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AGRICULTURAL EXTENSION**

*Empowering Agriculture  
for Generations*

**CENTRAL BRANCH**

# HOW TO MAKE AGRICULTURAL EXTENSION EFFECTIVE





**Sponsored by the SASAE (Central Branch)**

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## Executive summary.

Writing about making an extension effective is not a straightforward matter; it is difficult because it depends on the availability of different elements and the proper understanding of not one entity but a number of issues that work like a toolbox. In a toolbox, there are many tools that one can use to fix different challenges. From a distance, one may not see their relevance until one meets a constraint that needs that tool. In the same breath, making extension effective depends on a number of factors that must work in harmony to achieve the desired outcome – effective extension. In this toolbox, there are both big and small tools that are recommended for making the extension effective. Some of the tools are: **1. Understand what the extension is. 2. Use adult learning principles. 3. Build trusted relationships. 4. Know your audience: understand farmer motivations and contexts. 5. Tailor methods to the audience. 6. Select appropriate methods for extension. 7. Know aspects to be considered in making the extension effective. 8. Types of extension methods.** The tools are different and need to be used appropriately to work in harmony and produce the desired outcome. Since this writing is directed to extension practitioners, one can say that an extension advisor is expected to possess a range of skills to navigate the difficult terrain. Like a mechanic repairing a car, they do not necessarily need one spanner but need a toolbox with different tools to assist them. Experience has shown that some amateur mechanics who lack toolboxes do keep a hammer and a vice grip. These two tools normally do not provide good results; instead, they can cause irreparable damage. In extension, a person or an extension practitioner who does not have a toolbox of the methods needed to achieve a goal becomes a disaster.

## 1. INTRODUCTION

The purpose of this booklet is to share insights into aspects that need attention to make extension effective. There are principles that guide our work in extension. The implementation of the principles will ensure that extension is presented effectively, thereby making it effective. What do we mean by the term effective? We cannot talk about one concept of “*effectiveness*” without also considering efficiency. We need to bring in the concept of efficiency. It is unfortunate that we cannot separate efficiency from effectiveness. According to Peter Drucker, “*Efficiency is doing things right; what is it that needs to be done right in Extension? Effectiveness is doing the right thing.*” In other words, efficiency makes the most of your resources, and effectiveness drives value for customers. In

extension, the value for customers could mean the value of farmers or other stakeholders. Leaders like extension professionals typically gravitate toward either efficiency or effectiveness in terms of their management style. The goal is to hit both within one's area of management and outside one's area of business.

Borrowing the concept from the business field, efficiency means doing more with less (or the same); here, it might refer to assets such as financial, physical, and human resources. All these resources should be used in a manner that it yields output without unnecessary extra cost. It could also mean that the extension manager should use these resources to maximize the output. The question is, what is it that resembles output in extension? In this case, output could mean farmers' productivity or their capacity to solve their problems without much interference, both of which should be maximized in extension. Effectiveness is the quality of the resources that those resources deliver. When a business leader hits the sweet spot between the two, magic can happen. Efficiency means doing more with less (or the same) financial, physical, and human resources. In other words, efficiency is like 'maximizing output'. Effectiveness is the quality of the resources that those resources deliver. When a business leader hits the sweet spot between the two, magic can happen. A business leader is like an extension professional who can deliver if he gravitates and manages the efficiency and effectiveness of the area he oversees.

A deeper understanding of 'efficiency' could mean maximizing the time, effort, and resources one invests in their functional departments. Efficient operations require fewer resources to deliver similar or higher results, reducing costs and maximizing the return on investment in an organization. One other driving force towards effective extension is the prevalence of climate change. According to Damoa (2025), the growing climate crisis represents a significant challenge of the 21st century, demanding immediate and extensive action across multiple sectors. Climate change endangers ecosystems, economies, and public health worldwide. It is against this background of climate change that extension advisors are expected to employ the most effective extension approaches to be effective. There is a host of benefits once the extension is effective in the country.

The first question is **what are the benefits for effective extension?** The benefits are not hard to find. The growing population will need to be fed. There is a need to strengthen our extension practices to meet the food challenge in South Africa.

Many authors have written about the potential of extension to meet the food and dietary needs of our people. The need for effective extension is underscored by the fact that we live in the midst of climate change.

Climate change is a threat to humans because it affects food production and, in some cases, causes crop failure, exacerbating hunger and poverty. We therefore need knowledge to navigate the challenges of climate change. For example, using available knowledge for climate adaptation and mitigation can surely improve extension services. There is no doubt that the need for effective extension can be promoted by having extension practitioners use appropriate farming strategies that can increase yields under climate change. The use of short-growing seed varieties and locally adapted animal breeds could be among the factors that contribute to effective extension.

The objective of this booklet is to share some known ways to make extension more effective. This booklet aims to meet the needs of both scientists and technicians who lack training in agricultural extension.

## **1.1. UNDERSTANDING THE CONCEPT OF EXTENSION**

In order to make the extension effective, we need to understand the concept of extension. For example, Extension can be defined in many ways, and there is no common agreement on its definition. What is known and agreed is that:

- Extension is the process of working with people irrespective of their environments, be it rural, urban, or denser settlements in order to improve their standard of living.
- Extension has the potential to contribute to human, social, and economic development. Several authors have further explained the role and meaning of Extension; for example, Extension and advisory services are considered essential to human development and play an important role in agricultural development (Abdulwahab et al., 2023).
- Extension has great responsibilities for contributing to the development of any country in terms of agriculture because it deploys the extension agents at the forefront of combating some of the challenges faced by farmers.
- One of the most important tasks performed by the change agents is to facilitate the dissemination of innovation, improved technology, and practices through a range of traditional approaches, such as the extension teaching methods (individual, group, and mass methods) that have been in use for quite a long

time. We have recently seen the emergence of different modern approaches, such as participatory extension, pluralistic extension, and private extension approaches (Kidane & Worth, 2017).

- Effective extension should insist on building the capacity of farmers operating in various spheres of food chains to identify their problems as well as to solve them. Research in the Extension discipline has noted that the effectiveness of extension is key to increasing outputs in extension. Examples include ( Bembridge in 1987, Duvel, 2002, Mutimba and Semakula, 2011).
- The effectiveness of Extension based on farmer-to-farmer approach was measured, and the following were observed; increased technology uptake, increased production, food availability, information – sharing, and sales of commodities (Ssemakula and Mutimba, 2011), measured the effectiveness of approach. Another researcher measured the effectiveness of public extension (Loki, 2021; Zwane, 2016).

## **2. USE ADULT LEARNING PRINCIPLES**

### **2.1. What are the adult learning principles or Theory?**

In the 1980s, educator Malcolm Knowles popularised the concept of andragogy, the practice of teaching adults, and contrasted it with pedagogy, the practice of teaching children. Andragogy theory states that adult learners differ from children in their motivation, the relevance of education to their lives, and how they apply that education. In practice, adult learning emphasises helping learners understand the purpose behind what they are doing, providing hands-on experiences, and offering minimal direct instruction to encourage independent problem-solving. Many adult learning theories were developed out of Knowles' work in the following decades, all with the specific goal of enhancing teaching methods and experiences for adult learners.

### **2.2. What are adult learning principles?**

Integrating these 10 principles of teaching adults into lesson planning helps ensure that content is tailored to their unique needs. Since educators often serve more as facilitators, these aspects are important reminders when building curriculum and expectations for adult learners:

#### **2.2.1 Adults are self-directing**

For many adults, self-directed learning happens naturally without anyone explaining it or suggesting it. Adult learners are more likely to plan, carry out, and

evaluate their learning experiences without help from others. When instructing adults, it is important for learners to set goals, determine their educational or training needs, and implement a plan to enhance their own learning.

### **2.2.2 Adults learn by doing**

Many adults prefer not only to read or hear about subjects but also to actively participate in projects and take actions related to their learning. Project-based curriculum uses real-world scenarios and creates projects for students that they could encounter in future jobs. Many adult learners find that this kind of learning is highly beneficial, as they apply what they have been taught to their careers, giving them direct access to see what they can do with their new knowledge.

### **2.2.3 Adults desire relevance**

While some enjoy learning for its own sake, adult learners are more likely to engage in learning that is directly relevant to their lives. For example, a certification course aimed at job advancement should directly align with the learner's current role or career aspirations.

### **2.2.4 Adults utilize experience**

Adults are shaped by their experiences, and the best learning comes from making sense of those experiences. Adult learners can greatly benefit from finding ways to get hands-on learning. Internships, job shadowing, projects, and other experiential learning opportunities can help them gain a firmer grasp and become more excited about how what they learn can be applied to their interests and careers.

### **2.2.5 Adults process information with their senses**

Most adult learners do not thrive as well in a lecture-style environment. Because neuroplasticity tends to decline with age, it is vital to engage multiple senses during instruction to enhance memory and comprehension. Learning practices need to incorporate audio, visual, reading and writing, kinaesthetic, independent, and group techniques.

### **2.2.6 Adults appreciate repetition**

Repetition is essential for adult learning. Practicing new skills in a supportive environment fosters confidence and helps learners transfer those abilities into real-world applications. And the more they can practice a particular subject or skill, the better the chances are for mastery.

### **2.2.7 Adults guide their own development**

Utilizing dilemmas and situations to challenge an adult learner's assumptions and principles helps them guide their own development. Adults can use critical thinking and questioning to evaluate their underlying beliefs and assumptions and learn from what they realize about themselves in the process.

## **3. BUILD TRUSTED RELATIONSHIPS**

Working as a team is one of the requirements for ensuring work is done effectively with others. Teamwork is praised because one does not depend on a single head; instead, multiple heads do the thinking and coordinate the work. There is an African proverb that says if one wants to work fast, he must run alone, but if one wants to go far, he must walk with others. Building a team requires consideration of how to build a trusting relationship at work or within a team. Some of the efforts include the following ideas.

### **3.1 Recognise excellence and reward it**

Individual team members may develop pockets of excellence in their own corners, and these need to be acknowledged. Experience has taught us that we all hunger to be appreciated.

### **3.2 Set motivating goals**

Goals are great motivating factors. Without it, there will be no direction; all efforts must be channelled towards achieving a particular set of goals or objectives. Let your people decide how they do their work. This is far more important because it shows creativity. As indicated, more heads are better than one. Giving a team the choice of working tools is motivating.

### **3.3 Be open and communicate often**

We need to know how to communicate openly and not apologetically. Good communication is a motivator.

### **3.4 Build genuine relationships**

All relationships need to be attended to. We can have team exercises, such as going out for breakfast or dinner; of course, this will depend on the size of the group. Eating together builds a genuine relationship, just as undertaking an excursion together builds and cements relationships that can be used to achieve great assignments.

### **3.5 Encourage personal and professional growth**

Everyone has skills and a hunger to achieve some objectives. A team leader can encourage team members to work towards their personal objectives, which may later benefit the whole team. For example, if one member decides to study an area where the team is struggling to manage, achieving that objective will benefit the larger team.

### **3.6 Show vulnerability, while maintaining credibility**

The people being led should be able to recognize their leaders as important and vulnerable at times. The four elements of trust (Competency, Consistency, Integrity, and Compassion) are dependent on the way we behave - both individually and collectively. These behaviours come from innate traits that determine how we, as human beings, respond and/or act in any situation. Pat Sweeney calls these factors the “3 C's” of trust: Competence, character, and caring. First, to be trusted, their subjects must view leaders, for example, in the army situation; teamwork becomes important, especially when they are seen as competent.

## **4. KNOW YOUR AUDIENCE: UNDERSTAND FARMER MOTIVATIONS AND CONTEXTS**

**How do you motivate farmers?** There are many ways of motivating farmers; however, the following can be used:

### **4.1 By making sure that the benefits for the farmers derived from the engagement are crystal clear**

Before one tries to assist them with the extension programme, one has to be clear as to what will benefit them. If there is nothing that benefits them, it will not motivate them to learn or participate in such a programme.

#### **4.1.1 Celebrate farmer achievements**

One has to celebrate their achievement in the programme that they are attempting or doing well.

#### **4.1.2 Get farmers involved in citizen science**

Farmers need to be involved in programmes that have bigger or wider objectives to benefit many people.

#### **4.1.3 Speak to other relevant organisations and build trusted alliances**

The work of an extension advisor needs to be supported by other stakeholders in the same field of human endeavour.

#### **4.1.4 Understand the farmer's circumstances**

Not all farmers farm for financial gain; some do so because they derive personal satisfaction from helping others. This context is very important for one to know because it will facilitate reasons for their engagement.

#### **4.1.5 Identify 'Champions'**

Some farmers have more ability than others to achieve the goals of some programmes; hence, they need to be identified and encouraged. Good farmers produce an abundance of healthy food and many other valuable goods, too. Farmers take care of the soil, conserve water resources and wildlife, and are the caretakers of Mother Nature. Farmers play a significant role in community life. The farmer's main goal is to produce a good crop and/or healthy animals to support their family and feed the world. Know your audience: the farmer. It is important that, as an advisor, one understands the role of a farmer. For example, farmers need to understand agriculture well, whether it's selecting crop seeds, raising healthy animals, or maintaining farm equipment. In addition to farming knowledge, they must know about planting seasons, harvesting times, and how to keep their equipment in good condition.

#### **4.1.6 Co-design where practical**

If the aim is to focus on individual farmer behaviour change, the following key recommendations were made in the literature.

### **4.2. Target messages**

Carefully – the overwhelming message from the literature was the need to identify your audience before you communicate with them. By making an effort to understand their workflows, you may get a better sense of which messages they respond to. In general, one key finding was that people respond better to positive or gain messaging than to negative or loss messaging. As far as possible, one should present optimistic messages to farmers, stressing the benefits of adopting particular behaviours.

#### **4.2.1 Fund and encourage knowledge exchange**

Activities – good knowledge exchange and education initiatives, ideally delivered face-to-face or through active demonstrations - were identified as key factors in influencing behaviour.

#### **4.2.2 Knowledge exchange activities must be sustained**

Not just using one-off events. Continued engagement should be seen as something more valuable than simply providing information through leaflets. The Agriculture and Horticulture Development Board[i] (AHDB) in England already uses its ‘farm excellence platform’ to facilitate knowledge exchange with farmers, and it is considered that such active demonstrations, combined with face-to-face advice (ideally through trusted individuals), are the best way of getting information to farmers, but also for receiving knowledge back from them.

#### **4.2.3 Prove the value and ease of adoption**

If farmers do not perceive value in adopting a new behaviour, they are likely to stick with the status quo. The Agriculture and Horticulture Development Board (AHDB) could ensure it finds ways to demonstrate the value of adopting all recommended tools, policies, and practices. As above, active demonstrations could be a good way to do this, as could collating evidence from long-term studies that demonstrate benefits to a farmer’s bottom line or other aspects of their farm business. It is much easier to encourage adoption if recommended actions are already aligned with the farmer's workflow and address relevant tasks (behaviour change on the farmer's part is not then needed).

#### **4.2.4 Incentivise behaviour change**

Including nudging – where behaviour change was incentivised - there were signs of positive change, although perhaps not in the long term (more research needed here), and only when rewards were sustained. Thus, if AHDB is to incentivise behaviour change, it should ensure that the rewards can be sustained and that it uses other forms of interventions to underpin financial rewards (e.g., education).

#### **4.2.5 The overwhelming message**

The study, however, suggests that it may be problematic to focus on influencing individual farmer behaviour in preference to stimulating wider social change, which necessitates actions from organisations, research institutions, policymakers, and funders alike to reach out across a farmer’s ‘ring of confidence’. Many reviewers of papers argued that it is difficult to change individual behaviour without involving **trusted people**, such as advisors, family, and peers, and without wider social and organisational change. We thus make the following key recommendations to guide approaches that move beyond the individual and towards wider social and organisational change.

#### **4.2.6 Encourage a research culture**

Both within and outside of AHDB, that is, participatory and practice-relevant, rather than one that prioritises the production of academic material more suited to journal publication.

#### **4.2.7 Involve multiple actors in knowledge exchange**

When conducting knowledge exchange, whether verbal or written, identify key advisors in the given region. There is a need to identify which groups exert the greatest social pressure on farmers, thereby helping shift social norms and attitudes (e.g., friends, advisors, family). **Trusted advisors could use the management guides produced to ensure that the messages are right for the farmer.**

#### **4.2.8 Involve friends and families in knowledge exchange activities**

When conducting farming seminars or demonstration events, invite farmers' families and advisors to the same session to stimulate peer-to-peer learning. Also, ensure that other key decision-makers are present, including the landowner.

#### **4.2.9 Find ways of communicating with farmers in existing formal or informal networks**

Where possible, existing networks of farmer participation could be mapped to identify opportunities for group knowledge exchange. This will be more appropriate if a project is working in a particular region, rather than across the whole country.

#### **4.2.10 Farmers may be given leadership roles in participatory meetings**

Instead of merely being spoken to, thereby increasing their level of confidence and control in performing a particular behaviour.

#### **4.2.11 Invest in trained facilitators**

In order to increase the amount of face-to-face knowledge exchange with farmers and other practitioner groups.

#### **4.2.12 Recruit 'peer champions' to shape Agriculture and Horticulture Development Board (AHDB) advice and literature**

Where face-to-face knowledge exchange is not possible, consider the value of including testimonies of peer groups (e.g., fellow farmers or advisors) in advice booklets. Results suggest that farmers listen more closely to advice (e.g., in the farming press) when they see it is given by someone like them. These 'peer

champions' could be encouraged by AHDB.

#### **4.2.13 Keep track of ongoing research on peer-to-peer learning**

For example, through the European PLAID project (Peer-to-Peer Learning: Accessing Innovation through Demonstration).

#### **4.2.14 AHDB could lead a new phase of social change initiatives**

These would move beyond looking at the behaviour of individual farmers, which has long singled out problem non-adopters, towards a broader focus on the plethora of actors involved in farm decision-making. In order to prove the benefits of such an approach, the impact of holistic knowledge exchange activities on farm decision-making need to be investigated in a sustained, long-term fashion, and with an emphasis on actions taken, rather than merely intention to act.

### **5. TAILOR-MAKE METHODS TO THE AUDIENCE**

These are powerful Elements of extension principles promoted by Oakly and Garforth in 1985 and are still relevant. Extension advisors who wish to implement an effective extension programme are expected to possess the knowledge and skills needed for the job. The first important factors are summarized as follows:

#### **5.1. Knowledge and skills**

Each profession has its own knowledge and skill set. This is also true in the agricultural extension discipline: one must possess this knowledge and these skills. This may refer to the **technical advice** and information.

#### **5.2. Knowledge of Farmers' organization**

This is critical for the advisor to target the relevant farming group in his/her ward.

#### **5.3. Knowledge on how to motivate farmers**

This is also important, as well as how to build self-confidence among farmers. This is important because one of the challenges faced by extension advisors among farming communities is dependence on the government or service providers.

#### **5.4. Knowledge on helping farmers to have self-dependence**

This will capacitate farmers to fight dependence, which becomes a necessary outcome; such a skill will elevate the advisor to greater heights.

#### **5.5. Extension works with people, not for them**

From a distance, one can see that it is a tendency of dependence, which needs to be

discouraged.

### **5.6. Extension is accountable to its clients**

This principle is contradictory because, in essence, the boss pays the salary, yet technically, they have to report to the farmers.

### **5.7. Extension is a two-way link**

Gone are the days when farmers were instructed on how to farm. There should be a free flow of information from both sides.

- Extension cooperates with other rural development organizations.

## **6. SELECT APPROPRIATE METHODS FOR EXTENSION**

- Extension teaching methods are techniques used to extend new knowledge and skills to individuals and communities, especially in rural areas, by communicating with them to create interest, desire, and action.
- These methods are categorized as individual (e.g., farm visits), group (e.g., method demonstrations), or mass methods (e.g., radio and television) and use various forms like written, spoken, visual, or a combination to be effective.

## **7. ASPECTS TO BE CONSIDERED IN MAKING EXTENSION EFFECTIVE**

7.1. Extension should fill the gap between research and farmers.

7.2. Implementing a principle which says: Extension is a two-way link, Oakley and Garforth (1985).

7.3. Provide feedback to farmers. When their problems are taken to research stations, one has to provide feedback.

7.4. Identify appropriate technology. Such technology should be qualifying and meet the following requirements, such as accessible, affordable, simple, and adoptable.

7.5. Provide farmers with the necessary education.

7.5.1. Carry the consequences of their adoption to the research centres.

7.5.2. Have strong linkages with the research centres as well as with farmers and other related institutions.

7.5.3. Identify the goal of the programme, and the extension system that should fit within the goal.

7.5.4. The success of an agricultural extension tends to be directly related to the extent to which it fits the programme goals for which it was established.

7.5.5. Extension should improve agricultural production and productivity through the dissemination and adoption of new technologies and practices (Axinn, 1988).

7.5.6. Extension services should be accessible -available to the farming beneficiaries at all times.

## **8. TYPES OF EXTENSION METHODS**

There are many types of extension methods. Some are not appropriate, while others can make an impact when they are used. An example of such a good method falls within a group of methods called Participatory Extension approaches, which improve the effectiveness of rural extension efforts by government agencies, NGOs, and other organizations engaged in rural development (Kamalpreet & Prabhjot, 2018).

8.1. An example of the participatory extension approach is the Participatory Technology Development (PTD). This approach involves farmers conducting the technology development process (FAO, 2019). The aim of this method is to examine the technological concept of farmers, which is carried out within an indigenous technology framework that has been successful in other regions, with good outcomes.

8.2. Top-down methods are also part of the methodologies, although they are criticised, in countries that use no democracy.

- Extension should be based on the participation of extension staff at local levels in planning extension programmes.
- Extension should rely on local leaders.
- Extension programmes should be planned at the local levels (from bottom to top).

## **9. CONCLUSION**

In conclusion, it should be noted that designing appropriate extension programmes for each area is feasible. It is promising that effective extension can happen provided that a relevant approach is considered. Some of the aspects discussed can be seen as the necessary qualities and conditions for effective agricultural extension. In short, they can be regarded as determinants of extension effectiveness.

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[1] This organization has developed experience which the author has found relevant for these notes. There could be similar organizations that have the same experience that the reader can use; he is allowed to use such experience.