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## TOWARDS REDESIGNING THE AGRICULTURAL EXTENSION SERVICE IN SOUTH AFRICA: VIEWS AND PROPOSALS OF SMALLHOLDER FARMERS IN THE EASTERN CAPE.

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### ABSTRACT

*The public extension service in the Eastern Cape Province is in vital need of revitalization if it is to transform the unproductive smallholder-agriculture sector into a more commercially-orientated sector. The research used a Logical Framework Analysis (LFA) enquiry to determine the problems smallholder farmers face as well as the causes and effects of their problems. The research participants stated that the main problem was ineffective farmer development. This was caused by, among others, poor farming systems and, lack of training, finances and support. This led to, among others, dependency, crime, unemployment and poverty.*

*The participants said that they would like to become commercially productive. This would require, among others, access to training, finances and support, and improved farming systems. This would lead to reductions in crime, unemployment and poverty as well as them becoming independent and productive farmers. The smallholder farmers would not be able to solve these problems on their own, even with the help of an extensionist. These problems require input from multiple role players of the agricultural environment, as they need to be addressed from within a systems context. A platform would need to be created where all of the role players can interact in finding solutions.*

## 1. INTRODUCTION

This paper forms part of a study into the formulation of a new extension model for the Eastern Cape's public extension service. The previous paper (van Niekerk, Stroebel, van Rooyen, Whitfield & Swanepoel, 2009) determined eight factors that are crucial to effective extension; extensionists and researchers were used to determine their perceptions on the relative importance of these factors. Hereafter, the various stakeholders in the extension environment will need to be identified as well as their level of involvement in developing extensionists in each of the eight factors. An extension model will then be proposed. The purpose of the model would be to raise small-scale farmers to become commercial farmers through effective extension efforts. Although there are theories that promote large-scale commercial farms over small-scale agriculture, as economies of scale should push small-scale farmers out of the market, this has been refuted.

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India has over 600 million small-scale farmers and these farmers are unlikely to stop farming in the foreseeable future. Small-scale farmers should therefore be encouraged to increase productivity so that the demand for food – which is set to double by 2050 – can be met (Christoplos, 2010). Hence the need to strengthen the public extension service in the Eastern Cape, which serves the smallholder farmers.

In this part of the same study, a Logical Framework Analysis (LFA) or logframe analysis was used. According to van Rooyen, D’Haese & Anandajayasekeram (2002), the logframe analysis is a tool for bottom-up participatory project planning. In this light, extensionists can use the logframe analysis to determine the needs, problems and goals of the farmers. In addition, the logframe analysis can be used to help the farmers to help themselves, as once a problem is identified; the farmers – themselves – identify solutions to their problems.

A logframe analysis was performed with small-scale farmers so that their thoughts on their agricultural goals and what was needed to achieve these goals. The logframe analysis was used to determine the cause-effect relationship of problems the farmers face. This was followed by a turnaround strategy whereby the farmers’ objectives were determined and the negative cause-effect relationships were changed into a positive plan of activities to reach the goals of the farmers.

## **2. METHODOLOGY**

A group of 16 smallholder farmers participated in this study. The LFA utilizes groups of farmers in its process and according to Rivera, Qamar & Van Crowder (2001), extension services have a long history in group promotion and organization. It has been argued that extension can be more effective when extensionists deal with farmer organizations instead of individual farmers. It has been found that farmer organizations promote independence, democracy and development.

The use of farmer groups is an innovation in dissemination methods as there is an increase in the efficiency of dissemination as a multitude of farmers can be reached at the same time. Farmers within the group can also share local knowledge amongst themselves. There is, however, some debate on the effectiveness of information dissemination through groups. In certain instances it has been very effective, while in other circumstances it has been a failure due to conflict over leadership or resources and domination by group members with greater social status or wealth. To overcome this, one needs an understanding of group dynamics and power relations (Adato & Meinzen-Dick, 2007).

LFA used in this study followed a logical pathway of cause-and-effect. This method of research does not give statistically-significant evidence, but rather gives very authentic qualitative research data, which is what was wanted. LFA was used to determine the core problem and then the participants were asked to identify the negative causes of the identified problem. Following the principles of LFA, as described by van Rooyen, *et al* (2002), the participants were asked to discuss the negative effects that they associated with these causes.

This resulted in the formulation of the Problem Tree with the core problem in the middle representing the stem. From the core problem, the negative effects branch upwards and the

negative causes branch downwards like roots. Once this was constructed, a new LFA that identified the farmers' core objective and the activities required to reach their goals. This LFA was a positive reaction to that of the first LFA. This second diagram contained the core objectives, activities and the farmers' envisaged ends. This was formulated into the Objective Tree, with the core objective being the stem, the required activities being the roots and the desired ends being the branches that bear the metaphorical fruit.

### **3. FINDINGS**

#### **3.1 Problem Analysis**

South Africa's farming community consists of both predominantly-white commercial farmers and black communal and small-scale farmers. Communal and small-scale farmers are being encouraged to participate in the commercial farming sector (Sans Author, 2010). Farmers from the communal areas around Tyolomnqa in the Eastern Cape participated in this research. The farmers identified existing problems that they face in advancing their farming operations. Figure 1 exhibits the Problem Tree.

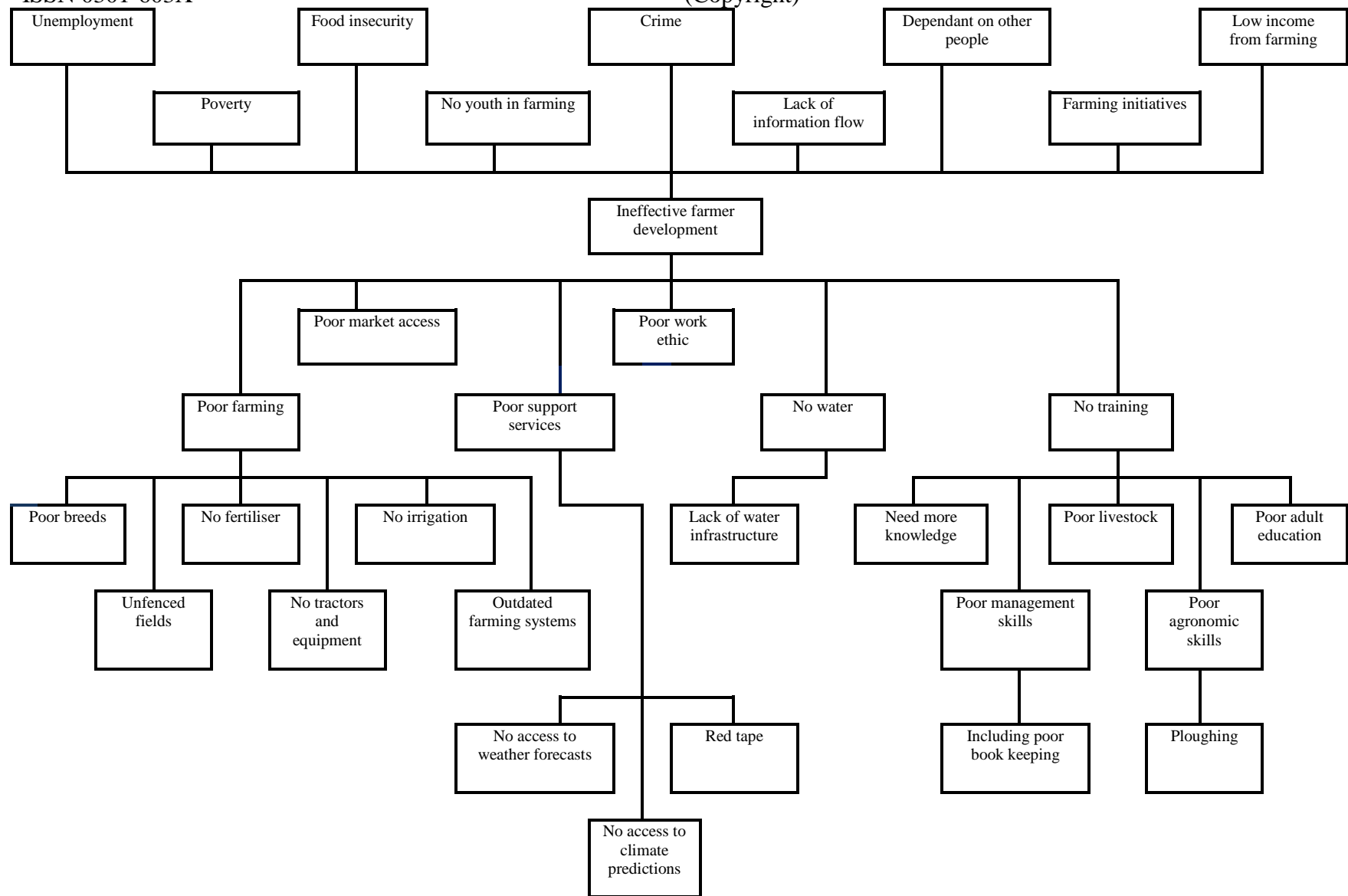


Figure 1: Problem Tree

The core problem identified was ineffective farmer development, which forms the stem of the tree in the middle of Figure 1. The farmers identified various causes of this problem as well as the effects. The causes became the roots of the Problem Tree and the effects are the branches. The numerous causes were grouped into seven central causes, which have subsidiary causes below them.

The first central cause was inadequate farming systems with subsidiary causes of poorly-performing breeds, unfenced fields, outdated farming systems and lack of fertilizer, irrigation and mechanization. The next three central causes were poor market access, poor work ethic and inadequate financial assistance. Another central cause was poor support services with problems with “red tape” and no access to weather forecasts and climate change predictions. The farmers also identified a lack of water and the associated water infrastructure as a central cause. The last central cause was insufficient training. As subsidiary causes, farmers said they “need more knowledge” and that adult literacy was low. Farmers also said that their agricultural skills were low. This included poor livestock production, poor agronomic skills in ploughing and pest control, and poor management skills that included poor bookkeeping.

The identified effects of these causes are:

1. Unemployment;
2. Poverty;
3. Food insecurity;
4. No youth in farming;
5. Crime;
6. Lack of information flow;
7. Dependency on other people;
8. Small farming initiatives; and
9. Low income from farming.

### **3.2 Objective Analysis**

The next phase in the LFA process was to turn the Problem Tree into an Objective Tree. The Objective Tree was used to describe the future situation once the identified problems have been solved. This involved reformulating the negative statements of Figure 1 into positive goals to be achieved in the future. This reformulation needed to be realistic. The logical cause-and-effect relationship was then converted into a logical activity-ends relationship that formed the Objective Tree; according to the principles described by van Rooyen, *et al* (2002). The Objective Tree is displayed in Figure 2.

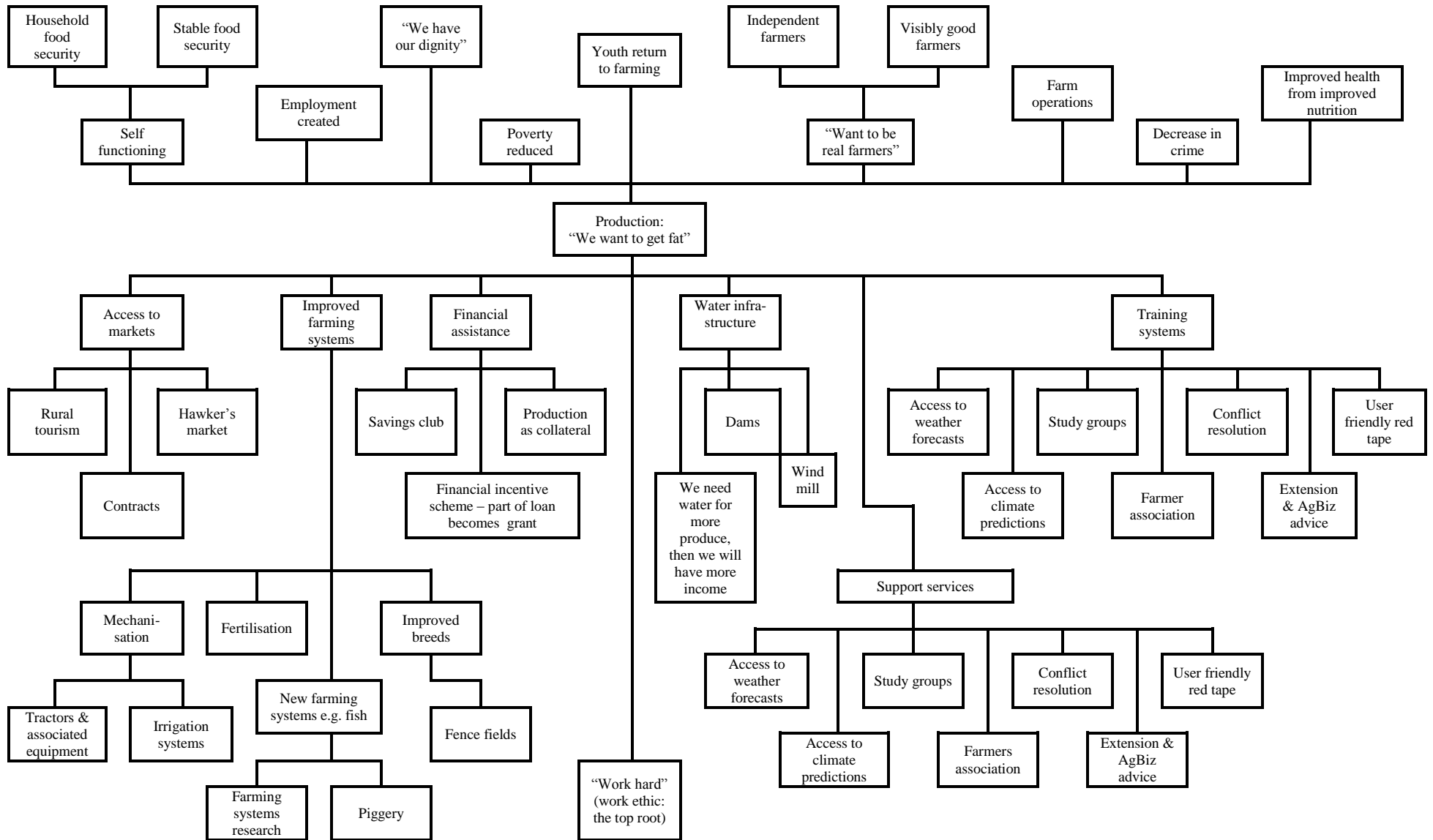


Figure 2: The Objective Tree

In the Objective Tree, the trunk is the core objective statement, which is for the farmers to achieve commercial production status or as one member of the participants succinctly put it, “we want to get fat”. The rest of the Objective Tree is composed of the activities to reach the objectives as the roots; and the branches with the metaphorical fruit being the desired ends.

The farmers identified ten desirable ends. These ends varied from personal ends to societal ends. These ends are however, all linked. Regarding the farmers’ desirable ends, one farmer stated, “we want to be real farmers”. Another participant said that this meant that they want people to see that they are good farmers as well as being independent. The farmers also articulated that they wanted to be self-functioning with stable household food security, and with this, improved health from improved nutrition. The farmers also said that they would like to expand their farming activities with subsequent increase in income. Above all of this, the farmers wanted “dignity”. Beyond the ends with a personal nature and when these development objectives could be met, farmers had ends that would improve their society. These ends included the return of the youth to farming, the creation of employment and the reduction of poverty, and a decrease in crime.

The farmers identified seven central activities that they believed would enable them to reach their development objectives. These seven central activities are:

1. Improving their farming systems;
2. Having access to training systems;
3. Having access to support services;
4. Having access to water infrastructure;
5. Having access to markets;
6. Receiving financial assistance; and
7. Having a good work ethic.

In terms of improved farming systems, farmers said that improving the livestock breeds and fencing the fields would help, as well as correct fertilization and mechanization through irrigation systems and, tractors and the associated equipment. New farming systems such as fish farming could help and this would require farming systems research. The farmers expressed interest in a piggery. The next activity expressed by the farmers was access to training systems. This would entail in-field training and would include basic adult education, youth programs, livestock production training, training in management and bookkeeping, and agronomic training in ploughing and pest control.

The research participants identified access to support services as a critical activity to reach their objectives. This activity included having access to weather forecasts and climate change predictions, the use of study groups and farmer associations, assistance in conflict resolution, extension and agribusiness advice, and user-friendly “red tape”. Another identified activity was access to water infrastructure, which included dams and wind pumps, and as one respondent said, “we need water for more produce, then we will have more income.”

Having access to markets is another activity that would help them achieve their objective and this could involve contract farming, rural tourism markets and informal hawkers’ markets. The next activity mentioned was access to financial assistance and several options were proposed, these were the formation of a savings club, the use of production as collateral and financial incentives schemes whereby part of a loan becomes a grant. The last proposed activity was a good work ethic or as one farmer said, “we need to work hard”. This last activity forms the tap root of the tree.

#### **4. ANALYSIS OF FINDINGS**

These findings concur with developmental issues of the past. These are socio-economic problems that extensionists cannot address on their own. According to Acunzo & Protz (2010), agricultural extension has changed from the transference of technologies and diffusion of research to a process known as communication for innovation. The latter aims to involve multiple stakeholders in problem solving and has five steps:

1. Encourage people to identify and acknowledge a problem;
2. Identifying and collecting together the different stakeholders that are affected by the said problem;
3. Working with stakeholders to define ways to affect change, while enhancing the existing communication patterns;
4. Addressing the societal cost of creating the change; and
5. Critically evaluating and reviewing the change and process.

This means that the problems need to be examined within a systems context and addressed as such by a number of role players. This corresponds with an updated definition of extension that was proposed by Leeuwis (2004). This definition states that extension is “a series of embedded communicative interventions that are meant, among others, to develop and/or induce innovations which supposedly help to resolve (usually multi-actor) problematic situations.”

In addition, agricultural innovation systems (AIS) were conceptualized to provide a platform from which a number of role players can interact so that such problems could be solved. The World Bank (2006) has defined AIS as “a network of organizations, enterprises and individuals focused on bringing new products, new processes and new forms of organization into economic use, together with the institutions and policies that affect the way different agents interact, share, access, exchange and use knowledge.” These new methods, processes and forms of organization are distributed through a network of various actors in the agricultural environment so that they can help evolve and improve any innovations (Swanson & Rajalahti, 2010). According to Klerkx, Hall & Leeuwis (2009), the concept of agricultural innovation systems (AIS) had arisen from blending insights from literature on agricultural innovation and industrial innovation. Such a system could help alleviate these socio-economic problems, especially at a policy level.

Similarly, market-orientated agricultural advisory services (MOAAS) advocates a highly diverse range of services to all of the participants in the value chain. MOAAS does not only focus on helping farmers, but rather all the stakeholders involved along the whole value chain. This is because although farmers can be producing sufficiently, if the value chain is not functioning efficiently then farmers will not be able to sell their products or will receive low prices. Thus, all the stakeholders in the system are engaged so that the whole system is running efficiently and optimally (Chipeta, Christoplos & Katz, 2008).

#### **5. CONCLUSION**

The LFA-enquiry revealed that the smallholder farmers felt that they were not developing as farmers. The research participants felt that this was caused by inadequate farming systems, poor market access, poor work ethic, inadequate financial assistance, poor support services, insufficient training and, a lack of water and associated infrastructure. They felt that the



effects of this was unemployment, poverty, food insecurity, no youth involvement in farming activities, crime, lack of information flow, dependency on other people, small farming initiatives and low income from farming activities.

The participants responded that their desired objective would be to obtain commercial production status. They said that to achieve this they would need to improve their farming systems; have access to training systems, support services, water infrastructure and markets; financial assistance; and have a good work ethic. They said that this would lead to them increasing their productivity with subsequent increases in income; being good farmers and independent; self-functioning with stable household food security; improved health from improved nutrition; youth returning to farming; and creation of employment, reduction of poverty and a decrease in crime.

The problems they face and the solutions they seek cannot be solved by the farmers themselves or with the help of an extensionist. These problems relate to the agricultural system and require a broad range of role players to help in rectifying this situation. At present, the public agricultural extension model does not have the capabilities to solve this dilemma as too few of the role players are consulted. It is suggested that an improved model, which consults all of the role player in the agricultural environment, would be more effective. More research is needed before one can make any concrete conclusions about an improved model.

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