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THE ROLE OF EXTENSION IN THE REVITALIZATION AND MODERNIZATION OF AGRICULTURE IN THE CARIBBEAN

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DEVELOPMENT OF EXTENSION SYSTEMS IN THE CARIBBEAN

Agricultural Extension as a specialised field really started in the Caribbean in 1897 when the newly formed Jamaica Agricultural Society appointed its first agricultural instructor with islandwide responsibilities (Rochester, 1967). In the Eastern Caribbean, agricultural instructors were appointed in 1901 by the then Imperial Department and in Trinidad, two instructors were appointed in 1903 by the Board of Agriculture (Henderson, 1973). From these humble beginnings Agricultural Extension has blossomed and today, full fledged national extension systems exist in every country in the English-speaking Caribbean.

Over the years, extension systems have *not* remained static and several approaches were attempted reflecting the diverse influences that have been brought to bear on those systems and the desire to adapt them to changing circumstances in the region. Henderson and Patton (1985) categorised the main approaches as follows:

- (1) The "*generalist*" approach where each agriculture instructor was expected to serve all the agriculture needs of farmers. This is still the predominant mode of extension today.
- (2) The "*coordinated services*" approach was attempted in Jamaica with the aim of increasing coordination among all extension type organisations by bringing them together under one roof. However, this approach did not last too long.
- (3) A different approach later evolved in Jamaica making all the agriculture services the responsibility of one organisation - the "*multipurpose model*". In this approach,

extension officers had a multipurpose role in that they dealt not only with agricultural problems but also those relating to basic infrastructure, health needs, and many more.

- (4) The multipurpose approach later gave way to the idea of splitting the extension services into two sections -- the "*split-functions*" approach. In this approach, the extension system is split into sections, one to provide the service function (the "*development*" arm) and one to provide information and education (the "*advisory*" arm). Variations of this approach have been attempted in many countries in the region.
- (5) In the "*saturation*" approach, a geographic region with the highest agricultural development potential was first targeted for concentrated effort and it was hoped that after the desired momentum was established, other areas could then be developed. This was, mainly an attempt to use limited resources to the greatest advantage.
- (6) While the saturation approach was aimed at a geographical area, the "*project approach*" by way of contrast, focuses resources on special problem areas. In discussing this approach, the authors deplored its increasing prevalence and noted that "*to a large extent, (it is) being forced on Caribbean countries as a result of the nature of international aid*". Indeed, this is an issue that needs to be urgently addressed, since increasing efforts to modernise and revitalise the agriculture sector will undoubtedly mean financial

support from external donor agencies and the likely proliferation of projects with the attendant negative consequences.

The above listing can be further extended to include some significant recent developments in approaches to extension work. Perhaps the most noteworthy of these developments is the use of the "sondeo" by the Caribbean Agricultural Extension Project (CAEP)¹ for "needs assessment". This involved adaptations in techniques used in Farming Systems Research known by other names such as Rapid Rural Appraisal, Rapid Reconnaissance Survey and Informal Survey involving the use of multidisciplinary teams over a short period of time. It is believed that CAEP's use of the sondeo in the various project countries for extension programming was quite a unique application of these methods.

Another model that has been attempted in the region is the Training and Visit System of Extension which now appears to be firmly entrenched in many countries of the world largely through World Bank support. It is quite important to note too, the recent efforts by two countries in particular, Montserrat and Barbados, to develop systems to fit their own situation.

For some years now, Montserrat has implemented what has been labelled as a "Planned Production System" which involves an assessment of the level of demand of items that can be produced in the country and the orchestration of production from farmers accordingly. Close monitoring of the situation is maintained through a Production Coordination Unit. Barbados, in a move to use resources more effectively, has moved towards formally integrating Research and Extension.

CONCEPTS OF EXTENSION

As several writers have noted, concepts of extension differ and may in some instances even be conflicting sometimes. Rivers, Seepersad and Pletsch (1989) have listed three approaches to, or definitions of, Agricultural Extension as follows:

- (1) *Agricultural Performance* - Extension is viewed mainly in terms of improving production and profitability of farmers.
- (2) *Rural Community Development* - Extension is viewed as serving to advance rural communities including improvement of their agricultural development tasks.
- (3) *Comprehensive Non-formal Continuing and Community Education* - Extension is viewed as the provider of non-formal agriculturally

related continuing education for multiple audiences: farmers, spouses, youth, community, urban horticulturalists.

While the prevailing perception of extension in the Caribbean may fit the "agricultural performance" definition, the *de facto* role of all extension workers on a day-to-day basis demands more of agricultural development type of perspective, and indeed efforts at improving extension programming (CAEP, 1984; Seepersad, 1985) encourages that kind of perspective. This approach is supported by Roling (1988) who commented that the concept of the 'mix' (i.e., the conditions necessary for agricultural development) is extremely important for extensionists in developing countries.

Extension is an interdependent and interactive function in the agricultural development process, a point which, is too often overlooked in assessing its performance. In this regard, Rivera et al., (1989) points out:

"It is influenced by forces outside the agricultural sector - such as education, transportation and irrigation and their development policies, planning and programme delivery. It is also affected by forces within the agriculture sector, such as credit, supply input, research and marketing" (p.140).

Modernisation and revitalisation of agriculture should be a multi-faceted endeavour involving various components in the agricultural development mix, acting in a synergistic manner. The effectiveness of extension, perhaps more than any other component in the process, will be circumscribed by the individual contributions of the various components and the dynamics of the process.

Another related point that should serve to frame our thinking on Extension's role relates to what is known in development circles as the "passing of the dominant paradigm". The paradigm referred to is the diffusion model which formed the basis of extension strategy for many years. Basically, the diffusionists promoted the notion that differences in "innovativeness" was the key to explaining why farmers do/do not adopt. Innovativeness was conceived as embodying a set of socio-cultural and psychological characteristics which contribute to earlier adopters being "smarter", "more intelligent" and "more progressive" than later adopters of new technology.

Within the past few years, however, the role of "system" factors (access to land and other

resources; basic infrastructure) has been recognised. Indeed, Roling (1988) felt that the issue many times has to do with 'opportunity'. When the opportunity and support are there for farmers, as in the case of the developed countries, Extension is likely to play a more dynamic role. The success of modernisation will thus depend heavily on what opportunities are provided for producers and others in the agricultural sector.

PRIORITIES FOR CARIBBEAN AGRICULTURE - DIVERSIFICATION AND FOOD SECURITY

Apprehensions about 1992 when the European Common Market will become wider in scope, are increasing and various kinds of pressures are already being brought to bear on Extension departments. Indeed, at a recent meeting of Chief Extension Officers (CEOs) from the Eastern Caribbean sponsored by the Agricultural Research and Extension Project (AREP)² the CEOs emphasised the need for clear consistent messages which could be taken to farmers on this issue. Several projects on agricultural diversification are getting off the ground and producers throughout the Caribbean are being urged to replace bananas, sugarcane and other so-called "traditional" crops with "non-trationals" or "exotics".

Another priority accepted by most countries is the need to increase food security. Some see diversification for export as being antithetical to food security and again inconsistencies need to be resolved so that clear messages can be taken to farmers.

What are some of the implications of those developments just discussed for Extension? First of all, we could offer some words of caution. We must be quite certain of what we are asking people to do and not rush hastily into arrangements that fall through due to circumstances that could have been avoided through careful preparation and planning. e.g. by preparation of extension packages on exotics for farmers; the establishment of markets for traditional products; by a psychological transformation from the culture of the traditional crop to that of the new products

Otherwise, credibility of the sponsoring agencies including Extension, if they assisted in promoting the message, will suffer and programmes could be set much further back than their initial starting point.

Although such considerations seem obvious, those kinds of problems come up with disturbing regularity and, if we are not careful the

frequency of such occurrences could increase, in our haste to push ahead quickly in the drive to diversification and greater food security.

Second, Extension wishes to underscore the value of taking a holistic or systems perspective in what enterprises or combinations are finally recommended. Availability of local and export markets and technological feasibility, although important, should not be the only considerations.

An example from Ghana may serve to elucidate the value of taking a systems prospective. Ghana was the leading producer of cocoa worldwide for much of the early part of this century but within the last 20 years, output had fallen by over 70 percent. Although a number of practices had been developed for increasing yields, research (Asante-Mensah, 1988) indicated a high level of adoption for only two of the 12 practices. Factors mentioned by farmers as disincentives to higher cocoa production included low producer prices, high cost of inputs, unavailability of labour, to name a few. Yet, the vast majority indicated their interest in staying with cocoa and even investing in new cocoa farms if given the opportunity.

How could the seemingly inconsistent findings be explained? The rationality of the farmers' line of thinking would emerge if one looks at the situation from their viewpoint. Obviously, profit maximisation in the short-term was not the only consideration.

Cocoa is a crop with which they had long experience and thus the one with which they, their workers and indeed, the system as a whole, have the most confidence. Further, given the prevailing circumstances in their country (high rates of inflation etc.), cocoa farms still offered the best form of security for them. There were also other factors responsible for cocoa maintaining its pre-eminent position in the agricultural sector.

Important social values were still attached to the ability of a man to hand down a good cocoa farm to his heir. Indeed, almost all the respondents themselves had acquired farms in this way - through inheritance or as gifts. Many farmers also mentioned that the method of payment for cocoa - in "lump sums" afforded them the opportunity to buy costly items for their home or farm which would require large cash outlays.

Although I have belaboured the point of taking the systems perspective a bit, I think it warrants the attention. Many of the sondeos conducted in the Eastern Caribbean reveal linkages and relationships similar to those just outlined that needs to be adumbrated so that the "goodness of

fit of new recommendations can be assessed *a priori* or better yet, recommendations could be developed which would be compatible with existing systems. The point, too that emerges from these discussions is that Extension has an important role in the decision-making from the beginning of the process; the *modus operandi* should *not* be to present Extension workers with *fait accomplis* for implementation at all costs.

A number of other issues may come to the forefront as the region moves towards modernisation and revitalisation of its agricultural sector. Modernisation implies greater use of new technology and thus the question of upgrading the skills of extension workers through systematic training will become germane. But a wide range of technology involving, perhaps, many new types of enterprises may be introduced and, will the "generalist" type worker be able to cope with all the demands for the different types of information (production technology, marketing information, etc.)? If not, what kind of backup can be provided or how can Extension be effectively linked with others who may be requested to perform those tasks?

As in developed countries, modernisation involves the application of high technology and high inputs which has invariably resulted in environmental degradation. Also, as farmers become more commercial in orientation, farm management skills will become more and more critical issues. These again will create increased stresses and demands on extension organisations. What about the delivery of inputs? Will Extension be asked to assist? As the drive towards cutting down the food import bill gains momentum, crop/livestock forecasting will no doubt become an important exercise. Will Extension be also saddled with this responsibility as obtained in the past?

Agricultural production is dominated by small farmers in most countries. Can satisfactory marketing arrangements be put in place to handle this situation or will Extension be relied upon to develop approaches such as cooperatives and group farming to synchronise production patterns and thus facilitate marketing arrangements? Cooperatives can also assist in handling input supplies and other essential services to farmers and thus, demand may also be placed on Extension for servicing those organisations.

Another option that has been pursued in many countries is to encourage the development of large farms, known as "mother farms" or "nuclear" farms for production of export crops and small "satellite farms" which may feed their production to

the mother farms or engage in production for local markets. In such cases, traditional extension systems have usually been relegated to servicing satellite farmers. Unfortunately, the tendency too often has been to bypass the existing national extension systems and set up new ones under the guise of projects thus demoralising and undermining existing systems.³

DEVELOPMENTS AND ISSUES IN EXTENSION

(a) *Communication Technologies:*

The so-called "information explosion" and recent advances in communication technologies have presented new opportunities to Extension but has sometimes created undue pressures. In the past, Extension had relied heavily on interpersonal methods - both the individual and the group method with the greatest emphasis on the farm/home visit. We should not, however, overlook the time honoured mass methods such as exhibitions and competitions, which have been major extension activities for many many years.

Sometimes discussions are unfortunately couched in terms of, to what extent mass media programming, particularly radio and television, can replace the traditional methods. Rather, as has been found in many developed countries, the real question is, how can they complement one another? Indeed, in some places, there has reportedly been a shift of the audience's preferences to more personal forms of communication because of "information overload" and the tremendous "clutter" that sometimes characterise the mass media. Sometimes, too, in their haste to be *avant-garde* and to improve their professional image, organisations and individuals become distracted by new technologies. Human and financial resources may be diverted into those new areas without a careful consideration of the pay-offs.

The above words of caution are not meant to play down or diminish the potential of the various communication technologies to increase Extension's reach, productivity and effectiveness. However, it must be recognised that additional and different resources are required and specialised skills need to be developed. Because of this, the approach currently prevalent in the Caribbean and many other countries is to centralise resources at Information Units most of which are located within Extension departments. However, other staff need to have basic communication skills and an understanding of the strengths and limitations of the various techniques. Such units will have to be given greater

support in order to effectively compliment the modernisation thrust.

(b) *Role of Private Sector and other Agencies in the Information Transfer:*

Agricultural information is transferred to producers by a number of agencies other than national extension systems. The role of the private sector in information delivery and other areas, is likely to increase as agricultural development gains momentum.

Public agencies need to be aware of this development and to develop mechanisms for linking with them. Models are now being developed to more accurately reflect the diversity that exist in terms of agencies involved in technology development and technology transfer. The work that is being conducted is aimed at analyzing agricultural technology systems (Swanson, 1986) and agricultural knowledge systems (Roling, 1988) both of which include extension as one part of the system.

CONCLUSION

This article has reviewed a number of developments that are likely to influence the scope and nature of extension work in the Caribbean. Some of those developments relate to the changing socio-economic circumstances in the region while others relate to international developments in the fields of Extension. On a worldwide basis, Extension is still the largest problem-solving agency and the recent increased attention being given to the field suggests Extension's potential in stimulating agricultural development is being widely recognised. However, it is only one component in the agricultural development process and thus effective coordination with other agencies and the performance of those agencies will be critical to the success of modernisation and revitalisation of agriculture.

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Notes:

¹ *The Caribbean Agricultural Extension Project (CAEP) was funded by USAID and administered jointly by the Department of Agricultural Extension, University of the West Indies (UWI) and MUCIA (Midwest Universities Consortium for International Activities). Seven countries in the Eastern Caribbean participated in the project which ended in 1989 after running for almost 10 years.*

² *The Agricultural Research and Extension Project (AREP) is a joint project of UWI and CARDI, funded by USAID. Participating countries are the same ones that participated in CAEP. Many of the programmes initiated under CAEP continue under AREP.*

³ *However, it should be pointed out that in some countries, existing rigidities in the national extension systems may unwillingly contribute to this. Extension systems, therefore, need to develop both the flexibility and capacity to contribute to agricultural development via projects in a multi-disciplinary framework.*