to the development of Agriculture. It is the function of the extension worker to make these policies and plans meaningful to the farmers and get them to adopt the new ideas and innovations which will lead to more efficient farming and increased standards of living not only for the farmer, but for the nation as a whole.

There are many factors which set barriers to agricultural progress in developing countries and make the task of an agricultural extension worker one of extreme difficulty if not unrewarding. As these factors may affect the role of the extension worker in agricultural development, a brief review of the main barriers to progress is pertinent to this discussion.

BARRIERS TO DEVELOPMENT

One of the greatest problems confronting extension workers in all countries relates to role definition within the social system. To be effective in diffusing ideas and securing change, the extension worker must secure link-up with the farming community; that is, he must become identified with his clients' society. The social position of this worker, however, subjects him to various role conflicts which make the link-up most difficult, and though he may live in the same community with his clients, he may still be regarded as an "outsider" by them accountable only to his headquarters. Role conflict is primarily a result of differing expectations on the part of the reference groups of the worker. The bureaucracy to which the extension worker is responsible and the farmer whom he serves, may have different and sometimes conflicting expectations as to the role the worker is to play. Even the worker himself may have a self-definition of his role which is in complete disagreement with the role expectations of his local clients and his administrators.

A necessary condition for change is that the participants must not only accept that improvement is possible, but have a genuine desire to improve. It will be agreed, I think, that farmers in general do not improve their methods

because the "government man" wants them to improve, but because they themselves want better standards of living - better houses, better education for their children and so on. There is, however, among farmers in developing countries a complete absence of incentives to improve, and a certain amount of inertia caused by the acceptance of the traditional mode of life.

In addition to the lack of incentives for improvement there is the problem of the values and attitudes of farmers in most developing countries to agricultural development programmes. Using Trinidad and Tobago as a pattern, one can hazard the generalisation that farmers in developing countries are disgracefully paternalistic and very conservative. They tend not to participate actively in planning for their own improvement leaving everything to government. The final result is that policies and programmes to help them are looked on as welfare schemes to which they themselves are not to contribute financially. Their conservatism results in widespread rejection, or at least suspicion of innovations.

The pattern of farming itself presents enormous handicaps to agricultural development and to the effectiveness of the extension worker. The small size of farms, frequent fragmentation, little or no security of tenure, vague or non-existent land titles, all tend to stifle the incentive to change even though the potential for development exists.

As one writer points out, the result of these endemic factors is that, unlike Euro-American Agriculture where one farm visit may influence improvements on hundreds of acres, this extension technique in developing countries, if successful, can influence agricultural practices on but a few acres.

The status and respect accorded to the Extension Division within the Ministry of Agriculture is another barrier to rapid agricultural growth in developing countries. The Extension Division is usually the "Cinderella" of the organisation. Not only that the staff is poorly paid, and have to live and work under very harsh conditions, but their efforts go unrewarded by their superior officers who are more prone to criticise than to sympathise. Indeed, there appears to be a complete lack of appreciation on the part of administrators of the importance of the extension service and the professional nature of extension work. As a result, it is very difficult for the service to attract high quality staff with the necessary dedication, integrity and zeal.

AGRICULTURE AND ECONOMIC GROWTH

In the majority of undeveloped economies, Agriculture is the only industry of any major importance, and though one may find some large and efficiently run plantation type farms production from which is in the main export oriented, the majority of the farming still lingers in what is best described as "hoe culture". A characteristic of this type of Agriculture is the low levels of productivity of the resources used - chiefly land and labour.

Since Agriculture is the only industry of major importance, it seems only natural that the overall economic growth of the country depends on growth in Agriculture. Barring any substantial foreign aid, Agriculture will have to produce the capital for investment in industry, the food for the increasing population, the labour to serve industry, and in many cases the market for industrial goods through increased rural purchasing power.

Any realistic examination of the organisation of extension service must be made in the light of probable changes in the structure of the agricultural industry. It is, therefore, necessary to attempt a brief forecast of the probable transition of farming during the process of growth.

A first requirement of agricultural growth is the rationalisation of the agricultural sector, and a rapid increase in production both for local consumption and export. This in itself will require the creation of an environment in which the farmers accept the possibility of personal gain from technological advance. Following on this phase of growth will be a period of increased capitalisation of farms, increase in the size of farms and a substantial reduction in both the number of farms and people working in Agriculture but with absolute increase in production. The next phase will be one of adjustment during which the principles of economics - the equalisation of marginal returns, product specialisation and enterprise combinations - will assume major importance.

As can be expected these phases will overlap, with the result that there will be great diversity and stratification in the type of farms and farmers during the process of agricultural growth. What, therefore, are the implications of the process of growth to agricultural extension?

ROLE OF THE EXTENSION SERVICE IN THE PROCESS OF AGRICULTURAL DEVELOPMENT.

Since extension is designed to meet the needs of farmers, it can be assumed that the development and maturity of this service is synonymous with the growth and development of the agricultural industry. Thus, during the first period of agricultural development, the extension worker would have to devote most of his energy to helping the individual farmer increase his production while at the same time creating the environment for further change. This period can be described as one of "technological orientation" during which the field application of physical and biological science is the important catalyst of change.

The job of the extension worker during this phase is not one of too much difficulty. Agricultural practices are generally of such low standards that simple, direct and non-monetary investments result in significant increases in production. Because of the lack of sophistication of the farmers, education during this phase is largely by demonstration. Simple plots (preferable on a farmer's land) showing the use of improved varieties, better seed, fertilisers and better agricultural methods are among the most important methods. The extension worker will find that a well-rounded training in agricultural science subjects is sufficient for him to function adequately. He is the self-sufficient handyman with a bagful of answers and recipes.

Though spectacular results relative to increased yields can be obtained during this phase of growth, one must be very careful in the manner in which advice and recommendations are made. This is the period during which the extension worker in particular and extension work in general are being evaluated by the farmers. A few "boobs" at this stage can result in wholesale rejection of the extension worker and the service he is to provide.

Caution must, therefore, be used in the introduction of new varieties and new practices especially when a crop is part of a complex farming system. It is always better to introduce a few new practices at a time and each practice must be carefully studied in the context of the local farming system especially in regard to the demands in labour. Perhaps a few examples may help to clarify this point.

One hears much about under-employment, and disguised unemployment in Agriculture, and the suggestion is that the adoption of a few new practices will not only remove drudgery, but give the farmer time to devote to other tasks. This is true enough, but I feel that under-employment in Agriculture

should be relative to there being alternative gainful employment which the farmer can obtain. This is not always so. The introduction of Communal Pastures in Tobago is a case in point.

A farmer has to pay a fee of \$2 per month for each head of cattle put on the Communal Pasture. To him this is a lot of money. We found that a farmer with say three animals will put only one on the pasture and still spend time cutting grass for the other two. We explained that by charging for his labour at the going rate for government daily paid employees, the time he spent cutting grass was worth more than the pasturage fee. This did not convince the farmer since the probability of his getting a job was very low. In other words, the alternative to cutting grass was idleness, and as such the opportunity cost was zero. The same thing applied when the Tractor Pool was introduced. A farmer will prefer to use a hoe to break up the clods left by ploughing instead of paying five dollars per acre for harrowing.

It is not possible to anticipate how long the period of "technological orientation" will last, or how long it will take to create the environment necessary for further development. Once the need for change is accepted by the majority, however, a host of reactions will run throughout the social structure of the society. The innovators and early adopters will make windfall profits while the laggards will be left worst off. Great satisfaction with respect to income will develop within the farming community. Attitudes will change, traditions will be broken as these erstwhile simple farmers are brought within the realms of the complex working and complicated price structure of a market economy. They soon begin to realise that their production decisions have to be guided by factors other than weather, soils and the family labour. A new phase of agricultural growth is reached when, instead of the ad hoc piecemeal application of technology, the prime concern will be the optimum organisation into a farm unity of the vast array of technological resources that are becoming increasingly available.

This new phase which can be called the "farm business orientation" period, will have several implications for extension work. The emphasis have shifted from purely increasing production per se, to increased production with a purpose, as farmers adjust to the needs of a commercial Agriculture. The principles of applied economics and farm management are the tools which now apply. The farmer will now have the genuine desire to maximise profits, and as such he would not only like to know that more fertilisers or a new piece of farm machinery will increase his yield, to costs and returns. In other words, the farmer will be equating his

margins, and think about specialisation and the enterprise combinations which bring the largest returns in terms of money.

The emphasis that will be placed on applied economics and farm management techniques during this period in no way suggests that science and technology are any less important. Indeed, the process is cumulative, and the phases will definitely overlap. What is indicated however, (and there is evidence now to support this) is that the teaching and extension involved in the application of science and technology will be assumed by agencies other than the government extension services - perhaps industry - and so release the extension worker to concentrate on the more immediate problems of training farm operators in business principles, farm management and the economics of finance, credit, purchasing and marketing.

While it was sufficient for the extension worker to be a "generalistic" when the primary concern was one of increased production, the requirements of the farm business phase present a considerable challenge which can make or break the entire service. Because of the complexity of Agriculture, more attention must be given to the planning of programmes in co-operation with specialists in the various agricultural fields; but, as pointed out previously, farm management techniques and the principles of agricultural economics will be the main tools for decision making.

It is obvious therefore, that the extension worker with a general training in agricultural subjects cannot by himself successfully cope with the needs that will now arise. This period will see the general application of synthetic insecticides and herbicides in crop production, antibiotics and other medicines in the veterinary field, greater demands for drainage and irrigation information, improved fertilisers and so on. Instead of conversing in the commonly accepted expressions like "NPK" and "Balanced Rations" both the farmer extension worker will acquire new terms. They will be speaking about "Variable Costs", "Marginal Returns", "Net output per unit of input" and so on. The time has come for re-adjustment /of in the organisation/the training of staff and the extension techniques to be used.

It will be impossible for one man to keep informed on the latest developments in all these areas. The extension worker will, therefore, have to be supported by a strong panel of subject matter specialists. His role will change from that of a self-sufficient handyman to a source of information and a

counsellor and interpreter of information from specialists. Perhaps this is the era of maturity in the growth of Agriculture.

The technological and economic changes that will occur during this period will create problems of adjustment for rural people and bring into sharp focus problems of social change. Unstable social conditions will result as some people are left stranded in uneconomic ways of life. Farmers who lack the necessary resources to compete will salvage what equity they have in favour of steady employment perhaps in industry. Employment in Agriculture will be greatly decreased. In addition there will be under-employment in an economic sense, uneconomic use of land, and much waste of human and physical resources. A new phase in extension work is reached.

The emphasis will now be shifted from scientific facts to the area of total rural development and adjustment, with a basic concern for the social processes affecting the family in a changing community. In other words, if the extension worker accepts education for living as his basic objective, he will have to realise that the important factor now is not the individual as such, but the help he can give rural people to organise and participate effectively in their local community and the world outside.

Rural people, in an effort to adjust to the rapidly changing conditions will need advice and guidance in aspects of life much more than just production planning and farm management. They will need leadership in understanding the dynamic factors of change that are affecting them. The extension worker instead of being the agricultural serviceman must now accept the role of community development officer.

Such are the changing roles of the extension worker throughout the process of agricultural growth. In fulfilling his ultimate objective of the security, health and happiness of the farmer ensuring greater participation in community life and greater interest and understanding in local, national and international problems, the emphasis will change as the needs of the people change. At first, he is the self-sufficient agricultural handyman emphasising increased production and the application of technology in an ad hoc piecemeal manner. With growing maturity, the emphasis shifts to economic management of the total farm unit, and finally to the wider area of rural development and adjustment where the community rather than the individual farmer assumed major importance.

The extension service of every developing country is confronted with an exciting challenge arising out of the need for rapid agricultural growth. If the service does not effectively meet this challenge it runs the risk of absolescence. Rapid agricultural growth requires an extension organisation that can anticipate change and quickly provide the services that the changes demand. Thus the establishment should be sufficiently flexible in the calibre of its personnel to permit re-arrangement as conditions require.

It now appears that in Trinidad and Tobago, though the majority of our farmers are still in the technological oriented phase of development, there are some areas - particularly the poultry and dairy industries and the large estates - where the emphasis is moving towards farm management and business phase.

More and more of the extension work involved in the application of the biological sciences and technology is being taken over by industry. A look at stockfeed, fertiliser, agricultural chemical and farm machinery industries will provide ample evidence for this statement.

But what is happening with our extension service in the process? With the emphasis shifting from pure technology to farm management, I am apprehensive that our extension service will fail to meet the demands placed on it. This is because the organisation as it is, does not provide the scope for change and broadening of responsibility. Its structure is becoming out-of-date and out-moded, and its growth reflects mainly the influence of expediency and economy. It is perhaps necessary to state here that extension exists to carry out educational programmes and not to perpetuate administrative structure.

Agricultural extension in developing countries has a major role to play in economic development. The responsibility for decision rests not only with the people who work in extension, but with all who are concerned with the overall economic growth of these countries.