TOWARDS DEVELOPING FINANCIAL MANAGEMENT STRATEGIES FOR LAND REFORM BENEFICIARIES IN THE BLOEMFONTEIN -- THABA N'CHU AREA OF THE FREE STATE PROVINCE OF SOUTH AFRICA

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ABSTRACT

This paper is based on research to design financial management strategies for emerging farmers, and examines financing problems anticipated for the beneficiaries of land reform in the Free State province of South Africa. Discussions focus on criteria that can be used to detect impending financial problems; in particular liquidity problems, and are based on the analysis of data gathered from recent beneficiaries of land reform, by means of interviews and a questionnaire.

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1. INTRODUCTION

Liquidity (cash) is the artery of any organisation. To obtain cash is one side of the matter, but to protect and manage it in such a way that debt as well as the cost of the money can be serviced, is probably more important. In a country where the quality of natural resources, especially rainfall and soil, are poor (Nell and Viljoen, 1995:210) economical utilisation of these resources is vital for the long-term financial survival of farmers, especially emerging farmers (also referred to as land reform beneficiaries in this paper). Although it has become

easier for emerging farmers to acquire land, many of them have not had the opportunity or time to develop managerial skills, particularly in the field of financial management. Limited access to credit has also inhibited efficient use of their resources.

In the light of these previous introductory remarks, and for the purpose of this paper, the emerging farmer is defined as a farmer who is serious about farming and who intends to become an independent commercial farmer. Typically, they lack access to support services and resources needed to expand their farming operations. This definition implies that they either rented or obtained land recently but most financial institutions are still not prepared to finance their operations due to inadequate collateral and risk. Nevertheless they farm at a commercial level, producing a marketable surplus.

A pilot study was conducted in a region where a major research project has been initiated. Fourteen emerging farmers were identified for the pilot. They included:

- Three farmers with privately-owned land
- Six communal farmers (out of a total of 2000). These were the only communal farmers that could be classified as 'emerging' in the sense that they produced for the market. (Madiba, & Legegeru, March 1997).
- Five farmers on state-owned land who have been given the option to buy the land in the near future; they were randomly chosen from a population of 15 such farmers.

This paper uses data from the pilot survey to explore the financial problems faced by emerging farmers, and to probe ways in which liquidity problems can be solved. Respondents' perceptions of risk, its sources, and strategies used to counter risks, are also investigated. No statistical tests are performed as the sample is too small.

2. METHODOLOGY TO DEVELOP FINANCIAL MANAGEMENT STRATEGIES

Several techniques are available to develop a financial management model. After an extensive literature study it was decided that dynamic linear programming (DLP) with risk discounting (Lyne, Ortmann & Le Roux, 1991:107), would best suit the objectives of the study. The technique accommodates multiple constraints faced by emerging farmers (discussed later) and simulates the long-term effects of financial decisions. However, this paper concentrates on data gathered in the pilot survey and serves mainly to identify factors that have a negative effect on the liquidity position of emerging farmers. The following aspects are discussed in more detail:

- Farm characteristics..
- An analysis of farm resources and enterprises.
- Financial problems.
- Attitudes towards risk, sources of risk and coping strategies.

2.1 Farm Characteristics.

The first step is to establish the characteristics of the emerging farmers and to describe their background.

2.1.1 Communal farms

In the case of communal land, the area that can be farmed is allocated by the local headman. Farmers can also rent additional land from households who do not use all of their land. In some cases the land cannot be cultivated because fences are frequently cut and crops are invaded by livestock. Some of the local villages have communal dairy buildings and pigsties. In one case the dairy infrastructure is used by just one farmer. This individual started his operation five years ago with five cows and is now farming with 35 dairy cows. Emerging communal farmers produce mainly on a cash basis because they have no security to offer as collateral for credit or loan finance.

2.1.2 State-owned land (Trust farms)

The former Bophutatswana government bought farms from large-scale commercial farmers, divided them into units of between 310 and 1330 hectares, and allocated the units to selected farmers who rent the land at very reasonable rates. The smaller farms have a higher proportion of arable land while the larger farms are comprised mainly of grazing land. The farmers who were serious about farming were able to build up reserves in the past years and are now in the process of purchasing their units at reasonable prices. Only the top few farmers qualify for credit at commercial banks. Most of the production is done on a strictly cash basis and farmers subject to liquidity constraints have to cut back on inputs. This reduces income, especially in above-average years.

2.1.3 Privately owned farms

There are only three emerging farmers in the research area who have bought their own farms. Their solvency ratios are all under pressure because the Department of Agriculture , who provided the loans to purchase the farms, took up most of the assets as security. These farmers have very few financial resources to develop their land and use it to its full potential. In one case the farmer received a loan to buy the land plus ten cows. The total carrying capacity of this farm is approximately 150 cows. As a result of the debt repayment ability of this farmer being limited from the start, and this farm will experience liquidity problems for some time.

Demographic and decision-making variables observed amongst respondents are summarised in Table 1.

Table 1: Demographic and decision-making statistics for 14 emerging farmers, 1997.

	Lowest	Mean	Highest
Age (years)	43	61	84
Family size	2	5	14
Educational qualifications:			
Farmer	none	Standard 5	Standard 10
Spouse(s)	none	Standard 6	Post matric level

Decision-making	**Technical**		**Financial**	
	Number	**Percentage**	**Number**	**Percentage**
Husband	11	79	3	22
Wife	1	7	0	0
Manager	1	7	1	7
Husband and wife	0	0	8	57
Husband, wife and children	1	7	2	14
Total	**14**	**100**	**14**	**100**

Twelve of the 14 farmers (86 %) are older than 51 years and 43 percent are older than 61 years.. Considering that the average age of farmers is 61, then an average family size of 5 is quite high. The low education rate is an indication that the emerging farmers will need management training in order to be successful.

In 11 out of the 14 cases (79 %) husbands made technical decisions on their own. When it comes to financial decisions, 10 of the 14 farmers involved their wives and even their children in the decision-making process (Table 1).

2.2 An analysis of the resources on the farms.

The state of the natural resources (land) on the farms visited varied from very good to bad. Good rains had generally high quality grazing as result. Farming equipment, enterprise combinations and livestock resources are also discussed in this section.

2.2.1 Land

The Thaba 'Ncu area, (where 86 percent of the respondents are farming), is not considered as a high potential farming area. The soil is shallow and it is difficult to store water. Farm sizes and land quality varied substantially. (Table 2).

Table 2 : Average farm size (Ha), 1997.

	Private Owners (Area)	Communal farms (Area allocated)	Trust farms (Area rented)
Number	3	6	5
Arable-lands:			
High	324	62	250
Average	227	28	173
Low	150	0	100
Natural grazing::			
High	450	300	545
Average	238	137	334
Low	73	1	112
Total			
High	656	364	784
Average	471	165	507
Low	340	1	362

The average size of trust and privately owned farms is much the same, but the communal farms are much smaller. The usual allocation of communal farms is five hectares of arable land for crop production and every farmer is allowed to keep a certain number of large and small livestock. However, some communal farmers do get more arable land and some rent additional land from other farmers.

2.2.2 Farming equipment

Planting implements were in a poor condition. In some cases ox planters had been converted for use with tractors. From an economic point of view, the area currently cultivated by farmers is too small to justify an investment of approximately R 20 000 ($1 = ±R 4,50) in a conventional planter. The average age of tractors was 21 years (Table 3). Most of the tractors were more than 15 years

old which suggests the problem with reliability during peak periods. These factors manifest in productivity of land and livestock. Poor productivity has a serious negative effect on liquidity and financial success.

Table 3: Tractor age distribution, 1997

Years	Number	Percentage
0 - 5	2	7
6 - 10	2	7
11 - 15	4	13
16 - 20	8	27
21 - 30	9	30
31 - 40	4	13
40 >	1	3
Total	30	100

2.2.3 Enterprise composition

Research done at a commercial bank (Louw, 1997) showed that commercial farmers' risk can be lowered by diversification up to a certain point (between 4 and 5 enterprises). When farmers keep on diversifying beyond this level, risk starts to increase owing to a lack of managerial capacity. The information summarised in Table 4 suggests that the respondent farmers are too diversified, especially if one considers their poor educational status.

Table 4 : Composition of enterprises, 1997

	Total
Number	14
Crops:	11
High	7
Average	3
Low	0
Pastures:	
High	2
Average	1
Low	0
Livestock:	14
High	5
Average	2
Low	1
Total:	
High	12
Average	6
Low	1

2.2.4 Livestock

Reproduction rates in the livestock herds have important implications for liquidity. The ratio of female to male animals is perhaps the important determinant of the reproductive rate. In some cases the observed ratio was 80:1 in comparison with a norm of approximately 25:1. Weaning rates, presented in Table 5, vary widely for such a small group of respondents.

Table 5: Weaning percentage of cattle and sheep, 1997

	Cattle (%)	Sheep (%)
High	100	115
Average	65	86
Low	8	19

2.3 Financial problems

Access to credit was very limited for the farmers interviewed. Those who had borrowed for land purchase were afraid to assume more debt owing to high nominal interest rates. The average solvency ratio of the three privately-owned farms was 1,88:1 (norm 3-4:1) which leaves little capacity for more borrowing.

2.3.1 Total production costs : total farm income.

The **total production costs : total farm income** (gross production value) ratio is perhaps one of the most important financial indicators. If the ratio is **higher** than a certain level for a specific farm, bankruptcy will be the result given certain debt levels. On the other hand, if the ratio is **lower** than a certain level there is a strong possibility that the farm's natural resources (land, natural pastures and water) will deteriorate, lowering the chances for a sustainable farming operation. The results of the survey are given in Table 6.

Table 6: Total production costs : total farm income and sensitivity and solvency ratio, 1997

Mixed farming (n=10)	Farm income (Fi) (R)	Produc-tion costs (Pc) (R)	Pc:Fi (%)	Total farm income (Tfi) (R)	Nett cash surplus (Ncs) (R)	Sensi tivity (Ncs/ Tfi) (%)	Assets (R)	Lia-bilities (R)	Solv en-cy
High	49900	44114	88%	715444	254984	36%	1736960	407208	∞
Average	232909	149861	64%	274044	31561	12%	547268	124935	4.4
Low	486444	172218	35%	49900	-31097	-62%	160900	0	1.6
Live stock farming (n=4)									
High	23125	22384	97%	134129	36157	27%	324548	21696	∞
Average	55020	27184	49%	55020	7870	14%	178535	5485	32.6
Low	134129	51065	38%	23125	-13725	-59%	1195	0	15.0

The **total production costs : total farm income** ratio is an indicator of the efficiency of financial management of the farmer. The technical as well as the economic level of management have an influence on this ratio. The highest ratio of 88 percent for mixed farming and 97 percent for live stock farming are far too high (norm for mixed farms is ± 55% and for livestock farms ± 45 %). The reason is

that the farmer must buy capital items for the farm from the balance and must also look after his/her family. The lowest ratios of 35 and 38 percent respectively are perhaps too low, but these farmers are farming at a high managerial level and reproduction levels are good.

2.3.2 Sensitivity

The **sensitivity of the cash flow** or **short-run risk,** is according to Schoney (1996:21), a measurement of the ability of a farm to survive catastrophic, as well as less adverse price and yield events. This ratio is calculated by dividing the net surplus of a cash flow budget for a normal year, by total income and can also be calculated for each year in a long-term cash flow budget

Similar to the situation of the production cost ratio (Table 6) the sensitivity also shows a great variation, from -62 to 36 percent and -59 to 27 percent respectively for the mixed and live stock farming operation. The negative sensitivities show that the farmers will not be able to take any loss in production. The average sensitivities of 12 to 14 percent are lower than a norm of approximately 17 percent which shows that the farmers will face liquidity problems in future, if they do not improve their management skills and productivity.

2.3.3 Solvency ratio (Total assets : Total liabilities)

The average solvency ratios listed in Table 6, compare favourably with expected levels. Seven of the 14 farmers (50 %) have no liabilities. The main reason for this is that most of the respondents have no access to credit. Debt financing might help some emerging farmers to grow financially.

One contrasting aspect of the financial analysis is that while the respondents are strapped for cash, their solvency ratios (private land-owners excluded) are healthy. The lack of access to credit helps to explain this anomaly.

2.4 Attitudes towards risk, main sources of risk and coping strategies.

Risk plays a very important role in the planning process of any farm. This is especially true in South Africa, where 90 percent of the area is arid and semi-arid. A farmer who is aware of the risks and knows how to plan for it, is more likely to make a success of his/her operation.

Attitude towards risk and strategies used to counter risk were also elicited in the survey. The results are summarised in Table 7. Seven percent of the farmers were classified as risk-takers, 21 percent as risk neutral and 72 percent as risk averse. This result corresponds with the findings of Binding *et al.* (1993:183) that the risk averse farmers are older (Table 1). They also found that risk-takers have better managerial abilities, higher levels of education, larger cultivated areas, higher non-farm income, a higher debt load and larger net farm income. These results, obtained for commercial farmers in the Eastern Free State, differ from those reported in Table 7.

Table 7: Risk rating of emerging farmers in the study, 1997

Risk rating	Number	Percentage
a. Variety A will give you a profit of 10000 in two out of ten years. (High profit high risk) Sehlahiswa sa A se tla ofa phaello ya 10000 lemong tse pedi tsa tse leshome (phaello e hodi-mo monyetla wa ho lahlehalwa o moholo.)	1	7
b. Variety B will give you a profit of 3000 in six out of ten years (medium profit medium risk) Sehlahiswa sa B se tla ofa phaello ya 3000 lemong tse tsheletseng tsa tse leshome(Phaello e mahereng le monyetla wa tahlehelo o mahareng.)	3	21
c. Variety C will give you a profit of 2000 in eight out of ten years (low profit low risk) Sehlahiswa sa C se tla ofa phaello ya 2000 lemong tse robedi tsa tse leshome (Phaello etlase le monyetla wa tahlehelo o tlase)	10	72
Total	14	100

Respondents were also asked to rate the impact of various risk sources on long-term profitability, and to indicate what actions they would take to counter these risks in cases where the risk source was rated 'moderate' or higher. The results are presented in Table 8.

Table 8: Risk factors in terms of its impact on the long term profitability of a farm, 1997

Risk factor	Moderate (3)		(4)		Great (5)	
	n	%	n	%	n	%
1. Sudden sickness (illness) Changes in health	4	29	1	7	6	43
2. Interest rates increases	2	14	1	7	1	7
3. The price you will receive for your produce (variation)	2	14	2	14	3	21
4. The yield you will receive (attain) in the next year (variation)	0	0	3	21	4	29
5. Changes in income tax policy	2	14	1	7	0	0
6. Drought spells	1	7	1	7	7	50
7. Theft	0	0	3	21	7	50
8. Changes in input costs	2	14	4	29	2	14
9. Land rent	0	0	0	0	0	0
10. Other specify Crime	0	0	0	0	1	7

(1) The percentages are calculated as a percentage out of 14

Sudden sickness, drought and theft were identified as the three major risk factors. The majority of respondents said that they would counter sickness by requesting help from relatives, drought by diversifying, and theft through a range of actions such as collaborating with police, keeping live stock away from the main roads, and through neighbour watch.

3. RECOMENDED FINANCIAL MANAGEMENT STRATEGIES TO ATTEND TO LIQUIDITY PROBLEMS ON THE FARM

Perhaps the most problematic situation for the communal and state owned land farmers is that they do not have secure land tenure. All 11 non-private land owners indicated an urgent need for fully exclusive and transferable rights to land in order to alleviate liquidity problems. Kille and Lyne (1993:106) found that exclusive property rights promoted more efficient and sustainable use of land on trust farms in the former KwaZulu homeland. - partly because land has no value as collateral if lenders are unable to repossess and sell it. The absence of an active land market diminished the credit-worthiness of all the respondents and forced them to leave some land idle (Table 9).

Table 9: Farm-land usage, 1997

	Private Owners	Communal farms	Trust farms	Total
Number	3	6	5	14
Average Farm-lands (Ha)	227	28	173	428
Average used over two years (Ha)	192	21	152	365
Average not planted (Ha)	35	7	21	63

The sustainability of a farm depends on the profitable use of natural resources, and in turn the latter depends on the financial discipline of the farmer. When profits are under pressure, over utilisation of natural resources will probably prevail and sustainability decrease. In this regard Harrington (1992:5) argues that sustainable growth is the continued growth in agricultural productivity, while the quality of the natural resources used in the agricultural production process, is increased. If productivity can be increased at a higher rate than inflation, then financial sustainability will prevail and the probability that the farm will survive over the long run will increase. Most authors on sustainability base their arguments on protecting natural resources. However, the profitable use of resources are probably more important and need special attention. If the profit gained from a resource is high enough to enable financial survival over the long run, the farmer will probably be more eager to look at ways to protect this resource (Lohr, *et al* :1992,105).

The farming equipment is very outdated (Table 3). Under these circumstances effective farming practices cannot be expected. An initial solution to this problem might at least be to encourage farmers to collective purchase of machinery. This can apply to tractors, planters, combines and other expensive machinery and equipment, even expensive male breeding stock.

The ram : ewe as well as bull : cow ratios deserve special attention with the aim to get the ratios closer to the suggested 1 : 25 ratio per serve or tup season. In this regard technology transfer is desperately needed in these areas.

The farmers will also have to be advised to limit their enterprises to the levels of their management capacity as well as the risks involved. Too many enterprises can increase risk especially when the management capacity becomes limited. The data suggests that emerging farmers are risk-averse and techniques used to model financial decisions will have to account for risk and risk-aversion.

The observation that the farmers under discussion, in spite of other constraints, face severe liquidity problems but enjoy a healthy solvency position suggests that they have had little access to credit. More secure land tenure may help to address this constraint. In a certain sense the fact that they did not have access to credit in the past helped them at least to survive in a way. Although financial management is not crucial if there is no debt to manage, this must limit further expansion of their farming enterprises.

All 14 respondents acknowledged this fact and rated management training as an important financial strategy to ensure a long term successful of their farming. This aspect accentuates the fact that farmers are at least aware of their strategic needs for survival over the long run and emphasise their need for technology transfer. However, the main problem in this regard is the lack of competent instructors capacity and extension services in the Free State Province. Farmers must also be made aware of potential problems and risks that they do not recognise.

6. CONCLUSION

The preliminary results obtained in this survey emphasise the need of emerging farmers for support by government in their endeavours as well as their needs for well-structured management training. Low levels of education, insecure land tenure, poor access to credit, the relative small area cultivated per crop, levels of crop yields, obsolete machinery and equipment, the high male : female livestock ratios, herd management and reproduction levels, risk and risk aversion as well the

lack of financial management skills all influence liquidity levels and warrant closer investigation in a study of financial management strategies for emerging farmers.

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