

# **The costs and benefits of providing agricultural support services to rural households in the developing areas of South Africa**

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## **1. INTRODUCTION**

A programme to improve rural households' access to basic agricultural support services was introduced to selected target areas in the so-called 'homelands' or developing areas of South Africa in 1987. The Farmer Support Programme, as it is known, was initiated by the Development Bank of Southern Africa (DBSA) with the specific aim of dealing with the constraints faced by smallholder farmers in these areas. It is well known that farmers in the developing areas of South Africa operate largely outside an effective organisational support network, whereas white commercial farmers, who produce an estimated 90 per cent of the total value added agricultural production in the country, have access to support ranging from credit to advisory and extension services. The Farmer Support Programme aims to ensure that previously disadvantaged farmers or households are provided with similar support services. The programme was designed primarily with smallholder farmers in the 'homelands' in mind, among other reasons because of the legal restrictions on black landholding prior to 1991, and it should be judged on these terms.

The political dispensation under which the programme was implemented also explains the use of racial categories and terms like 'homeland'. The Farmer Support Programme assumes that small farmers, although they have limited resources, allocate these resources rationally, and that at least some of them would emerge as commercial farmers if afforded the opportunity. The greatest obstacles to increased production and commercial sales are lack of physical infrastructure; production inputs; credit; markets; extension, research and training; and security of production rights, for example, through legally protected rental agreements. The purpose of the programme is to ensure that support services are

available on demand to black, small farmers in defined target areas, and to improve their access to input and product markets (Van Rooyen et al, 1987). The programme is comprehensive, and aims to provide institutional support and incentives for farmers, so that they utilise their available resources more efficiently. In the long run, with the development of local entrepreneurial abilities and management skills and the operation of economic forces, conditions will be created for the commercialisation of the developing agricultural sector.

A criticism often levelled against the programme as an agricultural development strategy, is that it is expensive to implement and requires considerable outlays in production capital by the individual participants. It may be true that outlays are high; but it should be noted that it was the costliness and failure of other, often capital-intensive agricultural projects implemented in many of the less developed areas of South Africa, which motivated the introduction of the programme as an alternative development strategy. This article calculates the cost of providing these support services to farmers in two of the areas where the programme was implemented. It also quantifies the benefits accruing to households using these services. This information is then used to calculate the financial internal rate of return of the programme in the selected areas.

## **2. THE COSTS OF PROVIDING SUPPORT SERVICES TO FARMERS INVENDA AND LEBOWA**

Van Rooyen (1995) calculated the costs of the Farmer Support Programme compared with traditional farmer settlement models (Table 1). Apart from the estimates shown in the table, which were largely based on information from the DBSA's loan book and from preparation or appraisal reports, no other estimates of costs, such as recurrent costs, depreciation on assets, and so on, were made. This section tries to fill this gap and to provide further information on which to evaluate the cost of the programme.

Since the DBSA introduced the Farmer Support Programme in 1987 there has been a decline in state and settlement projects in the Bank's loan portfolio. Van Rooyen (1995) attributes the decline in the overall cost of the DBSA's annual agricultural loan portfolio since 1987 to the change in strategy promoted by the programme and the subsequent cost savings per farmer. The DBSA's

agricultural loan provisions now reach more beneficiaries with less financial outlay.

**Table 1: Relative costs of the Farmer Support Programme and traditional farmer settlement models (R)**

Item	Settlement models		Farmer Support Programme	
	Irrigation	Dry land	Irrigation	Dry land
Total fixed cost per ha	25 264	-	6 576	350
Annual variable cost per ha	6 063	-	2 922	750
Fixed cost per farmer	194 533	80 848	4 885	367
Variable cost per farmer	48 685	6 200	2 113	785

*Source: Van Rooyen (1995: 10).*

Many of the various support elements of the programme are financed through DBSA loans to a number of implementing agents. The various governments and their implementing agents (agricultural development corporations), contractors, farmers and the private sector also make some contribution to the funding, but the DBSA provides the major share, namely 67,8 per cent. Between 1987 and 1991, 38,6 per cent of the funds was devoted to financing infrastructure and marketing, and 29 per cent to moveable assets. Production inputs received 26,5 per cent of the funds, while extension and training attracted only 2,6 per cent, most of which was used for general infrastructure and equipment for the extension effort. The extension function remained largely the responsibility of the former homeland governments rather than the implementing agent.

In estimating the costs of the programme, each target area must be analysed in detail to determine the extent of the programme there, the various elements and agents involved, the sources and applications of funds and loans, and so on. But several misconceptions about the cost of implementing the programme should first be cleared up.

The cost of the programme includes investments in fixed assets such as cooperative buildings, depots and sheds. However, it can be argued that these costs should rather be viewed as fixed investment in the rural infrastructure that is required in many rural areas. In calculating the actual additional cost of implementing the programme we should therefore be more concerned with on-farm costs (farm inputs, fencing, and so on), recurrent costs incurred by

the implementing agents and the former homeland governments in providing extension and training services, and administration costs, including salaries and transport of staff managing the programme. These overhead costs incurred by implementing agents are often difficult to account for.

In implementing the programme, the DBSA grants loan funds to implementing agents, who on-lend these funds to farmers as production credit and to contractors who provide mechanisation services to farmers. The costs incurred by the implementing agents in managing these on-lent funds are covered through an interest mark-up of around 2 per cent, or grants received from the government of the specific homeland, or both. Investments in fixed and moveable assets are largely funded through loans, mostly from the DBSA. These capital investments cannot be viewed as part of the annual costs of the programme as argued above and should be treated separately. Annual depreciation cost and the opportunity cost of capital are the only items related to capital investments that can be included in the programme's annual recurrent costs.

To determine the costs of the programme it was necessary to consult the project descriptions and loan agreements for Venda and Lebowa separately.

## **2.1 Venda**

The first implementation of the programme in Venda emerged from an agreement between the DBSA and the Venda government, in which the ailing Venda Dryland Crop Production Project at Mashamba, Khakhu and Mulima was to be converted to the programme. Only Khakhu and Mashamba were considered in the calculations below.

### **2.1.1 Capital costs**

Capital costs incurred were for the construction of physical facilities and infrastructure, and the acquisition of moveable assets. These are detailed in Table 2. Both sets of costs were funded by two DBSA loans to the implementing agent Agriven (now the Venda Development Corporation).

The first loan was fully disbursed in 1989/90, while the second was disbursed over a three-year period from 1988 to 1990.

The funds acquired for moveable assets were on-lent by Agriven to

the primary cooperatives at Mulima, Mashamba and Khakhu, and they purchased the necessary mechanisation equipment and vehicles to render mechanisation services. The cooperatives have not yet repaid any of these loans, although Agriven has started repaying its loan to the DBSA.

**Table 2: Loan funds for physical facilities, infrastructure and moveable assets in the Farmer Support Programme, Venda (R)**

Item	Mashamba	Khakhu
Physical facilities and infrastructure		
Offices and storage facilities	60 950	34 500
Security fencing	5 750	4 600
Sheds (for tractors, etc)	8 050	4 140
Contingencies	3 738	2 162
<b>Total</b>	<b>78 488</b>	<b>45 402</b>
Moveable assets		
Vehicles	21 160	2 875
45-58 kW tractors (8)	372 094	114 977
Implements	121 002	32 373
Office equipment	6 130	4 405
<b>Total</b>	<b>520 386</b>	<b>154 630</b>

*Source:* DBSA loan agreements.

### 2.1.2 Production and operational capital

The DBSA also provided a third loan of R566 985 to the implementing agent for production and operating capital. This is operated as a revolving credit fund for the three target areas and is used to:

- grant production credit to individual farmers with *de facto* land tenure rights for agricultural inputs and mechanisation services; no credit is granted to farmers with outstanding debts from previous seasons until such debt is fully redeemed
- finance the operational expenses of the cooperatives with respect to the provision of mechanisation services
- grant credit to individual mechanisation contractors.

In addition to the loan of R566 985, the Venda government contributed a further R724 769 towards production capital. This was largely in the form of subsidised interest on production credit and a mechanisation subsidy paid over to cooperatives. The

subsidy on production credit is transferred monthly to the cooperatives and is based on outstanding credit to farmers for production inputs. The mechanisation subsidy is based on the actual total cost of services rendered minus the amount received from farmers. According to the loan agreement, these subsidies will eventually be phased out. Farmers contribute their own funds in addition to production credit and the subsidies mentioned above.

Although the loan agreement and project description make provision for the establishment of independent entrepreneurs to provide mechanisation services to farmers, this has not taken place. Mechanisation services are still only provided by the mechanisation units of the three cooperatives and thus no credit was on-lent to any mechanisation contractors.

### **2.1.3 Determining the cost of the Farmer Support Programme at Khakhu and Mashamba**

The calculations of the costs per farmer and per hectare are not without flaws, since non-members often also make use of the services offered through the cooperatives. The number of farmers purchasing inputs and paying for ploughing services is thus likely to be greater than the number of registered and paid-up members of the cooperatives.

Using the latest information on farmers and area cultivated under the programme, it was possible to estimate the cost per unit for various cost categories. According to the latest information provided by the Venda Development Corporation (1994), there are 134 hectares of arable land under the programme in Khakhu and around 300 farmers are members of the Khakhu cooperative. In Mashamba, 264 hectares are being cultivated under the programme by 592 members of the Mashamba cooperative.

Overhead costs incurred by the implementing agent, in this case the Venda Development Corporation, are often overlooked. An effort is made here to allocate a share of the Corporation's administration costs to the programme. Just one permanent staff member of the Corporation is involved full-time in the Farmer Support Programme in Venda. Account is taken of this person's costs in respect of salary, office space and transport. The administration of loans also involves a cost which must be included. These costs amount to R154 000 per annum (Venda Development Corporation, 1994).

Apart from the various subsidies referred to earlier, the Venda Department of Agriculture and Forestry is responsible for the provision of extension services by one extension officer in Khakhu and two in Mashamba. The estimated annual cost in respect of salaries and transport is approximately R73 000 for Khakhu and R112 000 for Mashamba.

Each of the cooperatives employs staff who are remunerated from profits made by the cooperative from sales of goods. Mashamba cooperative is an exception in that it is managed by an employee of the Venda Development Corporation. The Corporation is therefore responsible for this person's salary, which is included in the overhead costs referred to above. The monthly salary bill of the Mashamba cooperative's staff of 11 amounts to R3 718 and is paid from their own funds. The staff of the Khakhu cooperative comprises a manager, a cashier, two tractor drivers and two guards. The monthly salary bill amounts to R2 205, and is also paid from the cooperative's own funds. These costs were not included in the estimation of the recurrent costs related to the programme, since they are funded by profits emanating from the programme itself and the farming activity it promotes.

It can be argued that the cost of the programme at Mashamba and Khakhu involves only the recurrent cost of the implementing agent and the government department concerned. Farmers also incur costs, but these are in connection with the production of crops for sale or for home consumption. Although the individual outlay per household purchasing modern inputs could well be too high for these poor households, it has no bearing on the actual costs of providing the services to the farmers.

For comparative purposes it is worthwhile to calculate the capital costs of the programme, that is, fixed investment and moveable assets. However, these are not annual costs but one-off investments in capital items necessary for the provision of services to farmers. From the figures presented in Table 3, it is determined that the capital costs of the programme at Mashamba amount to R598 874 or R2 275 per hectare cultivated. By comparison, the capital costs at Khakhu are R200 032 or R1 495 per hectare. As mentioned earlier, the actual costs per hectare and per farmer could be somewhat lower because non-members also utilise the services.

Total recurrent costs amounted to R275 000 (R1 045/ha) in

Mashamba and R166 000 (R1 238/ha) in Khakhu, including the costs of providing extension services, credit and mechanisation subsidies, the implementing agent's administrative overheads and depreciation on capital items. It should, however, be noted that in Table 3 'moveable assets' refers to tractors and implements currently owned by the cooperatives, whereas in Table 5 for Lebowa 'moveable assets' refers to loans to private contractors.

**Table 3: Capital and recurrent costs of the Farmer Support Programme at Mashamba and Khakhu, Venda (R)**

Item	Mashamba			Khakhu		
	Total	Per hectare	Per farmer	Total	Per hectare	Per farmer
Fixed investment*						
Physical facilities and infrastructure	78 500	298	133	45 500	339	194
Moveable assets*	520 000	1 977	878	155 000	1 156	662
Annual recurrent costs	275 000	1 045	464	166 000	1 238	709
1. Agriven						
Overheads†	51 000			51 000		
Depreciation	30 000			10 000		
2. Venda Government						
Extention	112 000			73 000		
Subsidies	82 000			32 000		

\* Investment by implementing agent funded through DBSA loans (total amount).

† It is assumed that the overheads can be shared equally amongst Mashamba, Khakhu and Mulima.

## 2.2 Lebowa

The reasoning behind the calculation of the cost of the programme in Venda applies equally to Lebowa. The costs in Phokoane and Kadishi were determined together, because the two target areas were treated as a single programme in the loan agreement between the DBSA and the Lebowa Agricultural Company.

### 2.2.1 Capital costs

When the maize projects at Phokoane and Kadishi were converted to the Farmer Support Programme, all existing buildings and moveable assets were transferred to the new body. Capital expenditure was therefore reduced considerably. The programme made provision for upgrading and extending the existing buildings

and facilities of the two cooperatives to a total amount estimated at R115 000. The existing cooperative buildings were taken over at a book value of R61 000, resulting in capital expenditures on fixed improvements totalling R176 000. The Lebowa Agricultural Company also provided credit to 29 mechanisation contractors, an amount estimated at R1 441 500.

Both the items detailed in Table 4 were partly funded by two DBSA loans to the Lebowa Agricultural Company, specified as follows:

- Loan 1: Cooperative facilities: R92 000 over 20 years at 8 per cent interest with a two-year grace period.
- Loan 2: Mechanisation equipment: R1 153 200 over 8 years at 8 per cent interest with a one-year grace period.

**Table 4: Capital costs of the Fanner Support Programme at Phokoane and Kadishi, Lebowa (R)**

<b>Item</b>	<b>Total costs</b>	<b>DBSA loan</b>
Buildings and facilities	115 000	92 000
Mechanisation equipment (loans)	1 441 500	1 153 200
Tractors	1 131 000	904 800
Trailers and implements	310-500	248 400

*Source:* DBSA loan agreements.

The balance of the cost of extending and upgrading the cooperative facilities amounted to R23 000 and was paid by the Lebowa government. The balance of the cost of mechanisation equipment was shared equally between the Lebowa Agricultural Company and the contractors, who each paid a deposit on their loan to purchase the mechanisation package.

### **2.2.2 Production credit**

The two cooperatives granted production credit to their members to a total estimated amount of R836 700. The DBSA funded the bulk of this through a loan of R669 360 to the Lebowa Agricultural Company. The balance was shared between the company and the farmers. The loan was provided over 6 years at 6 per cent interest and with a four-year grace period. The production credit is operated as a revolving credit fund and is used for:

- granting credit to individual farmers with *de facto* land tenure rights for agricultural inputs and mechanisation services
- granting credit to mechanisation contractors for fuel, parts and servicing of mechanisation equipment.

### **2.2.3 Determining the cost of the Farmer Support Programme at Phokoane and Kadishi**

The same cost items were again identified and calculated. Since the cost items in the loan agreements were not allocated between the two target areas, it was not possible to determine the costs for each separately. In Phokoane it has been estimated that 5 200 farmers are currently served by the programme and make use of the cooperative's facilities, and that around 6 800 hectares are cultivated in the immediate vicinity of the cooperative. At Kadishi it is estimated that 165 farmers are served by the cooperative and 165 hectares cultivated (Boshoff, 1994). These figures were used in calculating the costs per hectare and per farmer.

The overheads of the implementing agent were again included in therecurrent costs. These consisted of the salaries of the cooperative managers and accountants, who are all employed by the Lebowa Agricultural Company, and the salaries, transport costs, and so on of the staff in the company who are responsible for managing the programme. The Lebowa government pays the salaries of the two extension officers who were seconded to the programme. The other staff members of the two cooperatives; are paid from their own funds and are therefore excluded from the total recurrent costs. Total annual recurrent costs of the programme in Lebowa amount to R478 500 (or R89 per farmer per year), including the costs of providing extension services, credit and inputs, the implementing agent's administrative overheads and depreciation on capital items. Total capital investment amounted to R1 617 500 or R302 per farmer, which is considerably less than the norms for farmer settlement and other projects. Fixed investment is actually considerably smaller, owing to the large loan amount of R1 441 500 allocated to private contractors to finance the purchase of tractors and implements.

**Table 5: Capital and recurrent costs of the Farmer Support Programme in Lebowa (R)**

Item	Phokoane and Kadishl		
	Total	Per hectare	Per farmer
Fixed investment*	176 000	25	33
Cooperative facilities			
Moveable assets (loans)	1 441 500	207	269
Annual recurrent costs	478 500	69	89
1. Lebowa Agricultural Company			
Overheads **	364 000		
Depreciation ***	17 839		
2. Lebowa government			
Extension	90 000		
Depreciation †	6 661		

\* Investment by implementing agent funded through DBSA loans (total amount).

\*\* Include salaries, fuel for vehicles (including extension officers' vehicle), etc.

\*\*\* Depreciation on moveable assets and fixed improvements.

† Depreciation on extension officers' vehicle.

The unit cost of the programme is again overestimated, because the number of farmers actually serviced by the programme is much higher than the number of registered cooperative members. Boshoff (1994) estimated that the programme in Phokoane had reached an additional 3 880 farmers. It could therefore be argued that a total of 9 080 farmers are serviced or influenced by the programme. This would mean that the capital costs per farmer were as low as R178 and the annual recurrent costs as low as R53 per farmer. Although these farmers were not serviced directly through extension and credit, the diffusion of new technology and improved yields were noticeable. Farmers' access to (high-yielding) inputs has improved and new maize cultivation techniques have been disseminated informally in the community.

### **3. BENEFITS ACCRUING TO HOUSEHOLDS**

How do rural households benefit from the availability of agricultural support services? A number of studies (Van Zyl et al, 1991; Kirsten et al, 1993; Kirsten, 1994) have shown how access to support services provided under the Farmer Support Programme has led to increased household production of staple foods. This is often viewed as the major benefit and a measure of the

programme's success.

However, many critics of the programme argue that it increases indebtedness amongst participants. This is mainly because of the new cultivation methods, which require that modern inputs be purchased, often on credit. The credit element is often overemphasised. The high debt burden opens households to increased risk and indebtedness in adverse weather conditions. It has been shown that even in a good year many households would not make any 'profit' in the real sense of the word (see Kirsten, 1994). This argument assumes, however, that households have only one source of income, namely agriculture. Evidence from many studies of rural households in southern Africa shows that this is not so. Households have multiple sources of income, including migrant wages, pensions and informal sales. It is possible that households use income from other sources to pay agricultural loans. It is therefore appropriate to view the value of a household's consumption of the staple food they produce as income accruing to that household. The discrepancy between the producer price for maize and the retail price of a bag of maize meal makes this calculation important. It can be argued that many households have no incentive to produce more staple food than their own needs, because of unfavourable price relationships. Coarse maize can at best be sold to local traders at R50 per bag, while the price of maize meal varies between R98 and R103 per bag in local stores (Nkosi, 1992). This confirms the high value of household consumption of maize in relation to sales of surplus production. Assuming an average price for maize meal of R100 per bag and assuming that production costs are paid by other sources of household income such as remittances or pensions, the value of the household's maize production can be calculated as shown in Table 6.

Table 6 clearly shows that increased maize production is of some benefit to households when household consumption is also valued. If they had not produced their own maize, households would have had to buy more or less one bag of maize meal per month, amounting to an annual expenditure of around R1 400 (assuming that a household of eight members requires about 14 bags of maize meal a year). Production of staple food makes it possible for the household to allocate scarce income to other goods and services. In comparing the initial outlay of input costs with the value of production, it seems a 'profitable' venture in a normal production

year. With the money spent on inputs, the household would only have been able to purchase staple food for between three and four months, whereas in Lebowa, and particularly in Phokoane, the investment provided the household with enough staple food for a full year. Table 6 also shows that erroneous conclusions could be drawn if the value of household consumption is not taken into account.

**Table 6: Value of household maize production in Venda and Lebowa, 1990/1**

Item	Venda		Lebowa	
	Khakhu	Mashamba	Phokoane	Kadishi
Maize production statistics (averages)*				
Area planted (ha)	1	0.9	1,56	2.3
Recorded maize yield (t)**	0.95	0.81	2,71	1.62
Household consumption	8 bags (0,65 t)	7 bags (0.56 t)	15 bags (1.251)	12 bags (1 t)
Maize sold	4 bags (0.3 t)	3 bags (0,25 t)	18 bags (1.46 t)	8 bags (0.65 t)
Input costs (R/ha)*	219,65	228,69	486.50	333.55
Value of total household maize production (R)				
Household consumption	800	700	1500	1 200
Maize sales***	200	150	441	181
Total value	1 000	850	1941	1 381
Gross margin per household (R)	780,35	644,18	1 182.06	840.65

\* Average figures obtained from the 1991 survey of rural households participating in the Farmer Support Programme.

\*\* Average total recorded yields for 1990/1.

\*\*\* Most Venda households sell their maize to local traders at a price of around R50/bag.

Lebowa households sell to agents of the maize board and receive a net producer price of R302/t (1990/1).

The results from Venda show that households are selling some of their maize, despite the fact that the total harvest is insufficient for a year's household needs. Households sell a few bags of maize to repay at least part of their production loan and thus qualify for credit during the next season. The balance in respect of production credit or household consumption is covered by contributions from other family members through migrant wages, pensions, and so on.

In determining whether maize production on dryland is a profitable venture from the point of view of household food security, the

value of household consumption and the fact that the household often has more than one source of income should be taken into account. The discussion above, which meets these requirements, shows that it pays the household to purchase off-farm inputs and apply cultivation methods promoted by the programme. The return, taking into consideration the value of household consumption, is much higher than the initial production costs. If the surplus is not enough to cover production costs, other sources of income will have to be used. This will only happen if the credit system is of such a nature that households will repay their loan. If households do not have other sources of income the argument will not hold, and only farmers in certain areas will be able to make ends meet.

It can be argued that the programme is expensive since it requires production outlays on relatively expensive off-farm inputs. However, the benefits or returns from these investments are relatively high. The benefit in respect of sufficient household consumption is valued at more than three times the original outlay. Before they gained access to support services, including extension, households in Lebowa were not able to produce enough for household consumption.

#### **4. ESTIMATING THE RATE OF RETURN OF THE FARMER SUPPORT PROGRAMME IN VENDA AND LEBOWA**

The common method for evaluating the financial viability of a project (*ex ante*) is to calculate the financial rate of return (Squire & Van der Tak, 1975; Duvignau & Prasad, 1984). The financial internal rate of return or financial rate of return is the discount rate which leads to a net present value of zero. By this criterion, a project is acceptable if its financial internal rate of return equals or exceeds the opportunity cost of capital (Gittinger, 1982) - in this instance, the marginal cost of money or the rate at which money was borrowed to implement the programme. Determining the opportunity cost of capital is difficult, but in developing countries it ranges between 8 and 15 per cent in real terms (Gittinger, 1982).

The calculation made here is an incremental internal rate of return which only takes account of incremental net benefits resulting from the programme. The financial rates of return on the funds invested in the programme in Venda and Lebowa were calculated using the costs and benefits identified earlier. The benefits accruing to the households (the gross margin as calculated in Table 6) were

considered to be the annual flow of benefits to the programme. The annual recurrent costs were subtracted from this benefit stream to obtain the net benefit stream with the programme. The net incremental benefit was subsequently calculated taking cognisance of the household benefits without the programme. For these calculations, data from households that are not part of the programme and yield and input data recorded before its implementation (see Adendorf, 1992) were used.

The financial internal rates of return for the programme in Lebowa and Venda were calculated on the basis of the two target areas discussed above. Capital investment in both areas was taken as the fixed investment plus the investment in moveable assets (tractors, implements) by the individual contractors (in Lebowa) and cooperatives (in Venda). The investments in moveables are loans to contractors or implementing agents which are being repaid. It is therefore not strictly correct to view them as part of the initial capital outlay, but for the purpose of calculating the rate of return they were considered as such. Despite this, the financial internal rates of return for both areas appear to be considerably, higher than the marginal cost of capital (the 8 per cent at which DBSA" funds were loaned to the implementing agents). These rates of return are 12,3 per cent for Venda, and 130,9 per cent for Lebowa.

These estimates confirm earlier results on the success of the Farmer Support Programme in Lebowa (Kirsten et al, 1993; Kirsten, 1994). The yield increases resulting from the implementation of the programme ;

(especially at Phokoane) and the large number of participating households in that area generated the large incremental benefits which led to the exceptionally high rate of return in Lebowa. The rather low rate of return in Venda can be attributed partly to the small number of households that benefit from the programme.

The estimates are conservative, since they exclude households that benefit from the support services but are not members of the cooperative. And note that the rates of return should not be compared, since they do not constitute a good measure for ranking projects and since these calculations were done *ex post* and not *ex ante* as in normal benefit-cost analysis.

**Table 7: The financial internal rates of return of the Farmer Support Programme in Venda and Lebowa**

Item	Venda	
Number of households	892	
Total fixed Investment (R)	124 000	
Annualised	6 200	1
Per household	139	7
Moveable assets (loans) (R)	675 000	1
Annualised	48 375	
Per household	756	4
Annual recurrent costs (R)	441 000	4
Financial internal rate of return (%)	12.3	1
		3

The rates of return and unit costs calculated in this article provide enough reason to reject claims that the Farmer Support Programme is costly, particularly in Lebowa. On the contrary, the programme is inexpensive, given the immense benefits that accrue to households through improved and equitable access to basic agricultural support services.

## 5. CONCLUSION

The Farmer Support Programme has been criticised as just another expensive experiment in agricultural development. This article answers that criticism by shedding light on the costs and benefits of improving the access of rural households to basic agricultural services such as extension, credit, inputs, mechanisation and markets. The calculations and arguments presented here show that the benefits of the programme are much greater than the capital outlays and recurrent costs of the implementing agent. The study of Lebowa shows that the benefits are even greater when the programme is well designed and correctly implemented and more households are reached. This study was done in a particular political context. With the re-incorporation of the homelands and 'Independent' states into South Africa, much of what has been argued here might be deemed irrelevant. However, as the Department of Agriculture embarks on a programme to broaden access to agriculture and agricultural services, the results reported here might well provide a rough estimate of the possible benefits.

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