Review

Review on market re-orientation of extension services for value chain development in Borno State, Nigeria

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Hitherto the primary focus of agricultural extension in Borno State has been to ensure increasing agricultural production for food security. However, the current emphasis is on enhancing rural incomes through market re-orientation. This change was necessitated by the realization that subsistence food production can no longer provide for a decent living and therefore increased engagement in commercial food production and markets has become a necessity and reality for the rural farmers. The paper explored the significance of agricultural extension in improving the marketing system in Borno State with focus on how market-oriented agricultural advisory services (MOAAS) could assist in addressing the marketing constraints faced by actors along the value chains and plethora of agricultural marketing bottlenecks in the state. To avail value chain actors of required information and extension services and enable them take advantage of market opportunities entails the need for the adoption of market-led extension approach by the Borno State Agricultural Development Programme (BOSADP); the pursuance of deliberate and conscious strategy for pro-poor MOAAS and Borno State government as a matter of policy undertake the recruitment and deployment of market-oriented extension workers and engage in capacity building to develop the marketing skills of the existing staff.

Key words: Market re-orientation, extension services, value chain development, marketing extension.

INTRODUCTION

The primary focus of agricultural extension today unlike the situation before should no longer be on increasing production but rather on enhancing rural incomes through market-orientation and responding to farmers’ demand (Christoplos, 2010). The agricultural environment is changing with unprecedented speed and in very diverse ways as a result of market liberalization and globalization (Kahan, 2013). Some of the significant changes include changes in quality and food safety standards; changing prices and emerging niches in global community markets; changing consumer food preferences at national and international levels and consequences of mega-trends such as urbanization and climate change (Neuchatel group, 2008). These dynamics affect rural people as subsistence food production can no longer provide for a decent living and therefore increased engagement in commercial food production and markets has become a necessity and reality for the vast majority of the rural
population in Nigeria including Borno state. These trends have an effect on farmers who need to develop stronger management skills and competencies to cope with the ever-changing farming environment. For farmers to be better managers and to run their business for profit they need assistance from those working at various levels in agricultural extension. In order to survive and prosper farming needs to become competitive and profitable (Schwartz, 1994).

The objective of making profits is central to the idea of farming as a business. Extension workers and small-scale farmers need to be familiar with and knowledgeable about the changes that are occurring in farming and the opportunities and risks that the new farming environment offer. These farmers have to begin to farm as a business if they are to prosper in the future. Many of the constraints facing small farmers are related to a lack of adequate know-how and skills. Market-oriented agricultural advisory services can play an important role in helping small farmers to overcome these constraints, and are an essential component of the wider range of services that are needed to contribute to poverty alleviation.

CONCEPTUAL BACKGROUND TO EXTENSION AND MARKETING EXTENSION

Agricultural extension in many countries has come to encompass a wide range of activities in both the public and private sectors, yet the exchange of information continues to be the primary focus of all extension activities. The traditional concept of public agricultural extension involves a professional body of agricultural experts (generally government employees) who teach improved methods of farming, demonstrate innovations, and organize farmer meetings and field days on a wide range of topics (Agbarevo and Obinne, 2010).

According to CTA (2011) and USAID (2011) extension and advisory services were designed to help farmers boost crops and livestock production. These services enable farmers to adopt new technologies for increase production and profitability. According to them the specific objectives of agricultural extension and advisory services were to: i) provide advice to farmers on problems or opportunities in agricultural production, marketing, conservation and family livelihood; ii) facilitate development of local skills and organizations, and to serve as links with other programmes and institutions; iii) transfer new technologies to farmers and rural people thus an effective delivery of agricultural extension services is expected to play a significant role in agricultural production, processing, storage and marketing of food commodities.

Public extension is sometimes used as a channel to introduce – and sometimes enforce – agricultural policies. Extension also functions informally as farmers transfer their best practices and experiences to each other through what is termed ‘farmer-to-farmer extension’. In addition, extension activities are carried out by a wide range of organizations in the private business and non-profit sectors (Moris, 1991).

The word “extension” has been criticized as inherently emphasizing the “top-down” dissemination of information while ignoring other types of information flow between farmers, extension and research—particularly activities that involve farmers as equal partners in the process. This paper uses the term “extension” recognizing that extension functions are multi-faceted and go beyond “top-down” dissemination of new technologies. This author takes the position that the existence of multiple (sometimes conflicting) information sources is an advantage for farmers in that they can best select the information mix most suited to their goals as producers and the most reliable information source. The term ‘extension’ encompasses a diverse range of socially sanctioned and legitimate activities which seek to enlarge and improve the abilities of farm people to adopt more appropriate and often new practices and to adjust to changing conditions and societal needs. It has now become recognized as an essential mechanism for delivering information and advice as an “input” into modern farming.

In the context of the value chain, extension according to Adedoyin (2002) can be defined as a comprehensive programme of services deliberately put in place for expanding, strengthening and empowering the capacity of the present and prospective farmers, farm families, other rural economic operators (processors, marketers, rural agro-industrialists, farm managers, farm labour force), farmer associations and communities entrepreneurial, management and communication skills that they need to succeed in farming and farm related occupations.

The concept of agricultural marketing extension may be new, however it could be regarded as the most neglected part of extension activities. This is due to the fact that hitherto agriculture in Nigeria has mainly been practiced for subsistence not as a commercial venture. With current emphasis and need to promote farming as a business marketing extension have assumed increased significance. Agbarevo and Obinne (2010) conceived of marketing extension as the act of assisting farmers by teaching them how best to acquire agricultural inputs, transform them to output and market the output effectively to maximize profit while minimizing costs. In specific terms as opined by the authors agricultural marketing extension is concerned with making the farmer understand and take advantage of market opportunities by being in a position to provide answers to the following six critical production and marketing questions:

(i) What to produce: There are varieties of crops as well as breeds of animals to produce in any locality as
determined by factors such as cost of production, suitability of the soil, climate as well as availability of market for produce, land and labour input.

(ii) When to produce: The farmer will make the greatest profit when he/she produces during periods of scarcity. Market information regarding expected price variations for produce, meteorological information determining rains, droughts, pests or floods would be of immense benefit in timing farming operations.

(iii) What method of production to use: Enterprise recommendations on what method of production to use, input substitution and least cost combination of variable inputs to maximize profit and the most appropriate technology to use are addressed by agricultural marketing extension.

(iv) How much to produce: It is common for people to make lofty business plans without proper feasibility study. A farmer needs to know what area (hectares) to devote to a particular crop or mix of crops that could be financed by a given amount of capital. A poultry farmer for instance needs to know how much capital is required to raise 500 broiler chicks to market weight. The quantity to be produced has to be balanced against available resources.

(v) Where to buy and sell: There are alternative markets for procuring inputs and disposing produce. Different marketing channels equally exists. The farmer should purchase where the prices of best quality inputs are cheapest and products are highest. Von Thunen’s principle or model of land use regarding its implication on ‘farm gate’ prices, if understood by farmers would help them make the best decision as to where to sell their products. In this regard the transportation cost of produce to market, the risks involved, time and labour requirements need to be balanced against expected higher prices of products in distant markets compared to farm-gate price which is usually lower.

(vi) When to buy and sell: Small scale farmers have limited choices as to when to buy or sell because of little capital and need for regular income for subsistence. Moreover lack of processing and storage facilities constrain farmer’s ability to sell at times when prices are high. Marketing extension could assist farmers with skills of wise use of resources and utilization of low cost technology of processing and storage to avoid glut in the market. Availability and access to market information provides a guide as to the right time to buy and sell to get more profit.

MARKET ORIENTED AGRICULTURAL EXTENSION SERVICES AND ITS SIGNIFICANCE IN VALUE CHAIN (VC) DEVELOPMENT

Inherent in the VC approach is an acknowledgement that in addition to the farmers there are other stakeholders in the chain such as processors or other downstream actors who exert a positive influence on the small holder farmers who are the target to meet food security and poverty reduction in most agricultural transformation initiatives (Berthe, 2015). In fact as noted by the author in most African countries, including Nigeria small scale farmers constitute the major part of the supply base and improvements in productivity and food production will need to come from them. However, endogenous constraints (small scale production, poverty, high illiteracy and ill-health) and exogenous constraints (poor transport, infrastructure, poor access to credit, insufficient government and institutional support, etc.) make it difficult for them to compete. Consequently, because of lack of economies of scale (low volume of marketable surplus), they need to collaborate among themselves and with other actors in the market chains. However, they do not do so, as they lack information on the market and business skill and that is where market-oriented extension services has an important role to play. Market-Oriented Agricultural Advisory Services (MOAAS) as defined by the ‘Common Framework on Market-Oriented Agricultural Services’ are knowledge services which assists small-to-medium scale farmers and other actors in agricultural value chains to increase their access to markets and secure benefits from commercialization (Neuchatel Group, 2008). The definition entails looking beyond the problems of rural producers and farmers to focus on the challenges faced by a range of actors throughout the value chain in order to enhance the functioning of the whole chain. Figure 1 illustrates the value chain approach to provision of extension services.

It is apparent from the diagram that there are advisory service clients at each tier in the value chain. The clients can range from input providers, producers or producer organizations, micro-processors or multinational processing companies, to small and large traders or export companies. Even other organizations, such as financial service providers may need advisory services to better understand the market prospects for their potential clients. It is important that the clients at all levels are viewed as businesses which demand and use services provided along the value chain as depicted. Each of the actors requires know-how and advice and must therefore develop a sustainable and trusting relationship with the extension advisory service providers they deem competent and valuable (Neuchatel Group, 2008).

Markets are the driving force in agricultural development. This suggests that technological and organizational changes are in most instances driven by efforts to participate in markets. This is why, in recent years, extension has been steadily moving beyond its past role in technology transfer to greater involvement in facilitation, coaching and brokerage in market chains. Market demands are changing rapidly and becoming more stringent. Increased provision of market oriented extension is essential if poor producers and rural
entrepreneurs are to have the knowledge and information they need to respond to these challenges. Good market-oriented extension thus requires looking beyond the market opportunities that exist right now to focus more on helping farmers prepare to compete in the markets of the future. Iterative approaches are needed to help clients to adapt to the range of factors that are impacting on agricultural markets, from climate change to the expanding dominance of supermarkets and global supply chains (Christopoulos, 2010).

Market-orientation demands a value chain orientation; which in turn implies that extension must meet the needs of a range of actors – not just farmers. Extension must be concerned with local economic development and empowerment, and not just farming itself. In effect, market-oriented extension is about making sure a range of actors are able to collaborate with one another. For example, if traders or input vendors want to invest in a particular product, they may need to provide advice to farmers about varieties and planting methods. The other value chain actors who are advising farmers about what they want to sell (inputs) or buy (farm produce) therefore also need to understand the technology themselves in order to provide such advice. These other market actors require access to extension as well. Such a broader approach to the extension agenda is controversial. It raises questions about whether extension is just about ‘helping farmers’ or if it requires advice to a variety of stakeholders so as to contribute to developing the rural economy (and with that, rural livelihoods). A genuine value chain approach implies the need for facilitation and brokerage efforts to address constraints and bottlenecks to market access. Merely ‘helping farmers’ may not provide much help if the rest of the market chain is dysfunctional.

Traditional approaches to agricultural development tend to emphasize only food security which means helping farmers to grow enough to feed themselves and their families, and perhaps a surplus to sell. However, more recently concern with markets has become prominent because subsistence farmers need cash to meet up other obligations such as payment of school fees and health care. This implies that they should be able to grow things they can sell. And if they have a market for their produce, they have an incentive to grow more to earn more. This ushers in a virtuous cycle of higher yields and production, greater incomes, higher living standards, and more investment in production.

Market oriented agricultural advisory services are important by providing advisory support for producers as well as other actors in the agricultural value chain including processors, marketers and consumers. The scope of services includes technical know-how, understanding of markets, business management and facilitation of change in value chains. This entails that the farmer will have the appropriate knowledge of what
he/she wants to produce, the appropriate skills and techniques to produce for the appropriate markets and prices. The value chain actors need to develop critical competencies in contemporary issues in extension and markets so as to be able to successfully take advantages of benefits accruing along the value chain.

OVERVIEW OF AGRICULTURAL MARKETING CONSTRAINTS IN BORNO STATE AND EXTENSION STRATEGIES TO COUNTER THEM

The agricultural marketing system in Nigeria is complex because of the myriad of independently operating small-scale farmers constituting about 95% of the farming population and 75 to 80% of the entire work force. Agricultural marketing however is devoid of complexity in developed countries such as the United Kingdom and United States of America where the farming population is only 5 to 10% of the entire work force. The complexity of the marketing system has given rise to several challenges to marketing of agricultural products in developing countries such as Nigeria. The major constraints include poor prices for the agricultural products, exploitation by middlemen, transportation problems in moving products from rural to urban markets; lack of alternative markets and lack of or poor processing and storage facilities (Agbarevo and Obinne, 2010). Related but context specific marketing challenges abound in Borno State. Amaza (2006) and Gaya (2007) highlighted the crop based agricultural marketing problems in Borno State. These constraints according to the authors affect market development and commercialization of agriculture in the state. Moreover, the bottlenecks constitute challenges for effective market extension services delivery for the rural farmers. A succinct description of the problems are as follows:

(i) Lack of market information

Farmers, input dealers, output dealers and processors in Borno State have no access to regular and reliable sources of market information. A study by Amaza et al. (2005) revealed that 80% of farmers in Southern part of Borno State sought for information on prices within their locality before they made sales. These information could be biased and may provide the wrong signal to the farmers. Effective market information services (MIS) help to increase the efficiency of agricultural markets and help overcome market failures that are based on weak and asymmetric access to information.

Basically there are three main types of information disseminated through MIS (Shepherd, 1997). These include traditional market information systems that provide regular spot prices of agricultural goods to the farming community; market intelligence that provides forecasting information on a narrow range of products and that mainly supports the needs of traders and market linkage information that focuses on a single product and specifically aims to bring together buyers and sellers. All these types of market information are either lacking completely or are not regularly updated or the farmers do not get access to such information due to bureaucratic bottlenecks associated with its collection and dissemination in Borno State. Generally Agricultural Market Information System (AMIS) makes food commodity markets more transparent (FAO, 2019). For instance the global experience as reported in FAO (2019) publication ‘FAO: Challenges and Opportunities in a Global World’ pertaining the sudden rise in food prices between 2007 and 2008 which had a devastating effect for the world’s poor. One of the measures adopted to address international food price volatility was the creation of the Agricultural Market Information System. AMIS was launched in September 2011 to enhance transparency in international food markets and facilitate policy coordination when food security is at risk.

(ii) Poor infrastructure

Infrastructural deficiencies constitute market imperfections and are likely to affect both factor and product markets. Most of the markets in Borno State lack good road network and drains thus increasing farmers costs. Lack of electricity and storage facilities are a common occurrence in the state. The poor state of infrastructure has been worsened by the destruction of vital public and private social and economic infrastructure such as roads, electrical and telecommunication infrastructure, bridges, health and educational facilities and banks since 2009 by Boko Haram insurgents in most Local Government Areas of the state.

(iii) Poor bargaining power of producers

In Borno State there exists poor bargaining power of producers vis-à-vis middlemen in agricultural marketing. The situation is exacerbated by the absence of market information which could have empowered them through reliable, impartial and cheap access to information on prices and demand structures.

(iv) Lack of standard weights and measures

In Borno state agricultural products are sold under a variety of weights and measures. According to Gaya (2007) market transactions in agricultural commodities especially crop based products in the state are conducted using a local measure called ‘mudu’ which is approximately 2.5 kg weight for cereals and legumes.
This applies to crops such as maize, sorghum, rice, cowpea, soyabean and groundnut which are commonly grown and marketed in the state.

EXTENSION STRATEGIES FOR EFFECTIVE AGRICULTURAL MARKETING

In order to address the challenges to agricultural marketing identified in the previous section of this paper the following extension strategies are proposed for implementation in Borno State as a means to ensure effective marketing of agricultural products in the state.

(i) Adoption of market-led and market-oriented extension services delivery approach

Market-oriented services focus on the principle of market orientation, which is broadly based on customer satisfaction and competitive marketing of products. This entails that the extension service in the Borno State Agricultural Development Programme (BOSADP) should be market-led—that is, they should provide a product in the form of extension services based on the needs of the farmers. From an extensionist perspective, market orientation is needed to ensure that: Farmers are able to produce a marketable product; the necessary tools are available for processing and good farming practices are observed such as fertilizer application, pest control and crop rotation; and farmers have access to a market for their crops and livestock (GFRAS, 2012). Market-led extension provides services focused on linking farmers to the market, often to improve their income. This type of extension often also extends to other actors in the value chain. In line with the need to adopt market orientation, it has been suggested that the Nigerian agricultural extension system should address the critical challenges of agricultural extension and advisory services to transform it into a participatory, demand-response, market-oriented and ICT driven service that will provide for all the extension needs of all actors along the targeted commodity value chains of interest (Izuogu and Atasie, 2015).

(ii) Capacity building for extension workers in marketing extension skills

As farmers become more market oriented, so extension workers need to be in a position to advise them not only on how to grow crops and raise livestock but also on how to market them. Knowledge of produce handling, storage and packaging is also essential. The envisaged training programme is aimed to address lack of knowledge and skills on market-led agricultural extension as extension workers in the state needed strong capacity-building support. The other areas requiring priority assistance will include the development of training programmes on futures markets, agri-insurance and risk management, and farmer capacity building for collective activities and, in particular, market access and quality management which are complementary and essential marketing skills needed to operate in a dynamic business environment. It is therefore recommended that the Borno State government not only undertake the recruitment and deployment of market-oriented extension workers but also take deliberate effort to develop skills of existing extension workers in marketing through range of training materials and context specific courses tailored to the needs of a particular location, value chain crops or agricultural activity of interest.

(ii) Use of information and communications technology (ICTs) in dissemination of market information

Information and communication technologies (ICTs) exert an influence and impact positively on the agribusiness value chain. ICTs are veritable tools with potential for use in MOAAS. For instance for farmers the explosion of mobile phone ownership facilitates access to better market and agronomic information on crop prices and weather conditions, and financial resources and products such as credit and insurance. This enables them to improve the efficiency of their transactions. In the case of food companies and retailers, social media has become an integral part of their marketing strategies and engagement with customers (World Bank, 2012). ICT not only impacts individual stages in the value chain but also helps integrate them by tracking the progress of crops and foodstuffs from production to consumption, providing the information needed for traceability.

Radio-based dissemination of data has also become a common practice. In Uganda, for instance it was found that from 2000 to 2007, rural radio was the most effective means of delivering information to the large number of farmers (Ferris and Robbins, 2004). In many countries including Nigeria, this may continue to be the case as rural radio overcomes literacy issues and enables mass coverage. However radio dissemination is costly and in most cases is limited by a one-way information flow. The use of call-in options and call centers to the radio companies was one way of providing two way communication.

(iii) Adoption of pro-poor MOAAS

The dynamic nature of agricultural markets at national and international levels can be expected to continue to accelerate and penetrate areas that have been isolated from significant market change in the past especially in the rural areas of Borno State where subsistence
CONCLUSION

It is important to understand that adopting the value chain approach to economic development and poverty reduction in Nigeria and indeed in Borno State is a step in the right direction at the most opportune and appropriate time. In Nigeria, previous strategies employed, which mainly focused on improved production has yielded unsatisfactory result of perpetuating poverty through the continued practice of subsistence agriculture.

It is important to note that in Borno State as revealed by the review that the dawn of commercial agriculture have come based on the understanding that the value chain approach involves not only addressing major constraints and opportunities faced by farmers or producers, but also those of processors, traders and other businesses at multiple levels and points along a given chain. The process has also included facilitating a wide range of activities such as ensuring access to inputs, strengthening the delivery of business and financial services, enabling the flow of information and facilitating improved linkages between actors to higher-value markets. To avail value chain actors of required information and extension services along the value chain so as to be able to take advantage of market opportunities there is an urgent need to consider and adopt the extension strategies proposed in this paper.

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CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.