

**PARTICIPATION IN LIMPOPO FARMER MECHANISATION SUPPORT PROGRAM: LESSON LEARNED FROM SCHOONOORD AND MORIPANE CASES**

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**ABSTRACT**

*Extension programs are initiated and implemented in various communities wherein similar and proportionally equal resources are provided. However, the performance and successes of such programs differ greatly from one case to another. The study assessed the impact realised from the participation of farmers in the implementation of government's farmer mechanisation support program through interviews of randomly and purposively selected farmers and traditional leaders respectively, and all available tractor operators using semi-structured interview schedule. Personal observation and experience realised by extension workers during program implementation was used in the interpretation of findings and formulation of conclusions. The study was conducted in Makhuduthamaga local agricultural area in Sekhukhune District of Limpopo Province in South Africa. The study conducted a comparative analysis of two cases: Schoonoord and Moripane sorghum and maize belt respectively. The study found that when farmers play a leading role in implementation of agricultural development programs, such programs become successful and sustainable than when extension workers are in the lead. The study recommends active farmer participation approach in farmer development programs for sustainability through acquisition of sense of responsibility, ownership and self-reliance.*

**Keywords:** Participation, mechanisation, farmer support, Sekhukhune, Makhuduthamaga

**1. INTRODUCTION**

The Limpopo Government Department of Agriculture (LDA) was supplied with 72 tractors by Department of Agriculture, Forestry and Fisheries (DAFF) as an input injection for Limpopo Provincial farmer mechanisation support program, meant specifically for subsistence farmers in the province. The program was officially launched on the 13<sup>th</sup> of November 2012. The tractors were distributed among the five districts. Sekhukhune district received eighteen, four of which were allocated to Makhuduthamaga local agricultural office (Masemola, 2012).

A directive was then issued top-down to extension service that the program operations should be based in traditional authorities. Extension service didn't have program policy framework for guidance on approaches to apply during the implementation of the program. Only operational framework was in place for administrative directives. In essence, the program was implemented without a clear extension route map, and monitoring and evaluation system. This omission might have impacted on the choice of appropriate implementation approach on the one hand, and monitoring of the implementation and evaluation of the output of the program on the other. The program's implementation in the Makhuduthamaga local agricultural area was then focused onto two separate areas of production, namely Schoonoord sorghum belt and Moripane maize belt. The two areas were supplied with seven and one tractors respectively.

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According to the Department of Agriculture's (2005) Norms and Standard for Extension and Advisory Services, extension and advisory service should have clearly defined objectives, action plans, timelines, and deliverables. On the same note Palmer (2006) notes that a project must have five phases namely conceptual, planning, designing, implementation, and operation and support phases. It is during planning phase wherein budget allocation is defined. It is also during implementation phases that buy-in from participants is obtained. The main purpose of the buy-in exercise is to ensure commitment of the participants on the project implementation processes. The implementation teams' understanding of the project dynamics is tested during the implementation phase. This is complemented by operation and support phase through which all other supporting resources are engaged into the system.

Survey, analysis, planning, execution and evaluation are part of extension programme planning procedure commonly known as *Nine Spokes of the Wheel* (Murton, 1965) through which extension services identify and analyse areas and farmers' needs that need extension service's attention, plan for the program execution, and evaluate the outcomes of the operations. Novafrica (2005) agrees from participatory point of view that survey and participatory need analysis, planning, implementation and evaluation are major steps of Participatory Development Approach (PDA) which emphasises participation of role players as of critical importance. Kusek & Rist (2004) argue that the need to conduct a readiness assessment is very paramount for implementation of any public program. According to the authors' argument, need and readiness assessments are two different concepts. Need assessment assumes that there is fundamental and underlying question about the program. Readiness assessment on the other hand assumes that the program is needed, and addresses whether or not the implementing agent is ready. Furthermore, Hart, Burgers & Hart (2004) argue that many agricultural development projects are implemented without clearly defined plan of action and/or management framework, and as a result, they seldom achieve their intended objectives. The question that remained was whether the extension service was ready for the implementation of the mechanisation program in respect of analysis and planning on the one hand, and the beneficiaries of such a program from participation point of view, on the other.

## 2. DOCUMENT REVIEW

The study conducted a document review of documents on Limpopo farmer mechanisation support program such as *Operational Framework Version 2012/1*, *Tariffs for mechanisation*, *Monthly reporting template Annexure 2*, and *Overview Report*. The documents reflected the level of readiness of extension service at the time of implementation, tariffs for government mechanisation service, as well as the operational and production statistics. The service was rendered to farmers free of charge contrary to the spirit of the Limpopo Government Provincial Treasury (2011) that "*Ploughing and other mechanised products are offered to farmers on fee basis. ...The objective of the Department is to develop farmers to become independent*". The study found that at the time of the launch the program had not yet been provided with the required human resource support. For example, by the 9<sup>th</sup> November 2012 when the operational framework was approved and issued, prior the launch on the 13<sup>th</sup> November, additional operators required for the program had not yet been procured. By the 9<sup>th</sup> November 2012 the operational framework read: "*Departmental tractor drivers/operators have been identified and their services will be utilised. Appointment of additional tractor operators to complement the internal capacity will be done in consultation*" (Limpopo Government Department of Agriculture, 2012).

For the kick start of the program in Makhuduthamaga local agricultural area, additional seven tractors were borrowed from other adjacent local agricultural offices. Ten tractors were allocated to Schoonoord sorghum production belt and one tractor to Moripane maize production area for ploughing and planting. Each tractor was operated by two operators. The productivity of services in the respective areas varied (Limpopo Government Department of Agriculture, 2013). Table 1 depicts the document review findings from both cases.

**Table 1: Document review: A comparative analysis of the two cases**

CATEGORY	SCHOONOORD	MORIPANE
Number of farmers involved	350	43
Number of tractors provided	10	1
Number of operators	20	2
Tractor : Farmer ratio	1:35	1:43
Tractor : Ha ratio	1:38	1:81
Hectares ploughed	384	81
Hectares planted	327 (85.2%)	81 (100%)
Deficit (hectares not planted)	57 (14.8%)	None

### 3. PROBLEM STATEMENT

Two areas of almost similar socio-economic conditions were supplied with similar extension related resources such as mechanisation, inputs and extension service at the same time of the agricultural season. However, the extension service performance differed between the two cases. The case that had more tractors had a lesser success rate than the case with lesser number of tractors. The question that emerged was “what factors cause this difference”? The assumption was that participation of farmers in the processes might have had influence on the outcomes.

### 4. PURPOSE OF THE PAPER

*Evaluation* is the eighth spoke of the *Nine Spokes of the Wheel* and the last step of PDA through which extension service assesses its performance in addressing the areas of need identified during the survey (the first step of both approaches). The study therefore conducted evaluation to assess how or whether the extension service allowed active participation of farmers in the implementation of farmers support mechanisation program in the concerned area of study. The study also sought to look into the magnitude of farmers’ participation in the program in relation to the implementation thereof by extension workers. The purpose of this paper is to highlight the impact of people participation in public programs for ownership, self-reliance and sustainability. The findings may assist in identifying appropriate extension approaches in implementation of such agricultural programs in future.

### 5. METHODS

The area of the study was Makhuduthamaga municipal area. An exploratory case study design was applied to study two cases, Schoonoord and Moripane sorghum and maize belt respectively. Simple random samples were selected as thus: 86 farmers (43 in each case). 69 farmers responded (28 in Schoonoord and 41 in Moripane). Five traditional leaders were purposively selected for their pilot status and active participation in the program, four of which responded. All eight Makhuduthamaga tractor operators were selected and responded.

Document review was conducted on the program reports to complement the comparative analysis between the two cases. Sets of qualitative data were collected through a semi-structured interview schedule. The questionnaire was designed to address the participant's role and contribution to the implementation processes, and to highlight the impediments encountered and successes realised, as well as to solicit suggestions for future program implementation. The questionnaire also provided for any general burning issue that participants deemed noting. The qualitative coding analytic method was applied to generate categories of narrative themes (Marshall & Rossman, 1995 cited by De Vos, 1998). Extension workers that participated in the program implementation were purposively selected and used as informant of the study through unstructured interviews to clarify issues on the raw data, enhance interpretation of the findings, and to complement the drawing of conclusions of the study.

## 6. RESULTS

### 6.1 Farmers Participation

Farmers were asked how they participated in the programme and their responses between the two cases are comparatively depicted in Table 2.

**Table 2: Farmers' responses**

<b>CATEGORY</b>	<b>SCHOONOORD</b>	<b>MORIPANE</b>
<b>Role in the field</b>	Direct tractors to own land	Direct tractors to own land
	Broadcast seeds	Broadcast seeds
	Individual work	Team work
<b>Contribution</b>	Fuel purchase in 1 of 4 villages	Transportation of fuel
	None	Supply of minor implement spares
<b>Role of Extension Workers</b>	Delivery of inputs	Delivery of inputs
	Address meetings	Address meetings
<b>Impediments</b>	Tractor breakdowns	Tractor breakdowns
	Insufficient & late input supply	Insufficient & late input supply
	Insufficient number of tractors	Insufficient number of tractors
	Traditional leaders unfairness	
	Traditional leaders dominance	
	Extension workers' absence	
<b>Successes</b>	Many farmers benefited	All farmers benefited
<b>Advice for future operations</b>	Mobilise farmers groups/coops	Empower the farmers group
	Improve plough depth	Improve plough depth
<b>Any burning issue</b>	Men dominate/intimidate women in the field	Men dominate/intimidate women in the field

The study found that farmers were expected to clean their respective lands of trees and shrubs as well as to hand broadcast seeds where planter operation was limited, as part of their contribution to the implementation of the program. However, farmers were not made to participate in the planning processes of the program's implementation. As a result, the cleaning had not yet been done at the time of ploughing. The study found from farmers that traditional leaders dominated the program. As they were tasked to draw beneficiary lists, the

lists were topped by their relatives. As a result, the majority of the traditional leaders' clan including those that had not been ploughing their fields for sometime topped the beneficiary lists. The majority of the regular producers were excluded from the lists. The study found that farmers were not updated of changes, anticipated delays and/or breakdowns in time. Extension workers supplied inputs to farmers without advices about such inputs. Men were reported to have dominated and intimidated women in the field in fight for tractor services.

## 6.2 Traditional Leaders Participation

Traditional leaders were asked to indicate their role in the mechanization scheme. Their responses are indicated in Table 3 that displays the comparative analysis of responses from traditional leaders between the two cases.

**Table 3: Traditional leaders' responses**

<b>CATEGORY</b>	<b>SCHOONOORD</b>	<b>MORIPANE</b>
<b>Role</b>	Mobilise farmers	Motivate farmers
	Disseminate information	Disseminate information
	Draw beneficiary lists	Draw beneficiary lists
	1 of 4 traditional leaders facilitated collection of money for fuel purchase	Traditional leader monitored money for fuel transportation
<b>Contribution</b>	Tribal leadership support	Tribal leadership support
	Tribal councils' infrastructure for meetings	Accommodation & security for tractor & operators
<b>Role of extension workers</b>	Delivery of messages to and from communities	Delivery of messages to and from communities
<b>Impediments</b>	Tractors' breakdowns	Tractor breakdowns
	Insufficient & late input supply	Insufficient & late input supply
<b>Successes</b>	Yield	Yield
<b>Advice for future operations</b>	Address livestock damage on crops	Increase fleet size
<b>Any other burning issue</b>	Illegal squatters on arable land	

The study found that traditional leaders were tasked by the directives of the program to develop community beneficiary lists that were to be followed and monitored by their delegates in the fields. Traditional leaders' plots were supposed to be the first on the lists. Traditional leaders also facilitated and monitored contribution of funds by farmers towards assisting the program with fuel purchase and transportation where the program had deficiencies. They were instrumental in community mobilisation for dissemination of extension information.

## 6.3 Tractor Operators Participation

The tractors operators were asked to indicate three items how they contributed such as their role, contribution and the impediments they encountered. Table 4 depicts the comparative analysis of tractor operators' responses between the two cases.

**Table 4: Tractor operators' responses**

<b>CATEGORY</b>	<b>SCHOONOORD</b>	<b>MORIPANE</b>
<b>Role</b>	Plough and plant for farmers	Plough and plant for farmers
<b>Contribution</b>	Fix minor implement repairs with own private tools	Fix minor implement repairs with own private tools
<b>Impediments</b>	Tractor breakdowns	Tractor breakdowns
	Lack of mechanical support	Lack of mechanical support
	Lack of minor spares supply	Lack of minor spares supply
	Lack of tools	Lack of tools
	Lack of night security	Lack of night security
	Operators started ploughing at 08h30-9h00 because store officer reported to work at 07h30 for fuel refill	Operators started ploughing at 6h00 because fuel was readily available in community's storage facility
<b>Success</b>	85.2% service	100% service
<b>Advice for future operations</b>	Prioritise mechanical support	Prioritise mechanical support
<b>Any other burning issue</b>	Lack of night security in remote areas	Lack of night security in remote areas

The study found that tractor operators were hired through Expanded Public Works Program (EPWP) and trained a short while prior the launch of the program. No mechanical equipment or service for minor in-field repairs was supplied to tractor operators for any unexpected breakdowns. One of the operators used his own private tools to fix some minor repairs on the implements of all the tractors. All these limitations compromised their productivity. The main challenge the tractor operators encountered was frequent tractor breakdowns without supply of tools for minor tractor and implement repairs. Lack of access to fuel refilling facilities appeared to be among the major impediments.

## 7. DISCUSSION

The extension service implemented Limpopo farmer mechanisation support program without having conducted survey and need analysis to determine areas of need, relevant role players, and beneficiaries, as well as to determine the appropriate approaches per each area of operations as recommended by the principles of extension's *Nine Spokes of the Wheel* and PDA. The program was also implemented without a readiness assessment as recommended by Kusek & Rist (2004). The extension service did not assess its readiness as well as the readiness of the prospective beneficiaries of the program. As a result, the program was then implemented without the necessary mechanical, administrative and human resource support, and timely input supplies.

The program was also implemented without properly defined extension route map, and monitoring and evaluation system. Farmers were not engaged in the planning of the implementation and operational phases of the program. They therefore eventually played a passive beneficiary role than participatory. The local administrative support system was not made to adjust their routine processes to accommodate extension service's seasonal responsibilities. The extension service suffered the impact of such discrepancies. When traditional leaders are tasked to draw beneficiary lists, names of their close relatives top the lists. As a result almost only their clan benefit first while the season still lasts. Table 5 and

Table 6 respectively summarise common contributions and impediments noted from participants in both cases.

**Table 5: Common contributions**

Farmers	Contributed money for fuel logistics
Traditional leaders	Mobilised farmers
	Draw and prioritised beneficiaries lists
	Provided tribal infrastructure for communal use
Tractor operators	Fixed minor implement repairs
Extension service	Delivered messages to communities
	Delivered inputs to farmers

**Table 6: Common impediments**

Farmers	Men dominated and/or intimidated women in the field in fight for tractor services
Extension service	Delivered inputs very late in the season
	Delivered insufficient inputs
	Lack of mechanical support
	Non attendance to tractor breakdowns
	Lack of minor implement spares supply
	Lack of night security for tractor operators in remote fields

A comparative analysis of the difference between the two cases was also conducted. Table 7 depicts the difference between the two cases.

**Table 7: Summary of the differences between the two cases**

<b>SCHOONOORD</b>	<b>MORIPANE</b>
Traditional leaders mobilised farmers	Traditional leaders motivated farmers
Individual work	Team work
Traditional leaders prioritised their relatives	Community committee managed farmers list
Traditional leaders dominated the processes	Traditional leader formed part of the committee
Extension workers' absence was a problem	Extension workers' absence was not a problem
Many but not all farmers benefited	All farmers benefited
85.2% land ploughed and planted	100% land ploughed and planted
Operators started ploughing at 08h30-9h00 because store officer reported to work at 07h30 for fuel refill	Operators started ploughing at 6h00 (Fuel readily available in community's storage facility)

A criterion was identified to test the acquisition of human development outcomes by beneficiaries from the two projects. These outcomes were leadership, ownership, responsibility, dependency and self-reliance. The two different approaches applied in the two projects produced different outcomes. Table 8 depicts the variants between the two cases.

**Table 8: Comparative analysis of the two cases: Developmental Outcomes**

CATEGORY	SCHOONOORD	MORIPANE
<b>Leadership</b>	Extension workers led the processes	Farmers led the processes
<b>Ownership</b>	Extension workers owned the processes	Farmers owned the processes
<b>Responsibility</b>	More responsibility on extension workers	More responsibility on farmers
<b>Dependency</b>	More dependency on extension workers ( <i>No extension worker, no work</i> )	Less dependency on extension workers ( <i>No extension worker, no difference</i> )
<b>Self reliance</b>	Less self reliance in farmers	More self reliance in farmers

The extension service applied two different approaches in two separate adjacent areas of production. One approach was applied in the Schoonoord sorghum belt and the other in Moripane maize production area. Management of the ploughing and planting processes in Schoonoord area were led and managed hands-on by extension workers while in Moripane area the processes were led and managed hands-on by farmers themselves. The two different approaches produced different outcomes between the two cases.

## 8. CONCLUSIONS AND RECOMMENDATIONS

When agricultural development program is implemented without proper extension approach or extension route map, participation of farmers becomes fragmented and disintegrated. As a result, extension workers work hard rather than smart. Exclusion of farmers' participation in the planning process of a program meant for their advancement renders them passive participants and less committed beneficiaries thereof. As a result, extension workers carry much of the responsibilities. When the existing internal administration support service is not properly integrated with the seasonal extension processes, extension service fails to deliver services within targeted and suitable timeframes. In the absence of a clear program plan with human development outcomes, and monitoring and evaluation framework, extension service becomes developmentally fruitless. When farmers actively participate in the day to day operations of the program, they own and take lead of the processes. As they own, they take responsibility of eventualities towards sustaining the program (Diale, 2013). Farmers' less dependence on extension workers may suggest that extension workers achieve their "empower and let go" (Diale, 2011) development objective. When extension service works towards developing farmers into independent self-reliant participants, and top-down directives dictate the contrary, extension service becomes frustrated. As a result, the quality of agricultural service delivery gets compromised.

The study recommends active farmer participation approach in farmer development programs for sustainability through acquisition of sense of responsibility, ownership and self-reliance in the farmers. The study also recommends that participatory extension program planning should be adhered to ensure thorough participation of the intended farming communities. For proper and successful implementation of extension programs, the study recommends that a thorough survey should be conducted to establish community needs and problems that affect them prior implementation of any extension program.

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