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CRITICAL FACTORS INFLUENCING PERFORMANCE OF EXTENSIONISTS IN LIMPOPO DEPARTMENT OF AGRICULTURE IN SOUTH AFRICA.

Zwane, E. M.[11], Groenewald, I. B.[12] & van Niekerk, J. A.[13]

Correspondence Author: zwanefrank@gmail.com

ABSTRACT

This article draws its data from a study which was conducted in six districts of Limpopo Department of Agriculture. The study targeted the Extensionists and their immediate supervisors. Out of 800 Extensionists 324 participated in the survey. A questionnaire was developed using the Delphi technique as part of the methodology. Different factors that have bearing in extension performance were identified and tested to check the extent in which they influence performance. Responses from the Extensionists revealed that they are performing below the expected level. Part of the challenge points towards the quality of training and the lack of adequate resources to support the Extensionists. The article concludes with some recommendations to resolve the challenges.

Key words: Performance, Extensionists, Training, Limpopo

1. INTRODUCTION

Limpopo Province came into being after the new dispensation of 1994 and it is the amalgamation of former three homelands namely: Lebowa, Venda, Gazankulu and the former territory of the Republic of South Africa (RSA). Limpopo comprised of five districts namely: Mopani, Vhembe, Capricorn, Sekhukhune and Waterberg (Department of Agriculture Northern Province, 1995). Like in all the provinces, Agricultural Extension Service is one of the main instruments used by the Limpopo Department of Agriculture (LDA) to achieve its agricultural development goals encapsulated in the slogan "from farming to industrial development".

The goals could be achieved through provision of appropriate agricultural information and knowledge to enable and capacitate land users and farmers towards improved, sustainable and economic development. Seen in this light, the Extensionist is a change agent who is expected to have knowledge and resources for supporting extension interventions in order to be effective (Oakly & Garforth, 1985:93). Based on the assumed important role that an Extensionist can play in the improvement of farmers' lives, this article endeavours to contribute in highlighting the challenges linked to poor performance and to suggest remedial actions. Specific objectives are:

- To determine Extensionists' efficiency with regards to investment return.
- To determine respondents' competency level as assessed by themselves and by their supervisors.

[11] Research Affiliate, Centre for Agriculture, Rural Development and Extension. University of the Free State, PO Box 68, University of the Free State, Bloemfontein, South Africa.
[12] Head, Centre for Agriculture, Rural Development and Extension. University of the Free State, PO Box 68, University of the Free State, Bloemfontein, South Africa.
[13] Member, Centre for Agriculture, Rural Development and Extension. University of the Free State, PO Box 68, University of the Free State, Bloemfontein, South Africa.

- To determine to what extent does the availability of resources influence performance.
- To determine respondents views with regard to perceived importance of different sources of knowledge for supporting performance.
- To make recommendations with regard to resolving the challenges of poor performance.

2. RESEARCH PROCEDURE

A discussion document which served as a questionnaire was developed using the Delphi technique, and it was used during the interviews which were conducted in the following centres: Mokopane in Waterberg District, Polokwane in Capricorn District, Thulamahashi in Bohlabela District, Madzivhandila College in Vhembe District, Lebowakgomo in Sekhukhune district and Giyani in Mopani District.

The discussion document resembles a structured and semi-structured questionnaire. Respondents were guided before indicating their final viewpoints in the questionnaire. This was done to minimize mistakes and to encourage honest opinions and thus reliable information. The degree, to which Extensionists were involved, is indicated in Table 1.

Table 1: The sample size and sample percentage of extension personnel involved in group interviews.

District	Total extension personnel & %	Respondents	Sample %
Sekhukhune	107 (58.87)	63	19.4
Mopani	133 (27.06)	36	11.1
Vhembe	235 (18.29)	43	13.3
Bohlabela	97 (58.76)	57	17.6
Capricorn	169 (65.08)	110	34.0
Waterberg	59 (25.42)	15	4.6
TOTAL	800 (40.5)	324	100

Out of 800 extension personnel in Limpopo only 324 were involved in the group discussions constituting 40.5 percent. The data was analysed through the computer program of Statistical Package for Social Sciences (SPSS) through assistance of a computer specialist (Zwane, 2006).

3. FACTORS INFLUENCING EXTENSION PERFORMANCE

Extensionists are expected to deliver services in order to satisfy the needs of the farming communities. Many authors agree that research institutions should play a pivotal role in the generation of knowledge and information to provide back- up service to Extensionists which in turn should help their clients (Arnon, 1989; Bunting, 1986; Van den Ban & Hawkins, 1990: 293). Furthermore Extensionists are expected to account for their performance in order to justify the investment of public funds in extension.

3.1 Extension efficiency

Data regarding an acceptable return and an estimated average over many different countries is R130 for every R100 invested (Düvel, 2002: 15). Table 2 summarizes the extension efficiency as perceived by the respondents in the districts.

Table 2: An estimation of the extension efficiency of the Department of Agriculture and NGO's by respondents in the different districts and expressed as a return on R100 invested.

Institution/Client Group	Sekhukhune	Mopani	Vhembe	Bohlabela	Capricorn	Waterberg	Average
Dept. of Agriculture:							
Own area	**63**	**109**	**91**	**90**	**75**	**57**	**80**
Own Province	**81**	**125**	**106**	**97**	**77**	**46**	**89**
S.A. – Small scale subsistence	**51**	**119**	**92**	**80**	**66**	**49**	**76**
S.A. – Small scale commercial	**45**	**112**	**97**	**79**	**64**	**47**	**74**
S.A. – Large scale commercial	**39**	**140**	**111**	**87**	**73**	**56**	**84**
NGO's:							
Small scale subsistence	**46**	**108**	**71**	**70**	**52**	**61**	**68**
Small scale commercial	**40**	**121**	**76**	**74**	**53**	**55**	**69**
Large scale commercial	**35**	**138**	**87**	**87**	**61**	**54**	**77**

The Department of Agriculture reflects inefficient performance in terms of investment. For example the efficiency of extension in the districts is judged well below a return of R130 for every R100 invested in extension with an exception of large scale commercial agriculture in Mopani. Extension efficiency in the NGO's is perceived to be even lower.

There are significant differences reflected by the districts, for example Sekhukhune is rated low because it is dominated by small- scale farmers, there are an estimation of 59 000 small scale farmers and 15 000 commercial farmers in Limpopo (Department of Agriculture Northern Province, 1995). Mopani district is perceived to be efficient at R140 return per R100 invested and this applies only to commercial because it is seen as the food basket of the Limpopo Province, contributing 18 percent of the total horticultural products in the Republic of South Africa (Landbou Ontwikkelings program, 1991:15). Extensionists tend to rate their own Province higher when compared to the rating of their own area. The perception of the Extensionists differs when compared with that of their supervisors. The findings are presented in Figure 1.

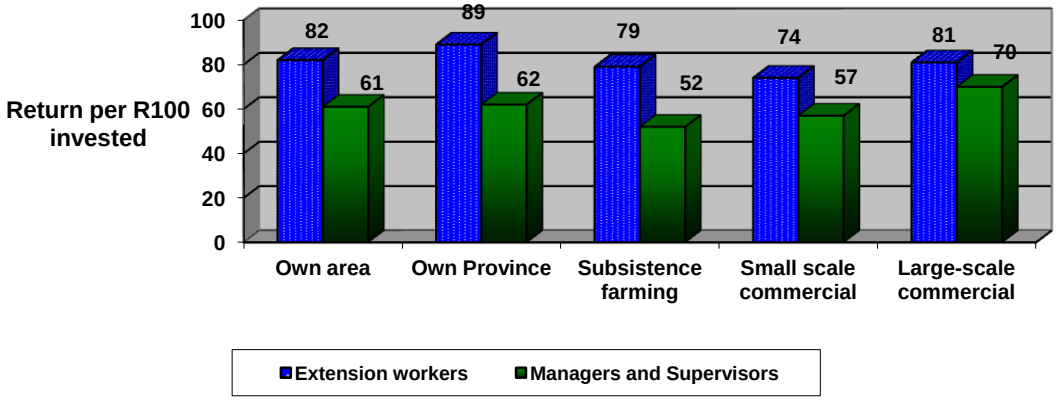

Figure 1: The assessment by frontline extension workers and extension managers of the efficiency of extension in different situations and expressed as the return per R100 invested in extension

Extensionists show a higher rating with regard to efficiency in extension. Figure 1 confirms the highest rating by the Extensionists when compared to assessment by the managers and supervisors. For example Extensionists rated themselves 89 on own province whilst the supervisor's lowest assessment is 52. The likely reason for the difference is that Extensionists tend to overate themselves whilst the supervisor seem to be more conservative in their rating. It can be concluded that there is a possibility of big loss of investments in extension.

3.2 Insufficient resources

Lack of resources can cause a negative impact in the performance of Extensionists. By resources it is referred to the means of transport, extension personnel and finances. A more reliable indicator of the perceived efficiency of the extension delivery is suggested to be between the productivity level of 75 and 100 percent (Düvel, 2002:17). The perceptions of Extensionists with regard to their assessment based in the absence of critical resource is presented in Figure 2.

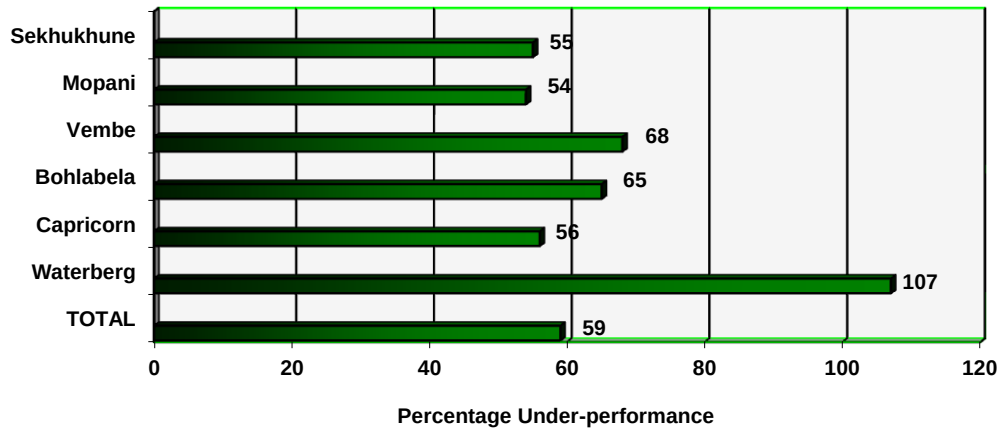

Figure 2: The perceived under-performance of extension workers expressed as a mean percentage

The mean shows 59 percent with an exception of Waterberg district. This suggests that Extensionists seem to operate at half of their capacity. The likely reasons are: lack of

commitment, incompetence, and demoralized extension staff and to a lesser extent may be attributed to lack of sufficient transport. The question is why Waterberg is exceptional while the rest of the districts are not. The possible reason could be that the senior manager might not be aware of the challenges of his performance and consequently influence his subordinates that nothing is wrong.

3.3 Competency level of Extensionists

The effectiveness and efficiency of extension is a direct function of the competency of the extension staff (Düvel, 2002:19). Before an Extensionist should demonstrate confidence and competency, an indicator is the level of his /her qualification. Observations confirm that Extensionists are often lacking in practical aspects of their technical subjects as a result of poor training (Adams, 1982: 2; Van den Ban & Hawkins, 1990:37). Table 3 shows the findings.

Table 3: Distribution of frontline extension workers according to districts and the highest qualification in agriculture

Qualification	Certificate Or Diploma		Adv. Dipl. B Tech or B-degree		BSc, and BSc(Hons)		Masters, MSc, PhD		TOTAL	
	n	%	n	%	n	%	n	%	N	%
Sekhukhune	55	87.3	7	11.1	1	1.6			63	100
Mopani	31	91.2	2	5.9	1	2.9			34	100
Vhembe	32	78.0	7	17.1	1	2.4	1	2.4	41	100
Bohlabela	48	82.8	9	15.5	1	1.7			58	100
Capricorn	89	85.6	11	10.6	3	2.9	1	1.0	104	100
Waterberg	11	73.3	2	13.3	2	13.3			15	100
TOTAL	266	84.4	38	12.1	9	2.9	2	0.6	315	100

The qualification of Extensionists is very low. For example the large majority of agricultural technicians, 84.4 percent, have a certificate or diploma. There are few professional technicians (15.6 %) at the levels of BSc, BSc. Hon, MSc, Masters and none at PhD. It can be concluded that the qualification of Extensionists should be improved.

3.3.1 Self assessment of Extensionists on competency

Extensionists were asked to assess themselves using a semantic 10-point competency scale. Figure 3 gives the findings.

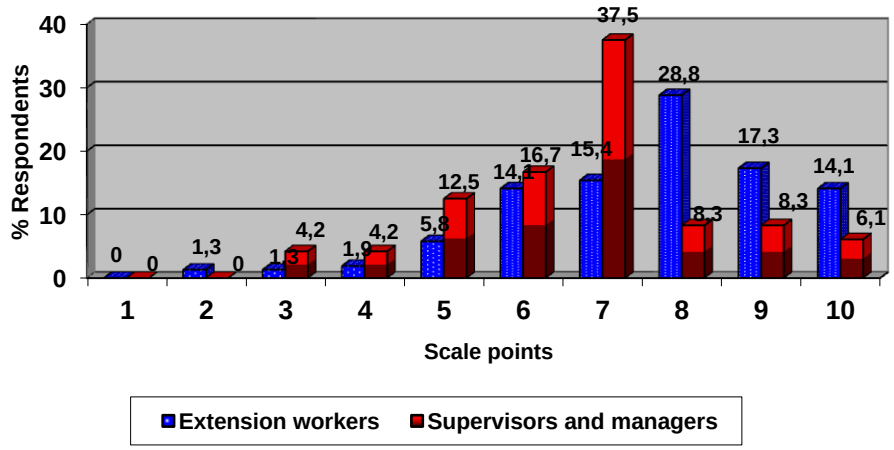

Figure 3: Percentage distribution of Extensionists according to their own competence assessments and assessments by supervisors and managers

The comparison of competency assessment by the agricultural technicians and the supervisors shows clear differences. For example 60 percent of the Extensionists assessed themselves above 8 while supervisors perceived 37.7 percent within the category. On the other extreme, Extensionists assessed themselves 9 percent lower than the assessment by the supervisors and managers. The difference illustrates the likelihood that Extensionists tend to over-rate their competency while managers and supervisors who know them are inclined not to over-rate them.

3.3.2 Assessment of Extensionists competency by supervisors

Both Extensionists and their supervisors assessed the competency based on the qualification categories. Figure 4 gives the findings.

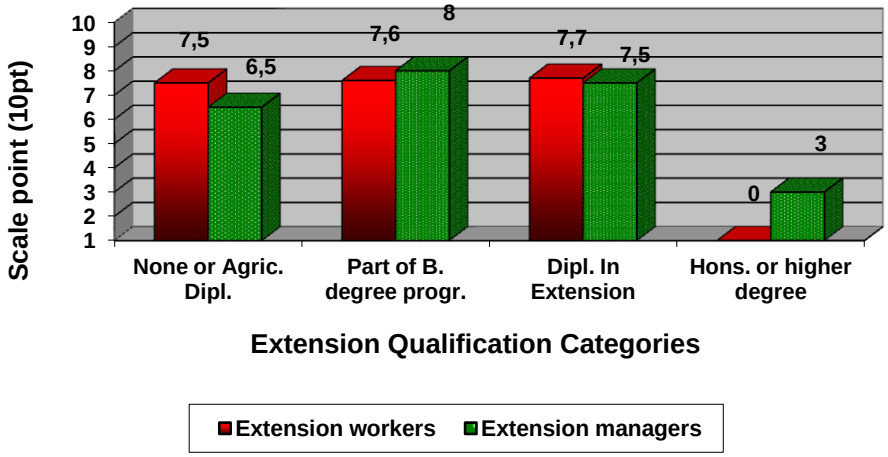

Figure 4: The mean competence of frontline Extensionists as assessed by themselves and by their managers/ supervisors in different qualification categories of extension

There is no clear tendency regarding the difference in the ratings of the extension qualification category except in the higher qualification category, where extension managers are extremely critical of the competency of Extensionists. This implies that extension managers only become critical and thus more realistic above a certain extension qualification

threshold, and would suggest that managers should have at least an honours or similar qualification.

3.3.3 Self assessment of Extensionists on agricultural knowledge

Table 4 presents the findings of Extensionist as they assessed their knowledge in various fields using a 10-point scale.

Table 4: The mean knowledge assessment of frontline extension workers by themselves as well as by extension managers using a 10-point semantic scale

KNOWLEDGE (Assessor)	Sekhukhune	Mopani	Vhembe	Bohlabela	Capricorn	Waterberg	AVERAGE
1. Agric. Knowledge							
(a) Agricultural technicians' assessment	7.4	6.3	7.4	7.3	7.1	7.9	7.2
(b) Managers' assessment	6.0	7.0	6.0	7.3	8.3	6.3	7.2
2. Extension Knowledge							
(a) Agricultural technicians' assessment	7.6	6.2	7.2	7.0	7.2	8.3	7.3
(b) Managers' assessment	6.2	8.0	6.0	7.0	8.3	7.0	7.3
3. Economic Knowledge							
(a) Agricultural technicians' assessment	6.4	5.3	5.7	5.6	6.1	5.0	6.0
(b) Managers' assessment	5.8	5.0	6.0	6.0	7.5	4.3	6.1
4. Managerial Knowledge							
(a) Agricultural technicians' assessment	6.2	7.0	6.2	6.3	7.0	6.7	6.9
(b) Managers' assessment	6.6	6.0	8.0	6.7	7.7	7.0	7.1
5. Marketing knowledge							
(a) Agricultural technicians' assessment	5.9	5.0	5.8	5.6	8.1	4.7	6.6
(b) Managers' assessment	5.6	4.0	6.0	5.7	7.3	5.7	6.1

There are differences in the current knowledge levels of Extensionists but no clear tendencies in areas of knowledge between the Extensionists and the supervisors. Managers' assessments in Capricorn are higher when compared with the assessment of the Extensionists. Another tendency is that in the economic and marketing knowledge, the Managers' assessments are higher than that of the Extensionists.

The difference could be the result of Extensionists who might have exposure to farmers on a daily basis and face challenges regarding the application of their knowledge. The assessment

by the Extensionists seems to be accurate whereas the extension managers assessed higher because they are less aware of the challenges faced by the Extensionists

3.4. Assessment of current and required knowledge of Extensionists

The Extensionists and the managers were requested to assess both the current and the required minimum level of knowledge (expressed as scale points) that is essential in order to perform their extension task effectively or with confidence. Figure 5 shows the findings.

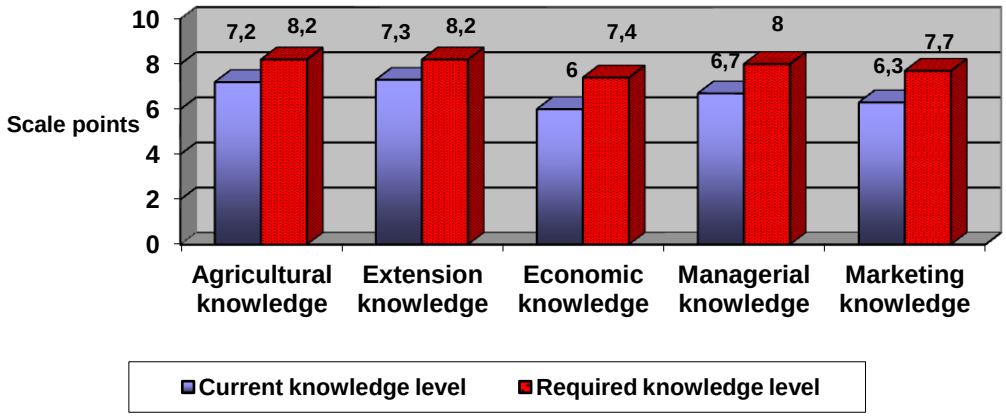

Figure 5. The perceived mean current and required level of knowledge of agricultural technicians in different fields

There is a clear need for more knowledge in the different fields. For example the current knowledge level ranges from a scale point of 6 to 7.3, whereas the scale point of required knowledge starts from 7.4 to 8.2, with limited knowledge requirements. This applies to managerial and marketing knowledge. The latter is due to the emerging field that managers are not trained and it becomes more important. Farmers are concerned about knowing how to combine specific knowledge of enterprises that will fetch higher price in the market, therefore Extensionists who possess the ability to influence profitability of farmers would be most helpful in Limpopo.

3.5 Extension manager's knowledge of extension

Effective management of extension is hardly possible without a good knowledge and understanding of management. The extension manager's knowledge of extension was assessed and Figure 6 summarises the findings.

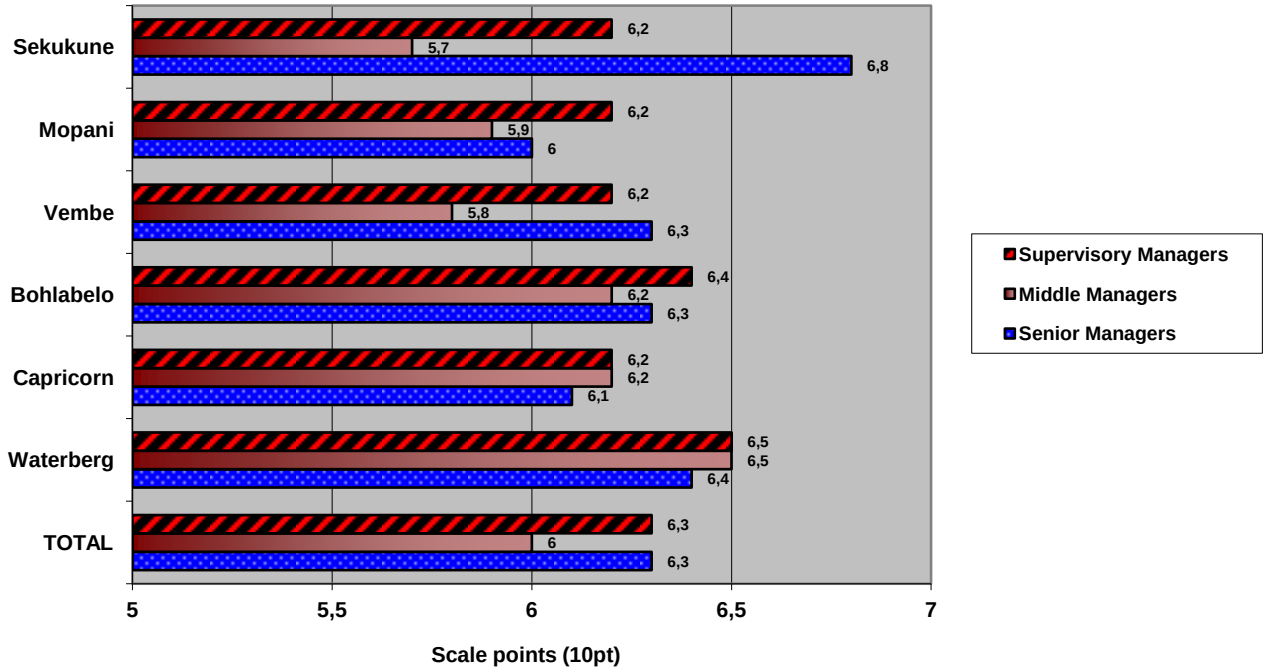

Figure 6: The mean assessment of managers' knowledge of extension based on a 10-point semantic scale

The mean level of extension knowledge is not high. For example, the extension knowledge of senior managers is on average 6 with an exception of Sekhukhune district which is perceived by respondents to be lower than that of the supervisory managers. The possible reason for the exceptionally high assessment of the acting senior manager in Sekhukhune district is that at the time of the survey the acting senior manager had received his B. Tech Degree and the Extensionists might have been convinced that the acting senior manager is knowledgeable in extension. Middle managers tend to be assessed lower with an exception of Capricorn and Waterberg. The reason is because supervisors have close contact while middle managers do not have.

4. PERCEIVED IMPORTANCE OF KNOWLEDGE SUPPORT

Proper knowledge support is ultimately intended to improve extension delivery. How important it is perceived can best be judged by comparing it with other measures that could be taken to attain better extension delivery. Figure 7 shows the views regarding the most appropriate means of better extension delivery by placing different alternatives in rank order.

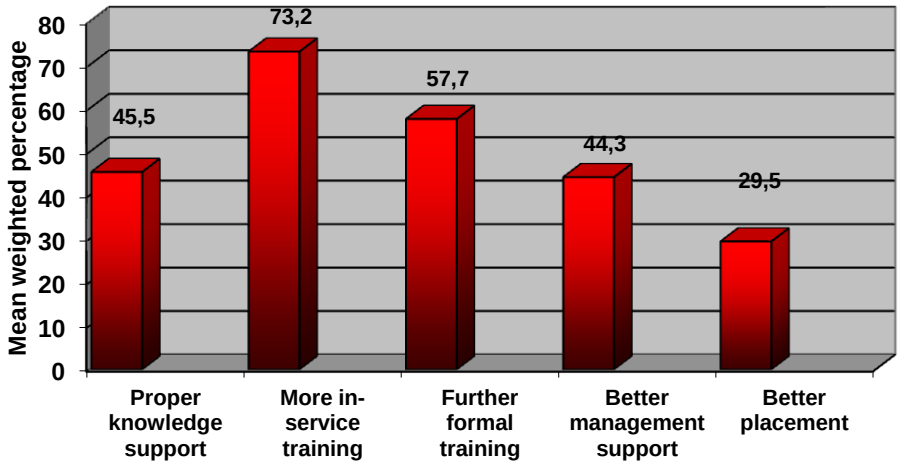

Figure 7. Mean rank order positions (expressed as weighted percentage) of different aspects in terms of their contribution towards the improvement of extension efficiency.

Among the alternatives, knowledge support takes in a middle position with a mean rank order percentage of 45.5. It is surpassed by more in-service training (73.2 percent) and by further formal training (57.7 percent). The role of training is, no doubt, appreciated, and it could be argued that knowledge support is a form of in-service training.

4.1 Sources of knowledge support

It is widely accepted that there is no one form of knowledge system (Arnon, 1989; Düvel, 2002, 33; Chambers, 1983) but there are various sources of knowledge support. The views of respondents regarding the contribution of different sources of knowledge support are summarized as follows: Agricultural Research Council Researcher 4.5, Researcher of Department of Agriculture 4.9, Subject Matter Specialist 3.9, Extension Supervisor 6.2, NGO's 4.6 percent. In terms of the findings the general knowledge support service is on a low level.

For example evidence shows that Extensionists in the four districts currently rely primarily on their supervisors, while the Mopani, district relies on the researcher of the Department of Agriculture. The likely reason could be the fact that Extensionists perceive the extension supervisors as the most important source of knowledge support because of the frequent contacts they have with the Extensionists. The researcher of the Department of Agriculture is perceived by the Extensionists as the second source of knowledge.

4.2 Types of knowledge

An effective knowledge system can be expected to provide knowledge support in different fields (Düvel, 2002: 34). Respondents' judgments of the level of support in the different knowledge areas are as follows: agricultural knowledge 60, extension knowledge 59.8, economic knowledge 49.1, managerial knowledge 57 and marketing knowledge 50.1 percent. The overall impression is that there is positive recognition for knowledge support. For example, the most knowledge support is in the areas of agriculture and extension while

economic and marketing knowledge support is somewhat lower, but still significantly higher than expected. It is uncertain to which degree these judgments were based on quantitative or qualitative considerations.

4.3 The use of Subject Matter Specialists (SMS)

SMS could be used as an alternative in providing knowledge support to extension staff as opposed to increasing the number of Extensionists or completely replacing them with subject matter specialists (Düvel, 2002: 136). This means bringing in an additional information intermediary. The SMS is preferred in Limpopo due to its potential in providing useful information into the Researcher-Extensionist- Farmer information chain. Table 5 summarizes the views of respondents with regard to the importance of different functions that SMS could do.

Table 5. The importance assessment by respondents of the different functions to be performed by the SMS (Düvel, 2002)

	MEAN SCALE	Rating	Mean Weighted %
1	Training of Extensionists on request (provide courses where necessary	7.59	60
2	Continuous and purposeful knowledge upgrading and capacity building of Extensionists working in the respective fields (pro-active)	7.65	56.5
3	Assistance and advice to farmers when requested by farmers and/or Extensionists	7.51	51.9
4	Training of farmers where knowledge base does not exist among Extensionists	7.23	48.3
5	Assistance of Extensionists with problem cases	7.33	49.3
6	Assistance of Extensionists with message design i.e. designing messages that are technically, economically and human behaviour relevant (where requested)	7.05	45.1
7	Become specialist regarding relevant commodity/discipline in area of responsibility in relation to current production, prevailing problems, needs of farmers (including research needs if there is no solution), priorities and solutions to be promoted by extension	7	46.9
8	Seeking solutions through adapted research/demonstrations (adapting innovations to specific local conditions)	7.34	45.8
9	Remain abreast of new research, developments and knowledge in field of specialization	7.54	42.7

The general impression presented by Table 5 is that all the functions listed receive wide support. For example, all were rated as very important with assessments of more than 7 out of a maximum of 10. It does seem though that the more familiar functions are perceived as somewhat more important, but there is encouraging support for the new functions, which will have to be introduced in order for subject matter specialists to make a significant impact.

These functions include continuous and purposeful knowledge upgrading and capacity building of Extensionists working in their respective fields.

5. CONCLUSIONS AND RECOMMENDATIONS

The conclusion suggests that extension performance is below the expected level of productivity. The investment of Extensionists on both small scale and large-scale farmers is running at a loss. It is suggested that the Department should take serious steps to ensure that there is sufficient return from investment such as strong supervision and creating awareness among the Extensionists on economic principles. The competency of the Extensionists is low and not satisfactory consequently affect the credibility of themselves and their extension supervisors and the managers.

It is recommended that extension managers should at least have an honours degree in extension before being recommended for the post of a manager or senior manager. The tremendous need for knowledge information makes the establishment or expansion of a proper knowledge support system one of the most urgent challenges facing the Department of Agriculture's extension service. This evidence includes, amongst others, the need for training (58.3 percent) and the fact that the large majority of respondents believe that training is the factor that can contribute most to the improvement of extension delivery in Limpopo.

As far as sources of knowledge support are concerned, Extensionists recommend their supervisors (62 percent) as a source of knowledge support. Furthermore a knowledge support system in the form of an extensive SMS system is strongly recommended. For example the function of the SMS should be to supplement and not to duplicate or perform the same task as the Extensionists. Insufficient resources such as transport, extension personnel and funds were identified as constraints toward extension performance. The Department of Agriculture should improve the service benefits of the Extensionists, ensuring that minimum standards are provided in terms of resources such as office support, means of communications, and means of transport. Alternative means of transport such as allowance may need to be investigated and Extensionists be consulted properly prior to its implementation.

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