THE NEED FOR AGRICULTURAL EXTENSION POLICY IN NATIONAL DEVELOPMENT

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INTRODUCTION

The World Food Summit (WFS) in Rome in 1996 committed FAO Member States to the Millennium Development Goal (MDG) of reducing food insecurity by half by the year 2015. In order to realize this objective, the FAO was directed to establish Inter-Governmental Working Group to elaborate Member States’ efforts to achieving progressive realization of national food security (Rivera with Qamar, 2003). Food security is a special concern and in rural areas may require physical infrastructure such as road and power, security, access to systems of market-based exchange, in addition to public investments in research and extension and related communication systems (Rivera, 2003). There is need to re-prioritize and re-conceptualize extension services and promote communication for rural development activities within the framework of the food security challenge acknowledged originally at the World Food Conference in 1976 and adopted at the WFS in 1996. According FAO (2002), re-capitalized extension means the training of both public and private extension agents, the development of sound strategies, programmes and policies, and institutional arrangements that facilitate extension.

Agricultural Extension worldwide is in transition (Rivera, 2003). Government and international agencies are advancing structural, financial and managerial reforms to improve extension. Decentralization, pluralism, cost-sharing, cost recovery, participation of stakeholders in development initiatives and the decisions on resources that effect them are some of the elements of this transition. Public sector extension was severely attacked for inefficiency, ineffectiveness, highly centralized and not pursuing programmes that foster unity (Rivera, 1991, Mwangi and Asiabaka, 2001).

But the role of Government is critical for the reconstruction of agricultural extension, especially for fostering the public good (Rivera, 2003). Only the public sector can effectively and efficiently carry out certain functions and indeed, only national government can assume the responsibilities that effect the state as a whole. Only governments can ensure that extension work for public good and even if those services are provided by contracting with private sector providers (Rivera and Zijp, 2002). It is only national governments that can promote increased institutional pluralism in extension service provision and oversee the quality of enhancement and assurance necessary for agricultural and rural development.
Serageldin (1996) succinctly put it that strong, effective and efficient governments are essential to development, for they alone can create the enabling environment required for the private sector and civil society to flourish. Extension is a political and organizational instrument utilized to facilitate development. Its purposes differ from technology transfer by companies organized around specific, usually monocropping farming systems to problem-solving educational approaches to participatory approaches aimed at alleviating poverty and advancing community involvement in the process of development. When systematically and effectively provided, extension is known to enhance social and economic development. The technological and knowledge system that underpins extension is a critical factor in development (World Bank, 2003) Consequently, investment in agricultural research and extension is thus a critical input in agricultural growth (Anderson and Feder 2003). Studies (Birkhaeuser, Evenson, and Feder 1988, Anderson and Feder 2003; Asiabaka et al 2008) have demonstrated the high economic returns of investment in agricultural research and dissemination, with is typically up to 40 percent.

Extension policy in many countries over the recent decades has been exclusively production-focused, institutionally monolithic, centrally directed, and organized on the premise that the public sector extension structures can effectively reach down to village level. Partly in reaction to this, neo-liberal voices have recently urged reform in the sense of wide-scale privatization of extension and removal of state subsidy" (Farrington, Christoplos and Kidd, 2002). They challenged this premise and argued that the public sector cannot finance, let alone deliver extension service to meet all requirements, new approaches will increasingly privatize extension in areas well integrated into markets, switching resources to more remote areas where the majority of rural poor live.

The Functions and goals of Extension

Agricultural Extension is one of the policy instruments which a government can use to stimulate agricultural development. The question is: for which purposes is this the most suitable policy, and how can it be combined with other policy instruments, such as agricultural research, agricultural education, the provision of credit and supplies, marketing, organization and mobilization of farmers, and the infrastructures. Van den Ban (2000) stated that the goals of extension organization include:

- Transfer of knowledge form agricultural research to farmers (vulgarization or extension)
- Advising farmers on the decisions to make, sometimes by recommending a certain decisions to be taken, the alternatives to choose from, e.g. in UK, Germany, advisory work as used in Scandinavian countries, voolichting as Netherlands, penyuluhan as in Indonesia
- Education-helping farmers to make a decision in such a way that they are able to make similar decisions themselves in the future. This is implied in the term extension education as used in U.S.A
- Enabling farmers to find their way by helping them to clarify their goals and the possibilities they have, together with other farmers to achieve their goals. The French word “animation” and the German word “capitacion”
- Stimulating desirable agricultural development as is implied in the Austrian word “Forderung” and the Korean expression of “rural guidance”
Agricultural Knowledge And Information Systems (AKIS)

The realization that one cannot think in terms of water-tight compartments of creators, disseminators, and users of agricultural knowledge has led to the development of the concept of Agricultural Knowledge and Information Systems (AKIS). It is an institutional approach which looks at the sets of interconnected actors who play different but complementary roles and hence function synergically (Mettrick, 1993). It leads to the theory building about the way people and organizations receive, transform, and transmit information, about the interfaces between them, and about the complementary roles institutions play in relation to each other. It is a practical approach which sees its goals as the improvement of the management or the design of the AKIS so that it functions in a way seen as desirable by policy makers, farmers and other participants (Roling, 1989).

An AKIS can be defined as:

"a set of agricultural organizations and/or persons, and the links and interactions between them, engaged in such processes as the generation, transformation, transmission, storage, retrieval, integration, diffusion and utilization of knowledge and information, with the purpose of working synergically to support decision making, problem solving and innovation in a given country’s agriculture or a domain thereof." (Roling, 1989).

On one hand, Agricultural Information System is a system in which agricultural information is generated, transferred, consolidated, received and fed back in such a way that these processes function synergically to underpin utilization by agricultural producers. In the concept of an information system, the institution generating, transforming, transferring and receiving information are emphasised as well as the information flows and linkage mechanisms between them.

On the other hand, An Agricultural Knowledge System is a system of beliefs, cognitions, models, theories, concepts and other products of the mind in which the experiences of a person or group with respect to the agricultural production is accumulated. In the concept of agricultural knowledge system, its structure and the order it imposes upon the environment is emphasised. Different groups of people have knowledge systems. The difference between knowledge and information is that the latter can be transmitted while the former is an inherent function of the brain. Thus one can generate knowledge and utilize knowledge but not transfer it. Communication experts see knowledge as a property of the mind, something that “occurs between the ears”, which cannot be transmitted to others unless transformed or encoded. Information can be transmitted to others; it consists of a pattern imposed on data which allows them to be transmitted and also affects their interpretation (Roling and Engel, 1990).

The Agricultural Knowledge and Information System has to be seen as part of a larger system. Thus, external influences which have to be taken into account include:

- structural conditions of the markets, inputs/outputs, infrastructure, resource base
- external institutions such as aid donors, international agricultural research centres, commercial firms
- policy environment such as laws, regulations, incentives, customs;
- political and bureaucratic structure such as how interest groups affect the system.
Global Developments that have Impact on Agricultural Extension Policy

Extension should be dynamic and be able to respond to various developments in the world that impacts on it. Some of these developments are:

- **Globalization and Market Liberalization**: According to FAO (2005), globalization aims at creating more interaction and linkages among countries in trade, information flow and finance, encouraging open competition through removal of trade and other national safeguard barriers, supposedly under fair and relatively equal condition for producers of goods and services, no matter what country we live in, thus making it possible to mutually benefit from international contacts and opportunities. Market liberalization on the other hand is an integral part of globalization. It calls for removal of trade barriers, tariffs and other regulatory measures that are usually put into force by countries to protect their own industries and products, and to discourage the inflow of articles produced elsewhere in the world. Liberalization calls for opening of markets, called deregulation, so that goods may move freely between countries. It also advocates the removal of artificial price controls and of public support to the farming sector in the form of farm subsidies so that the market can realistically determine the price of various commodities and products on the basis of their demand, supply and quality and the consumers can freely make a choice concerning what is best for them. For extension to be competitive and be in tune with these development, national agricultural extension systems will have to bear, and must prepare themselves in time to meet the challenge.

- **Privatization**: Services that were hitherto managed by governments are now managed by private sector. This is the case for countries such as the Netherlands. Privatization emanates due to scarcity of funds, inefficiency and less productive extension service (Mwangi and Asiabaka, 2002). Terms such as outsourcing, contracting and cost-recovery are all aimed at privatization. The idea here is that farmers will have to pay for extension advice. The willingness to pay (WTP) of extension services may be problematic for a country like Nigeria where farmers believe that extension service is part of national cake and cannot be paid for. All said and done, farmers need to be protected from private operators even as we privatize agricultural extension

- **Pluralism**: The need for using more than one organization to provide extension services to farmers is gaining momentum. NGOs and private companies are providing extension in pluralistic and demand-driven manner. Countries like Kenya are already practising pluralism in extension (Mwangi and Asiabaka, 2001)

- **Decentralization and Devolution**: Decentralization and devolution aim at decentralizing administration and decision making to lower authority, e.g. shifting administration from Federal government or local governments. Problems will arise if not well articulated as job security may be a great issue in its implementation

- **Participation**: Participatory extension approaches have been advocated for many extension systems and has led to extension working through farmers groups. Farmer Field School (FFS) have been successful in countries such as Uganda, Kenya, Indonesia Benin (Asiabaka, 2007)
Information and Communication Technology (ICT): Extension for long has been affected by lack of adequate facilities for face to face or individual extension and transport logistics. But ICT can overcome these difficulties when appropriately used. Studies such as Adesope, Asiabaka and Matthews-Njoku (2007) have shown the importance of ICT on Extension Managers in Southeastern Nigeria.

Guidelines for Modernizing National Extension Systems

Globalization, market liberalization, privatization, pluralism, decentralization and devolution, participation, rural poverty, food insecurity, HIV/AIDS and climate change are thematic areas in global development agenda. These developments are creating new learning requirements for both small, medium and large-scale farmers. These developments when seen within the context of revolution in information technology are challenging the old ways of extension delivery system in Nigeria and other developing countries. The time now ripe for paradigm change for policy makers in developing countries to re-visit extension within the global context, so as to let extension function be performed with excellence in line with global challenges to their economies and especially their agricultural sector. Extension has the function of providing need and demand-based knowledge and skills to rural men, women and youth in non-formal, participatory manner, with the objective of improving quality of life. If extension function is applied to agriculture, it is called agricultural extension, if applied to health, it is called health extension, and so on. Since most of the target of extension are adults, extension usually applies principles of adult education to enhance learning.

The guidelines for National Agricultural Extension systems, as articulated by FAO (2005, Qamar,M.K, 2005) include:

- Assessment of the existing extension organization against farmers’ needs and determine whether to strengthen or re-structure it.
- Decentralize extension but not before capacity building of the staff and orientation of elected officials
- Broaden technical mandate of extension to aim at broader development of rural human resources
- Formulate national policy on extension in order to ensure political and financial commitment
- Give extension profession a long overdue status similar to other agricultural disciplines
- Bring pre-service education in agricultural extension in line with modernizing the national extension systems
- Promote pluralism in extension by involving public, private and civil society groups
- Privatize extension partially or fully where it is socially and economically feasible
- Develop and apply information tools to facilitate the work of extension workers
- Develop original, location specific, participatory, gender-sensitive and inexpensive extension methodologies and materials instead of applying those methodologies which are promoted as universally suitable.
Orient extension staff to major food security related global developments that could eventually effect rural livelihoods

- Encourage the extension services to empower farmers through organizing them into legal associations to constitute a strong lobby for themselves and for extension
- Encourage bottom-up, grassroots extension programme planning by farmers in order to make extension demand-driven, but also exercise supply-driven, top-down modality for promoting public good practices such as conservation of natural resources and environmental protection
- If extension function is to be performed with relatively small number of extension staff, follow appropriate strategies for getting maximum support
- Ensure effective operational linkages between extension, research and other relevant institutions

Formulating Agricultural Extension Policy

Whose policy are we formulating? Is it the policy of the World Bank, FAO, bilateral donors, NGOs or national governments? The policy focus of all of them differ significantly.

- The World Bank focuses on the principles of extension that it wants to country to adopt. This guides the bank's staff to articulate the project formulations.
- Bilateral donors have extension policies that cover the projects which they finance and which they provide technical assistance. Their extension policy might focus on issues such as: how their projects will influence national extension policies.
- Non Governmental Organizations (NGOs) will have extension policy that focuses on areas of default, where governments does not reach or where government policy has failed.
- National extension policies are very different from that of donors because they often focus on translating an agricultural policy into required extension deployment to assist realize the agricultural policy.

According to Roling (1989), national extension policies cannot afford to focus on ideal situation, devoid of political realities, the historical context, and the similar variables. National policies are tools for governance. They become effective on a specific dates as part of national development plans and must be realistic in providing leadership to extension and research apparatus of the nation. Interfaces exist between the various donor or other organizations and the national extension policy. This is true because the donor policies influence national governments and vice versa.

Components of Policy

Policy development have two distinct dimensions namely: Knowledge and Choice. Policy decisions are made on the basis of knowledge of past experiences from action. There will be a deliberate choice of problem or problems out of very many others issues? Is it poverty? Is it food security? Is it environmental adopted as a matter of choice. Consequently, the problems are the issues to be
addressed by policy. The choice of the problem has implication for extension policy, in terms of:

- Target categories chosen
- The technology developed
- The types of crops and industries
- The priorities

Extension becomes a policy instrument to implement agricultural policy. The issue of instrument is important. Do we see extension as a tool for knowledge transfer? Or a tool for farmer organization? Or a tool for the provision of service? The real question is what are the impediments to farmers’ willingness to accept extensions messages which extension needs to address to facilitate the achievement of national agricultural policies?

Once one makes the choice of instrument, the implementation comes into focus. Who will deliver the message of extension? Are they professionals or village extension workers? What type of extension service are we talking about? Public or private extension service? Decentralized or centralized extension service? Is extension seen as a separate institution or a component of the agricultural knowledge system?

Policy and field reality are different. Most policies spell out the methods of implementation. In reality are they followed? The interface between policy makers and the field worker is a difficult one. This is because field works have their own way of making sure the policy maker does not know the reality in the field.

The Need for Agricultural Extension Policy

In many countries, the problems of establishing or maintaining an effective agricultural extension service can be traced back to the lack of a realistic policy or an unstable policy framework for charting the mission of the extension system. Lack of agreement on the functions of extension, the clientele to be served, how extension will be financed, frequent changes in organizational structure and programme priorities, rapid turnover of the extension staff, and the proliferation and lack of coordination between different organizations that undertake extension work are some of the common problems that highlight the issue of extension policy. In addition, extension must be responsive to changes in the agricultural sector, the drive toward market reforms, and shrinking government budgets.

The importance of extension policy was recognized by the FAO's Global Consultation on Agricultural Extension when it recommended that "all national governments should develop and periodically review their agricultural extension policy. This policy should include the goals of agricultural extension, the responsible agencies and personnel, the clientele to be served, the broad programmatic areas to be addressed, and other relevant guidelines." The consultation further recommended that "the FAO, in cooperation with the donor community, should engage in policy dialogue with national governments to stress the importance of agricultural extension in national agricultural development and the need to have an explicit, formally enacted, agricultural extension policy" (Swanson, 1990, p. 11).

Formulating and enacting a sound, comprehensive, and useful extension policy is a difficult undertaking (Coutts, 1994).
Agricultural extension is one of the most strategically important policy instruments for achieving the twin goals of food security and sustainable agricultural development in developing countries (Contado, 1997). The FAO-sponsored Expert Consultation on Integrating Environmental and Sustainable Development Themes into Agricultural Education and Extension Programmes noted that "without a persuasive, effective and unambiguous set of directives for good working practice, articulated in the form of high-level policy and agency mandates, the current ad hoc approach to environmental matters will likely continue" (Stocking, 1994, p. 18). Agricultural extension policy is a part of national development policy in general and of agricultural and rural development policy in particular. Hence, agricultural extension is one of the policy instruments which governments can use to stimulate agricultural development (Van Den Van in Jones, 1986, p. 91, Roling, 1989). Extension is very much a part of what Roling refers to as the agricultural development mix. He notes that extension is a weak instrument when it stands alone, but that it becomes powerful when combined with price incentives, input supply, credit, seed multiplication, and so forth (Roling in Jones, 1986, p. 110). The Global Consultation on Agricultural Extension concluded that agricultural extension policy should be consistent with and supportive of national agricultural development policy and goals (Swanson, 1990, p. 11).

According to Contado (1997), each country should have a comprehensive agricultural extension policy which provides for coordination with research, education, input supply, and credit and marketing systems, as well as some flexibility to reflect the dynamic nature of the agricultural sector. The policy should include the mission and goals for agricultural extension, the responsible agencies and personnel, the clientele to be served, the broad programmatic areas to be addressed, and other relevant guidelines. In developing national agricultural extension policies, representatives of all major groups of farmers should be directly involved and other relevant agricultural organizations should be consulted. "By pursuing a comprehensive policy," the Global Consultation noted, "countries can expect the extension system to contribute to increasing agricultural productivity and farm income, and to improving the quality of life of most rural farm households in pursuit of the general goal of growth with equity. In addition, such a policy should help maintain and conserve the natural resource base for sustained agricultural development and enhance food security" (Swanson, 1990, p. 11).

**Constraints to Nigerian Agricultural Development**

Agricultural growth is a sine qua non to national development since no country can achieve real development with initial and sustainable growth in the agricultural sector. Nigeria cannot be an exception. Consequently, there is the urgent need for the federal government of Nigeria to address the following constraints if she needs to be a competitive player in the world development arena. These constraints to development to sustainable development include:

**Ad hoc agricultural policies:** Frequent improvisation and ad-hocism is major set back to agricultural development in Nigeria. Development planners have indicted policy makers for their lack of sustainability, lack of continuity, lack of realism and consistency. Successive governments come up with new agricultural policies and programmes which instruments and variables such as developmental needs of the people, target employment opportunities, population growth rates, environmental sustainability and other socio-economic needs of the people (Yaker, 1993).
Inappropriate Agricultural Extension Services: Effective agricultural extension services and delivery systems are sine qua non to agricultural development of any country. The dissemination of agricultural information and practices are the central role of agricultural extension. The ineffectiveness of the extension service can also be seen from the caliber and level of education of the extension workers. Their low level of training has made it very difficult for them to interpret and extend extension messages without distortions to the farmers.

Lack of Grassroots Participation: Most agricultural polices have been top-down. The implication is that planning and policy practices have negative impacts on food production. Agricultural development policies often ignored the need for grass-root and people participation. Such agricultural policies do not reflect the needs, aspirations and realities of the beneficiary. This type of policy is based on lack of reliable data-base and lack of the mechanism for coordination, implementation, monitoring and evaluation.

Inadequate Funding of the Agricultural sector: The federal government capital expenditure on agriculture as a percentage of the Federal Budget from 1970s to present have been very low. On the average, the federal government spends minimally, as part of its capital expenditure on agriculture. If compared with sectors, agriculture is yet to get the funds required for a boost in agricultural production. The appropriated funds are not released on time and most of the times, only a percentage of the appropriated funds are actually released.

Lack of Access to Land: It is estimated that Nigeria's arable land is about 72 million hectares out of which about 36 million or 50% are under cultivation (Ajakaiye and Akande, 1999). The ability of the farmer to have access to land is dependent on a number of factors such as population densities, land tenure systems and settlement patterns. In the states of South-eastern Nigeria, the population densities, environmental degradation (erosion, Oil pollution etc) have effected land availability and land/person ratio. Environmental degradation such as erosion has also reduced soil fertility and made the use of fertilizer inevitable.

Labour Constraints: Agricultural labour was abundant until after the civil war when as result of investment in the non-agricultural sector, labour was attracted to other lucrative sectors such as petroleum and construction. Agricultural labour is also seasonal hence it is cheaper at certain periods of the year. The rural-urban migration poses its own problem for agricultural labour as most able-bodied people leave the rural areas for urban centres in search of white collar office jobs and leaving agriculture to the weak and the old. According to Onyenwaku (2000), drudgery in farm work and low returns from agriculture force rural youth to migrate to urban centres rather than go into production agriculture. Scarcity and high cost of hired labour and greater dependence of the small-holder farmers on hired labour due to reduction in, both the quality and quantity of labour supplied by farm families are also constraining factors.

Inadequate Capital: The main problem with capital as a resource is that most farmers do not have enough equity capital of their own and do not have the capability to raise the loans for their farm activities. This is more critical now that the cost of capital is increasing since agricultural lending has to compete in a fully deregulated credit market. The introduction of micro-finance Banks if well implemented may assist in checking this problem.

Markets: The provision of adequate marketing infrastructure such as storage, roads, suitable means of transport and communication has become very important issue in the agricultural sector performance in Nigeria. Unless these infrastructural facilities are
adequately provided, not much can be achieved in making agriculture respond to the demands of the economy.

**Input supply:** Agricultural inputs such as fertilizers are hardly accessible to the real farmers. Fertilizers are very essential farm input in the degraded and fragile soils of the country. Due to population pressure, there are little or no fallow periods and this requires replenishment of soil fertility through the use of fertilizers. But this commodity is very scarce, expensive, and often delivered after the planting season. Other agro-chemicals are always scarce and expensive and not within the reach of the resource-poor farmers.

**Lack of Rural Infrastructure:** Lack of infrastructure such as roads, transportation, electricity, good drinking water and socio-economic facilities have been the hallmark of the rural communities. The lack of these infrastructures have compounded the problem of agricultural production. The rural farmers depend on the middlemen to come to the rural communities to buy the agricultural produce. The implication is these resource-poor farmers depend largely on the whims and caprices of the middlemen who determine prices at the farm gate which are typically low. The rural roads are always in a poor condition thereby making it inaccessible during the rainy seasons. Some of the agricultural produce are left to rot away due to lack of storage facilities. The lack of basic amenities such as good drinking water and electricity induce the rural-urban migration by the young the energetic people.

**Inappropriateness of agricultural technologies:** Technologies for agricultural production must be appropriate and respond to the ecological, financial, economical and cultural needs of the society. Often, technologies for agricultural production do not fit (Asiabaka, 1994). There are developed for a different cultural and ecological setting and transferred to the country. The resultant effect is that is the non-adoption of such technologies.

**Recommending an Agricultural Extension Policy for National development**

In 2002, the World Bank, United States Agency for International Development (USAID) and the Neuchatel Group put forward a number of policy recommendations that had implication for extension:

**Government should view extension within a wider rural development agenda:** The emerging view of extension is not that of a service or a system, but of a knowledge and information support function for rural people. Rural knowledge and information needs are diverse; thus there are benefits from having a range of providers to deliver advice, technology innovations, and facilitation services.

**Government should define extension policy for a pluralistic system:** Extension policy should be designed with an inventory of the actor (who provides what to whom) reform. It is important to have a strategy for the national extension system, but it requires with country-driven processes.

**Government should make long-term commitments:** New approaches should take time and years to be fully institutionized.

**Government should develop a stakeholder coordinating mechanism:** Some type of coordinating body for the various participants in extension needs to be considered to need to harmonize behaviour and strategies.
Government should build capacity of rural Organizations (RPOs), the public Sector and Service Providers: Capacity building and institutional strengthening require funding to widen the pool of qualified service providers and ensure strong link with and modernization of various components of formal and non-formal agricultural education.

Government should be realistic about limits of the fully private extension organizations: The private sector will play an increasing important role in rural knowledge systems, but total privatization is not feasible, even for commercial agriculture. The appropriate mix can only be achieved through piloting and learning from experience.

Government should develop a nationwide strategy for extension and rural development: Extension should form part of a larger decentralization agenda that will engage local government units and grassroot organizations.

Recommendations for Successful Agricultural Extension Policy in Nigeria

In addition to above global recommendations, it is further recommended that for Agricultural extension policy to fully succeed in Nigeria, Government must provide the following:

A Systematic Agricultural Extension Services: Evidence from developed countries show that agricultural extension services are instrumental to increased agricultural production. This success cannot be achieved in the absence of a proper coordination and linkage between research and extension. There is need for continuous training for agricultural extension staff so as to be technically sound to interpret and disseminate agricultural information based on tested and scientific agricultural practices. The research-extension linkage systems must be strengthened in such a way as to have proper coordinating and inter-organizational relationships. Extension services must be responsive to the needs and aspirations of the farmers and the entire society. There is the very important need to position the Agricultural Development Programme (ADP) for a well articulated and aggressive extension interventions in the next decade. There is the need to modify the existing extension outreach strategies to make it more participatory, so that the indigenous knowledge of the farmer counts.

Research and Development (R&D): Research and development (R&D) is necessary for agricultural technology development. Research effort should be geared towards producing adequate, relevant, needs-oriented, adaptable and transferable technologies. Agricultural technologies must also be flexible and gender-sensitive. The role of both sexes in the process of agricultural production, processing and marketing should be taken into consideration by scientists. Agricultural technologies must be appropriate. Technologies must respond to the ecological, financial and socio-economic conditions of the people and must also be technically sound. According to Alao (1980), the problem with most technologies in developing countries is the rate at which available research results are lost because most of these technologies are either not adaptable or not transferable. Agriculture cannot perform its various roles unless the macroeconomic and technological environment are conducive to effective performance. The drag in the agricultural development take-off since independence is attributable to macroeconomic policies and technological atrophy. Agricultural R &D needs to be demand-driven and as such will focus on felt need of stakeholders. Agricultural R&D must focus also on increased productivity.

Women Empowerment: There is a growing awareness in the development community that such goals as food security, improved health and low population rates can be achieved only when women are recognized as active participants in the development process. Technologies for agricultural development must be gender sensitive to growing
number of women farmers in the country. Often times, development planners ignore the silent majority: the women. Women form the bulk of farmers in Nigeria and they are also involved in processing and marketing of agricultural produce. Yet, they lack access to most of the productive resources of land, credit, information and decision making. Policies targeted to Women will enhance agricultural productivity in the country.

Mass Production of Food: Agricultural development policies aimed at food production needs to aim at crops where the country has comparative advantage. This can be targeted at crops such as cassava, oil palm and to some extend rice. This is important because cassava, for instance, is food security crop that can do the magic that rice did in Asia and potato in North America. This is true because: cassava provides food for more than 80 million Nigerians, it is easy to grow, adapts well to marginal soils, ecologies and farming systems. Cassava cushions families against hunger when all other crops fail. It can be processed into various domestic and export uses and there is growing demand for cassava and its by-products in the world.

Targeting Agricultural Development Policies: Agricultural production would not be left at the hands of small-scale farmers alone. We need also to target large-scale plantation agriculture. This has worked in Asian countries such as India and Malaysia. It is on record that Malaysia got their first oil palm seedlings from Nigeria in the early sixties but now Malaysia is the world’s greatest producer of palm oil and other oil palm produce. They surpassed Nigeria because they went into improved plantation agriculture. It is important that we target these large scale farmers in addition to the small-scale farmers who, though resource-poor, produce the bulk of Nigeria’s food needs.

Provision of Infrastructure in Rural Areas: There is the need to provide basic infrastructure in the rural communities. This will discourage rural-urban migration by the youth. The most important infrastructure include accessible roads, good drinking water, health facilities, schools, markets, research and extension institutions. The availability of and access to rural infrastructure is fundamental to the achievement of food security, poverty alleviation and rural integration. It is very essential that policies aimed at food security and boosting agricultural production must address the infrastructural inadequacies of the rural areas where the bulk of agricultural production takes place.

Enhancing Food Security of the States: Food security has been defined as “When all people at all times have both physical and economic access to sufficient food to meet their dietary needs for productive and health life” (USAID, 1995). By this definition, food security is a broad and complex concept that is determined by agro-ecological, agro-physical, socio-economic and biological factors (Campbell, 1991, von Braun et al, 1992, Asiabaka, 2003). Food security is also defined by a triad of concepts such as food security whereby the emphasis is on food availability at all times, food access and food utilization. There is a need for a state policy on food security to the ability of the citizenry to be able to utilize food efficiently and maximally.

Agricultural Education and Training: Investment in the next generation through agricultural education and training is vital for the state’s agricultural growth. The Agricultural education can take the formal or informal setting. The important things is that efficiently and profitably.

Involving Non-Governmental Organizations (NGOs): The involvement NGOs in agricultural production is important because they have shown to have grass-root support in all developmental process. A policy that empowers them to mass production of food is not only desirable but pertinent. They can be organized and harnessed towards
increased agricultural production. There is pragmatic realization that public sectors are not able to provide adequate services efficiently. The NGOs are community-based and as such will be more attuned to the needs of the poor, could design suitable programmes for them and could be held accountable for the services rendered. Community based organizations (CBOs) could be encouraged, through funds, technical assistance and training to design and implement community-based poverty reduction/alleviation agricultural programmes. The project would provide credit to establish cottage industries for bottling, canning with the objective of purchasing, preserving and adding value to agricultural reduce (Asiabaka and Unammah, 1999)

**Micro-Credit Funding.** Micro-credit can be given through the exiting informal credit system prevalent in the community, for example, the local “esusu” system Credit received in this form will attract little of no interest.

**Micro-enterprise Programme:** This has been described by the United States Agency for International Development (USAID, 2000) as “a business with fewer than 10 employees. A second characteristic of a micro-enterprise is that both the business and the owner have a low level of assets and income. Often micro-enterprises involve only one person, the owner-operator, or they may include unpaid employees who are family members”. Simple food processing, handicraft production, repairs such as shoes, bicycles, radios etc, dressmaking and food vending are typical examples of micro-enterprise activities.

**CONCLUSION**

The essential goal of agricultural policy is to ensure increased output of agricultural commodities to meet the needs of increasing population, expanding industrial processing and expansion of agricultural exports (Akande et al, 1999). The extent to which agriculture has responded to policy initiatives may be assessed from the standpoints of:

- Physical commodity output and food availability,
- Nutritional Status
- Agricultural Commodity prices
- Export trend
- Employment generation, and
- Income

Successful agricultural development needs to satisfy the following conditions:

- There must be market for farm products
- The available agricultural technology must be constantly changing
- There must be a local availability of supplies and equipment
- There must be production incentives which make it profitable for farmers to produce more, and not only for their middlemen who make the bulk of the profit, but for themselves, and
- Transportation and other socio-economic infrastructures must be available in rural communities.

Nigeria is faced with three important agricultural policy decisions:
depend on food aid from developed economies

(ii) direct scarce foreign exchange to food importation

(iii) produce enough food both for her growing population and for export

The third option will form the policy focus of country in the years to come. If the 2020 vision of the federal government will be actualized. Nigeria needs to be food secure and agriculture will revert to its position as a major contributor to the national economy. This can be achieved through a systemic and well formulated agricultural extension policy. It is evident that successive Governments have put in place several agricultural development policies since independence. Despite these policies, the country is still food insecure and most of her citizens still live in poverty and misery. The constraints to agricultural development have also been highlighted in the paper. The guidelines and/or recommendations are not an exhaustive list. Whatever form the agricultural extension policy of the country takes, whether decentralized, devolved, pluralistic, private, Nigeria needs to kick-start the process. It needs ample preparation, piloting, learning from our failures, coordination and oversight. The enabling environment must also be put in place. The political will must be there, and the need for dedication, accountability and honesty on the part of the implementers of the policies must be paramount. Behaving otherwise is tantamount to paying lip service to the food security of the state and national development of the country.

References


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