

## THE SPECIALIST OR THE GENERALIST: WHAT DOES THE YEAR 2000 AND BEYOND REQUIRE FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT?

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### ABSTRACT

*The debate whether extension should specialise or not to attain successful and sustainable agricultural development will continue for times to come. This article takes a critical look at what is understood to be extension, agricultural development and specialisation. The role of credibility, knowledge, perception and programmed extension will also be considered and how these factors/elements relate to the rendering of effective and successful extension services.*

*It is of major importance that the situation and needs of clients/beneficiaries of extension services be taken into consideration, as this should form the basis of any decision taken towards more specialised – as compared to generalised approaches. Care should be taken that decisions are not based on the needs and/or aspirations of those who render these services.*

*Furthermore the issue of responsibility of the extension agent and the extent of this responsibility is of significance. This responsibility may be to maintain and improve the availability of existing information (e.g. research), the transfer of technology to communities (e.g. training) or a responsibility towards funding agents, financiers, government, etc. The responsibility towards the members of the community, on the other hand, is of vital importance if successful and sustainable development is to be achieved.*

*The slow progress made with development in certain communities could amongst other reasons, be attributed to extension agents not being sufficiently trained or development being approached in an ad hoc or non-scientific way. Many field workers on the other hand seem to lack commitment to implement proper development principles.*

*The challenge for the year 2000 and beyond is to ensure that development is approached in a programmed and scientific manner, with well-trained extensionists to manage and implement these programmes. All role-players should be involved as far as possible and they should be experts in their fields and co-ordinated by a suitable development agent. The development agent's role may also change over time, as development is a dynamic process with the needs of people changing continuously.*

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## **1. INTRODUCTION**

Agriculture and agricultural development in South Africa is complex, amongst others, due to the historical dualistic composition thereof. It is not possible to offer a simplistic approach on whether extension services in general should be specialised or not. Many recommendations on models and approaches to extension seem not to recognise what extension (in the broader sense) really is all about, but seem to limit the understanding only to be the rendering of advice or to transfer technology. The needs of communities have been neglected in many instances, whilst the needs of possible service providers have formed the basis of many recommendations in the past.

This article aims to highlight certain aspects of importance towards a recommendation on how extension could be structured. It is not intended to be biased towards any approach.

## **2. AGRICULTURAL DEVELOPMENT AND EXTENSION**

Van Eck (1990:33) sees agricultural development as intentional, scientific, coordinated and purposeful actions to unlock and optimise the utilisation of the agricultural potential of an area/region towards greater spiritual and material prosperity of farming communities involved. Van der Wateren (1983:29-30), on the other hand emphasises that development is essentially a socio-cultural challenge (rather than physical, technical and economical). The client is assisted with prevailing problems in an effort for him/her to adapt to new values set within the community- a process that this author relates to Agricultural Extension.

There are also different definitions and interpretations of "extension". It is most commonly understood to mean the rendering and sharing of knowledge or the extension of knowledge through a process. This approach is shared by many during debates on how extension should be structured. "To advise" is however a very narrow interpretation of extension, which has developed into a wonderful science over the past few years. Botha (undated:3.) states that if extension means, "to give advice", the underlying assumptions are that:

- The advice-giver has the knowledge i.e. the answers to the problems and questions (in other words a specialist);
- the person who knows has to/can communicate this knowledge to someone else;

- the advice goes in a single direction; and
- it is to the advantage of the recipient to accept the advice.

Botha (undated:4) furthermore refers to other interpretations which include “transfer of technology” and underlying assumptions that have become outdated, unacceptable and in many cases untrue, namely that:

- The research system has the answers to farmers’ problems;
- the extension agent will always get the answer from the agricultural research system and communicate it to farmers;
- farmers are required to change their behaviour and accept innovations; and
- the changes will be acceptable to, and beneficial, for farmers.

More recent inclusion of the concepts of “counselling” or “deliberations” have improved previous interpretations by clearly shifting power relations towards the farmers who then act in a partnership with extension and research.

Düvel (1980:5) refers to extension as a continuum, where a narrow approach of information is seen on the one side, and a wider approach where extension overlaps with adult education and community development on the other side of the continuum. This includes a phase of preparation where needs and motivation are included in the equation; consequently people are to be taught how to think and not what to think. Farmers are then assisted in preparing themselves on how to overcome problems in future by themselves (even if they are being advised). The underlying principle is to assist farmers to help themselves. Through this development approach the objective of independence is promoted over the long term.

Botha (undated:8) concludes that there is no single definition of extension that is universally accepted or applicable in all situations. It remains a dynamic and ever changing exercise. Different definitions contain one or more or combinations of the following:

- It is an intervention;
- voluntary change is essential;
- giving and sharing of knowledge;

- motivating, enabling and providing insights;
- forming opinion and better decision-making;
- mutual and reciprocal learning;
- communication takes place;
- it is an ongoing and continuous process; and
- agricultural technologies play a major role.

The question on whether to specialise or not, should be debated and decided on only after there is a *clear and mutual understanding of what is understood to be extension*. This of course should be closely linked to the philosophy and objectives of an extension organisation.

### 3. SPECIALISATION

“The specialisation of extension” has often been promoted without necessarily considering what is actually understood by specialisation. So often the words subject matter specialist, researcher or specialist advisor are used, without clarity as to what the author’s definition of a “specialist” actually is. The Oxford dictionary refers to a specialist as a person who is an expert in a special branch of work or field of study. (Hornby, 1974).

In many professions throughout the world, there are specialists. In the medical profession there are general practitioners, with specialists in various fields e.g. neurologists, urologists, cardiologists, etc. Even attorneys and accountants specialise in different fields.

Agriculture is no exception. There are crop scientists and animal scientists. Crop scientists can specialise in different crops, e.g. maize, beans, mangoes, grapes, sugar etc. Animal scientists might specialise in different domestic animals such as sheep, cattle, goats, broilers, layers, pigs, etc. All these specialists might need further support, like a soil analyst, a veterinarian, a nutritionist, a specialist in plant nutrition, artificial insemination, chemicals, weeds, pathology, etc.

Olivier & Scheltema (1986:82) referred to the following specialists in Extension:

- Specialist Extensionist;
- Industrial Extensionist;
- Agricultural Economics Extensionist;
- Product Extensionist; and

- Subject Specialist.

The question is: **“How specialised should a specialist be?”** Furthermore the question of speed/rate of technology development is relevant. A specialist would probably only be and continue to be a specialist if such a person keeps him-/herself up to date with the latest technology. The true specialist may only continue to be a specialist if such a person would find sufficient time to keep him-/herself updated with the most recent technology.

Düvel (1989:2) stated that the more specialised and sophisticated the technical message, the greater the need for a specialist. Another phenomenon likely to increase the need for specialisation, is the proximity of the level of production to the potential or optimum (also in an economical sense) level of production. The needs and situations within the community are always relevant, raising the question whether the specialist is indeed more appropriate or not. The needs and situations at grassroots level should guide a decision on the involvement/inclusion of the specialist.

The specialist will find it very difficult if at all possible to accept responsibility for agricultural development while simultaneously keeping up with development operations in the field. One or both responsibilities will probably be neglected. The principle task of the subject specialist revolves around knowledge and technology in a specific discipline or sub-discipline and its transfer to extension workers and the farming community (Venter, 1986:50). This should however, be formalised through extension/developmental structures for purposeful development.

#### **4. GENERALISATION**

The Oxford dictionary refers to a general practitioner as somebody who is not a specialist or consultant. The assumption is made that a generalist in extension is typically the ward extensionist normally employed by Government and Development Corporations. These extension workers are perceived to be “jacks of all trades” with a general knowledge on a variety of subjects. According to the discussion document on Agricultural Policy (1998:44) there are approximately 10 000 extension workers employed in these sectors in South Africa. Most of these Extensionists are not sufficiently qualified.

Successful agricultural development will only be possible if communities are empowered to make their own decisions and be able and willing to accept

ownership. This goes beyond giving advice or the transfer of technology to communities, even if practised by specialists.

The role of the so-called generalist in development is to apply the different methodologies in extension, resulting that such a person primarily needs to be a *specialist in the field of extension methodology and human behaviour*. Knowledge in other relevant fields will only be of importance if appropriate and needed in a proper development program, one that will of course contribute to the credibility of the extension worker.

## **5. THE ROLE OF MEDIATING VARIABLES IN HUMAN BEHAVIOUR**

Mediating or intervening variables are seen as critically important determinants governing human behaviour (development). They are obviously also very important from the extension perspective. According to Düvel (1991:78), the non-adoption of innovations or practices can be traced back to the individual either being incapable or unwilling to adopt the recommended practice. Unwillingness to adopt can directly or indirectly be linked to lack of needs, lack of knowledge and wrong perceptions, whilst incapability to adopt can be linked to personal and environmental factors.

### **5.1. Needs**

Need based development is an accepted departure point in the methodologies of extension, where behaviour is directly focussed on the goal as a means of need satisfaction. This raises the question whether the role of the specialist will generally contribute towards successful development as such inputs are not necessarily need based. Farmers contacting specialists for information would do so because of a need for information/knowledge, coming mostly from the more progressive farmers already on a higher level of production.

The contribution made by a specialist towards agricultural development will therefore be restricted to the more capable/progressive farmers where this expertise is mostly applicable and needed. In a homogeneous farming area the need for a specialist can be expected to increase when compared to a heterogeneous area and/or when a more holistic development approach is to be followed. The sugar-, wine- and fruit industries are examples where the relevant specialists play a more substantial role in development. Specialists also played an important role in the tobacco industry, until the needs of these farmers changed drastically as a result of market related problems and the need for alternative crops and practices. So often in the past needs of

communities have changed as a result of different reasons, of which natural disasters (e.g. floods, droughts, and runaway fires); changes in the political environment, etc. are recent examples.

A most important function of extension will always remain the identification of needs (felt and unfelt needs) according to which development programmes are to be planned, initiated and adapted. Such programmes should involve different appropriate role-players, including specialists.

## **5.2 Perception**

Düvel (1991:80-81) indicates that perception relates to prominence, compatibility and relative advantage of a proposed innovation as perceived by the recipient/client.

Development programmes have to take these issues into account. The field of specialisation of a specialist might not necessarily be in line with what the community perceives as relevant, important or to their advantage, whilst the extension agent could hopefully accommodate these perceptions in development programmes.

## **5.3 Knowledge**

Koch (1985:147) shows that knowledge and perception will probably only assume meaning if linked to a felt aspiration. In his study Koch (1985:149) found that knowledge contributed towards more objective decision making. This does not necessarily result in decision making *per se* and consequently development. On the other hand an insufficiency in respect of knowledge could lead to over ambitious or otherwise unrealistic decisions, probably caused by an erroneously perceived need dimension-which can be manipulated externally. (Koch 1985:iv).

Following the above, knowledge alone does not necessarily result in development. Caution should therefore be exercised concerning specialisation of extension. In this context it may be asked why smokers or alcoholics don't quit the habit while having all the knowledge of the detrimental effects thereof. Also, why don't many farmers lime their soils in the high rainfall areas even though many have all the knowledge of the disadvantages of soil acidity and the advantages of liming.

## **6. CREDIBILITY**

According to Rogers and Shoemaker (1971) credibility is the degree to which a communications source or channel is perceived as trustworthy and/or competent. This is supported by Koch (1981:1-2), stating that credibility is a prerequisite for successful extension, as it has to do with the powers of persuasion and behavioural change. Credibility is said to be a most important element in personal communication and is expressed in the attitude of the receiver of the message towards the source. It has to do with what the receiver thinks of the source; not what the source is, while this can change over time because credibility is a dynamic characteristic. Credibility is an image that recipients develop towards speakers (Mulder 1984:14).

According to Koch (1981:4-5) credibility is influenced by:

- The receiver;
- Time;
- Internal- and External change;
- The subject; and
- The situation.

Van der Westhuizen (1984:28-31) added other factors including knowledge, the message, extension channels, communication and human relations. He also concluded that these factors are applicable to both the specialist and the generalist, with only slight differences in emphasis.

The ward extensionist (generalist) needs to specialise in at least one technical subject, which should of course be relevant to his area of responsibility. This will positively contribute towards his credibility on strength of his knowledge and through his conduct and confidence radiated within the community, in which he lives and works.

The credibility of a specialist depends primarily on his reputation, which could change over time through his/her involvement in development programmes. The generalist might have the advantage (or disadvantage) of being with the community on a more permanent basis. The credibility of specialists involved in development through the ward extensionist (as a coordinator or manager of development initiatives) will be related to the level of credibility of the supporting extensionist. The extension organisation will certainly also affect the credibility of the development agent, either positively or negatively.



## 7. RESPONSIBILITY AND ACCOUNTABILITY

The responsibility of the extension worker (as compared to the specialist) is an aspect of development that needs more prominence. Düvel (1988:94-95) stated that should the ward extensionist be replaced by a specialist service, our common access to a high level of knowledge concerning the ward and the communities living within that ward, would disappear.

According to Botha & Stilwell (1997:3) the way in which state extension services are being managed is archaic and lacks farmer involvement and accountability resulting in a lack of motivation and support incentives. This has certainly improved in certain provinces as reflected in development structures in Mpumalanga (De Beer, 1998:93-99) and in Kwazulu-Natal (Van Rooyen, 1999:141-149) indicating that provinces have engaged in initiatives to improve accountability of its role-players in development.

Development corporations manage extension on a typical "project" basis while the private sector manages "extension" to profit themselves (Botha & Stilwell, 1997:3). This indicates clear and preferential accountability (and responsibility) more towards the supply of inputs and/or the generation of profit, rather than development.

The ward extensionist should primarily be *responsible for the development of his/her communities*. He/she needs to have a thorough knowledge of community structures, their leaders and their needs. He/she should also know or have access to information of the resources and climate of his/her area of responsibility. This makes him/her a specialist of his/her ward and it's people, which is of utmost importance for constructive development.

Arguments are voiced at times that the subject matter specialist is mainly responsible for his subject of speciality. Economists, Animal Scientists, Soil Scientists etc. will make their inputs towards development on issues related to their specialities and would normally leave the communities, without necessarily contributing towards other development aspects beyond their speciality. Knowledge alone, as stated before, does not always result in development. It might only be a contributing factor towards development. Düvel (1988:97) stated that technical messages be made available to Extensionists who could ensure that the messages be transferred to the relevant communities as needed/appropriate.

There is of course the alternative that consultants or private organisations be contracted for community development (Kraft, 1997:42). This might ensure

their greater responsibility towards the community involved and their development. On the other hand we find many examples of development programmes not being sustained within communities, long after the contract with a consulting agent has expired. Contracts with development consultants should therefore be designed to ensure sustainable development. The job has clearly not been completed once technical information has been communicated.

The position of an extensionist living within or near his/her community and who is accepted to be basically responsible to the community for their development is the crux towards success. Certain commodity sectors in commercial agriculture (e.g. National Wool Growers Association) has engaged in these type of initiatives by appointing development managers in certain provinces. Based on this principle, the role of Organised Agriculture could be extended to include Extension involvement.

## **8. THE CLIENTS OF EXTENSION**

The issue of who the clients of Extension are, is important when deciding whether to specialise or not. Rogers (1995:262) categorised farmers as follows namely:

- Innovators;
- Early adopters;
- Early majority;
- Late majority; and
- Laggards (including non-adopters).

Specialists will certainly direct their major inputs towards the so-called top farmers (innovators/early adopters). These farmers are typically on a higher level of production and need specialist advice to increase their production and/or to implement an innovation for the first time. This service will generally be paid for, but these farmers are aware of their problems and needs and seek specific information voluntarily.

Extension in the broader context should involve the majority of members belonging to a community. Development should therefore be aimed at the early- and late majority (middle group farmers) where an estimated 68% of the members of communities are grouped. This is a responsibility related to the so-called generalist or, in other terms, a specialist in the methodology of extension and a person who knows the people and the community structures he is serving.

## **9. RESPONSIBILITIES OF THE EXTENSION WORKER**

With reference to what is meant by “Extension” (see par. 2), the responsibilities of the Extension worker are comprehensive and can best be approached through organised- and programmed working procedures, involving as many role-players as possible.

According to Van Aswegen (1990:19-20), the first step towards a programmed working procedure, is for the Extensionist to do a thorough survey of his area of responsibility and to document all relevant information relating to:

- Communities and their social structures;
- Farming enterprises;
- Production data; and
- Physical and environmental information.

This information should be organised and interpreted to serve as a reference document to the Extensionist in future (with regular updates as and when necessary).

Düvel (1991:70) identified different phases in a model for programmed extension namely the:

- Consideration phase;
- Survey phase;
- Planning phase;
- Action phase; and
- Evaluation phase.

A variety of activities need to receive attention during these phases to eventually develop a tangible development programme or business plan. These activities will differ from area to area (depending on the level of development), but could include the following:

- To organise communities and to create development structures;
- Needs- and problem identification;
- Prioritisation;
- Problem conceptualisation;
- Surveys (including surveys related to human aspects including behaviour patterns); and
- Participatory development methods.

The eventual business plan (development program) should guide future development activities and should involve as many role-players as possible (including community groups). This should be done transparently through proper consultation. The Extension worker (with the community as partner) should manage programmes, including the co-ordination of different development agents (also specialists). This approach is supported by Terblanché (undated:16) stating that the generalist is "an indispensable link in a total development process. By establishing an organisational structure through which he acts as co-ordinator, the generalist can give direction and guidance to the process of agricultural development."

## **10. TRAINING AND COMMITMENT OF EXTENSIONISTS**

The vast majority of Extension workers in the government services and parastatals are not sufficiently trained (Botha & Stillwell, 1997:2). The so-called generalist might (in the national context) only refer to a person who has a general knowledge on a variety of subjects, while the true Extension worker needs to be a specialist in the methodologies of Extension and human behaviour. A thorough knowledge on a technical subject or farming enterprise within his/her area of responsibility would be a clear recommendation, because such knowledge will contribute towards his/her credibility amongst communities.

Unfortunately technical knowledge alone, irrespective of its level of excellence, does not guarantee successful community development. Extension workers should be committed to apply their knowledge in practice and be dedicated to do their work. It is a source of serious concern that development is generally approached on an *ad hoc* basis, with little impact on development on the one hand and clear evaluation difficulties on the other. The poor performance of Extension in development could in principle be attributed to non-commitment, the lack of knowledge and lack of experience of Extension workers, and of course limited implementation of proper scientific development approaches/methods.

## **11. CONCLUSIONS**

- 11.1 Successful agricultural development is certainly possible in South Africa and Extension in the true sense of the word is the vehicle through which this could be achieved.
- 11.2 Development programmes based on the needs of communities and constructively involving all the appropriate role-players (including

- communities) are of essence and should permit role-players to have different responsibilities.
- 11.3 Development programmes should be evaluated frequently thereby ensuring appropriate and timeous action and adjustments.
  - 11.4 The level of development, the community and the identified needs should determine whether a more specialised (as compared to a generalised approach) should be followed. A holistic development approach certainly requires different role-players including specialists in an integrated and constructive schedule.
  - 11.5 The Ward Extensionist is generally referred to as a generalist. This certainly is a misnomer, as successful development requires proper planning, skills and knowledge. The Extensionist needs to be a specialist in development and he/she should be properly trained to deal with the challenges of development. Appropriate general knowledge will contribute to the credibility of the Extension worker with his/her communities.
  - 11.6 Extension workers should be assessed on their development approach and how this approach has been developed. Success and failures in practice should be taken into consideration and linked to the reason there-of (through evaluation). This does not only include statistics of inputs.
  - 11.7 The responsibility of development (vested in the generalist) as compared to the responsibility to have knowledge, to advise and to keep up to date with new technology (i.e. the specialist) impacts on the role, function and commitment of the extension agent in development.
  - 11.8 Knowledge *per se* does not necessarily result in development, although knowledge continues to develop.
  - 11.9 Extension is far more than the mere transfer of the technology or rendering of advice. In this context is it appropriate for the specialist (with his technology) to fulfil the function of rendering support to the generalist in a development programme with communities. Closer linkages between Extension workers, specialists and farmers should be formalised appropriately in practice through, for example demonstrations, field trials and the development, implementation and evaluation of relevant farming systems.

11.10 The role of the specialist becomes increasingly important as development progresses. The sugar-, wine and tobacco industries are examples of this.

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