and sheep were competitive or supplementary, depending on the region. Beef cattle production should be based on knowledge and the understanding of the people for beef.

Attention should also be given to the removal of impediments, e.g. high costs of securing excessive hygienic standards in communal benefits, environmental interactions, basic needs, etc.

Note

1 Based on a Ms Agri dissertation in Agricultural Economics at the University of Pretoria.

References


Commonwealth Agricultural Bureau, England.


The provision of a place where land, usually low lying and near water, is ploughed and small, equally sized plots are allocated.

This system differs from the stamp system of savings used in the Savings Development Movement in Zimbabwe to vary from low amounts during the crop season to high sums during the post-harvest season. Figure 7 (1979) examined savings balances for clubs operating in the Ngzi district of Zimbabwe between 1973 and 1976. He found an increase in savings during the planting season and a decrease during the harvest season for the illiterate saver (Von Schroeder and Buchan, 1987).

Agriculture (KDA) subsidizes certain types of agricultural inputs. Bartlett’s Sphericity test statistic was significant at the 1% level, supporting use of principal component analysis (2). The index PCT, which accounted for 69% of correlations between the four variables, was estimated as:
...the club and did not depend entirely on their savings. Where this happens, savings records do not exist for the individual, or if they exist they are often incorrect. ACAT field workers may act as auditors, inspecting club books from time to time (Gwanya, 1988). However, the ability of ACAT staff to visit clubs is severely hampered by limited resources (Seibel and Meredith, 1987).

Chitsike (1988:78) found amounts saved by members in savings clubs in Zimbabwe to vary from low amounts during the crop growing season to high sums during the post-harvest season. Swanepoel (1990) examined savings balances for clubs operating in the Ngczi district of Zimbabwe between 1973 and 1976. He found that the average balance for the season for each year of the period,海尔克和克林(Nkhl 1987:40) reported that the club during June and September and then fell in October for ACAT savings clubs in Swaziland during 1981. December savings were reported to be the lowest. Gwanya (1988:22) observed Transkeian members generally saving towards some predetermined goal, usually a seasonal investment such as an input package. Their savings were usually lowest in December, foll­owing the planting season.

The above review of past communal clubs studies indicates a need for more research on attributes and savings behaviour of local (South African) club members. By studying these aspects, this paper hopes to identify incentives for joining local communal clubs and whether savings patterns remain of those clubs elsewhere in Southern Africa.

3. Survey data

Communal clubs serviced by ACAT in KwaZulu were stratified by region for which ACAT field staff members were responsible. Eight strata were drawn (Fig. 1) while defining with con­sumer price index published by the South African Reserve Bank (South African Reserve Bank).

Table 2: Correlations between distance to infrastructure variables (Source: DisBank, 1990)

<table>
<thead>
<tr>
<th>Distance to Infrastructure Variable</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disbank</td>
<td>0.96407 (DISBANK)</td>
</tr>
<tr>
<td>Dispost</td>
<td>0.96426 (DNA)</td>
</tr>
<tr>
<td>DIspay</td>
<td>0.96426 (DISBANK)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISPOST)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISBANK)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISP)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISP)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISBANK)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISP)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISP)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISBANK)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISP)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISP)</td>
</tr>
<tr>
<td>Distance to Training Centre</td>
<td>0.92902 (DISP)</td>
</tr>
</tbody>
</table>

...denotes significance at the 1% level, "significant..." at the 5% level and "significant..." at the 10% level.

Bargaining power is significant at the 1% level, supporting the view that"significant..." at the 5% level and "significant..." at the 10% level.

5. Distance to Institutional amenities (PDI)

Savings clubs act as catalysts which aid development by providing needed infrastructure (Von Platte and Roos, 1983; Devereux, et al., 1987; Adams, 1986; Bothell (1976). On the other hand, it has been recognized that many rural deposits would increase if financial intermediaries opened up branches in these areas.

An index of distance from club to certain infrastructural amenities (PDI) was constructed using amenities similar to those provided by a savings club - a post office on a place where club members can deposit their savings. Distance variables used were distances in kilometres to the nearest bank (DISBANK), the nearest post office (DISPOST) and the nearest agricultural inputs facility (DISBANK).

Distance variables used for these variables tend to be positive because these amenities tend to be found as commercial centres (Table 1).

Table 1: Correlations between training variables for 106 ACAT communal club members, KwaZulu, 1989

<table>
<thead>
<tr>
<th>Variable</th>
<th>Memtrain</th>
<th>Memper1</th>
<th>Memper2</th>
<th>Distra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memtrain</td>
<td>1.0000</td>
<td>0.8611</td>
<td>0.69102</td>
<td>0.7996</td>
</tr>
<tr>
<td>Memper1</td>
<td>0.8611**</td>
<td>1.0000</td>
<td>0.96386</td>
<td>0.8039</td>
</tr>
<tr>
<td>Memper2</td>
<td>0.69102</td>
<td>0.96386</td>
<td>1.0000</td>
<td>0.8039</td>
</tr>
<tr>
<td>Distra</td>
<td>0.7996</td>
<td>0.8039</td>
<td>0.8039</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

...denotes significance at the 1% level, "significant..." at the 5% level and "significant..." at the 10% level.

6. Savings clubs and communal gardens

Savings clubs offer rural people a place to deposit money. In ACAT clubs the membership fee is used to purchase inputs collectively. Members receive inputs in proportion to the amount of money they have contributed (Swanepoel, 1990). The membership fee charged in savings clubs is for input packages and a minute book (Gwanya, 1988:22). In total, 43 clubs and 106 members were sampled. Sixteen of the 42 members who belonged to communal garden clubs from which 42 members were sampled. Of the 106 members belonging to garden clubs, only 38 had accessible savings information for the period 1981 to 1985.

4. Data Analysis methods

4.1 Principal component analysis

Principal component analysis (PCA) is used to transform a set of correlated variables into a set of uncorrelated variables. The first three variables were used as input for principal component analysis. As no single correlation analysis (3) produced a "general..." index, further measures were made to identify the most significant variables. The first three variables were significantly positively correlated with each other and negatively correlated with DISP (Table 1).

The index PCT, which accounted for 69% of correlations between the four variables and had an eigenvalue of 2.27, was estimated as:

PCT = 0.4927(MEMTRAIN) + 0.5947(MEMPER1) + 0.9142(MEMPER2) - 0.2571(DISTRA) (2)

...denotes significance at the 1% level, "significant..." at the 5% level and "significant..." at the 10% level.

Barter's Sphericity test statistic was significant at the 1% level, supporting the view that "significant..." at the 5% level and "significant..." at the 10% level.

This dummy variable which equals 1 if the member has any formal savings and 0 if the member does not have any. Members of garden clubs should more likely be inclined to open for-
savings
GAR
garden clubs
Garden clubs tend to be market orientated, in that surplus production, such as keeping money aside for Christmas celebrations and family expenditure. These savings patterns followed those identified by Smith (1976) in Zimbabwe. 

6.1 Discriminant analysis

Table 3: Correlation matrix of discriminant variables for 106 incomes per household member than savings club members. A more farm assets). Assets used to estimate these clubs could therefore have higher annual on-farm (rand) for sale as they lack a accounts as they are dependent on registers being available. When registers are purchased from ACAT staff members. This impacts the recording process.

6. Results

6.1 Discriminant analysis

Table 3: Correlation matrix of discriminant variables for 106 ACAT communal club members, KwaZulu, 1989

Table 4: Discriminant function results for variables which best distinguish between ACAT garden club and savings club members, KwaZulu, 1989

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Group mean</th>
<th>Unstandardized</th>
<th>Standardized</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINC (R)</td>
<td>208,46</td>
<td>104,26***</td>
<td></td>
</tr>
<tr>
<td>PC</td>
<td>-38,66</td>
<td>29,07***</td>
<td></td>
</tr>
<tr>
<td>KDA</td>
<td>36,64</td>
<td>4,93**</td>
<td></td>
</tr>
<tr>
<td>PCD</td>
<td>46,88</td>
<td>65,45**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,00</td>
</tr>
</tbody>
</table>

** denotes significantly different group means at the 1% level, * the 5% level, and \* the 10% level.

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>FINC</th>
<th>PCT</th>
<th>KDA</th>
<th>PCD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0,0029</td>
<td>-0,082</td>
<td>0,0341</td>
<td>-0,0135</td>
</tr>
<tr>
<td></td>
<td>0,62***</td>
<td>-0,5771</td>
<td>0,5701</td>
<td>-0,3704</td>
</tr>
<tr>
<td>Canonical correlation</td>
<td>-0,877</td>
<td>0,52</td>
<td>0,55</td>
<td>0,55</td>
</tr>
<tr>
<td>Predictive Accuracy</td>
<td>0,19</td>
<td>0,18</td>
<td>0,18</td>
<td>0,19</td>
</tr>
<tr>
<td>Estimation cases</td>
<td>50,04</td>
<td>50,04</td>
<td>50,04</td>
<td>50,04</td>
</tr>
<tr>
<td></td>
<td>70,4</td>
<td>88,8</td>
<td>88,8</td>
<td>88,8</td>
</tr>
<tr>
<td>All members</td>
<td>81,7</td>
<td>81,7</td>
<td>81,7</td>
<td>81,7</td>
</tr>
<tr>
<td></td>
<td>66,7</td>
<td>85,0</td>
<td>77,1</td>
<td>81,7</td>
</tr>
<tr>
<td>Hold-out cases</td>
<td>66,7</td>
<td>85,0</td>
<td>77,1</td>
<td>81,7</td>
</tr>
</tbody>
</table>

** denotes significance at the 1% level, * the 5% level, ** the 10% level.

Post-ranking savings are low, indicating allocation of funds to alternative uses such as local government, Christmas celebrations and family expenditure. These savings patterns followed those identified by Smith (1976) in Zimbabwe. 

Real total amounts saved and withdrawn during 1966 fell by 43% from 1965 levels. Real 1967 and 1968 amounts saved and withdrawn were similar to 1966 levels. Savings patterns in these three years, however, followed the same monthly trends as shown in figure 1, indicating that members still 'target saved' to purchase inputs 'packages'. Two factors are probably responsible for the fall in real amounts saved and withdrawn from 1965 through to 1967. Firstly, people may have started to pay cash for inputs instead of saving through their clubs. Secondly, access to savings was limited, because people were withdrawing more of their savings than deposits. 

 realtime budgeting of ACAT-Kwazi from 1985 to 1989. The fall in average membership encouraging in Swaziland and Gwanya (1988) for ACAT savings clubs in the Transkei. It suggests a swing by savings club members towards other savings and input purchasing opportunities, where interest may be allocated and where input supply services are better. The drop in savings and withdrawals for input centers in the clubs was not associated with rising input package prices as real input package prices, remained constant over the study period (Agapea, 1984-1989).

7. Conclusions

Discriminant analysis indicates that garden club members tend to have higher annual on-farm income per household member. This could result from garden clubs encouraging their members to market surplus production. Communal gardens can therefore become important tools for raising household incomes in the surveyed areas.

Members belonging to savings clubs tend to have more ACAT training experience than garden club members, while garden club members tend to have more KDA extension personnel visits. Members of savings clubs seem to rely more heavily on ACAT for extension input. Both clubs offer members the incentive of access to technical information and training which can raise farm productivity. 

Members of savings clubs tend to be from infrastructure areas than garden club members. Members may join savings clubs to benefit from the subsistence services they provide (plan to purchase inputs and deposit money). Savings club registers are not being used effectively. Apart from being no interest incentive to encourage savings, registers appear too complex for use by club secretaries. Savings club members tend to deposit more funds in clubs just before the planting season (August to November). Post planting savings are much lower in the sample. The high level of funds to alternative uses (reduced incentive to save until next planting season). These patterns of group membership set preconditions to a drop in savings club membership. Savings clubs are used as suppliers of inputs rather than as savings institutions.

Real amounts saved and withdrawn in surveyed clubs fell between 1985 and 1987 due to a decrease in average membership. This was associated with a fall in real annual ACAT-Kwazi operating budgets. The budget cuts had a detrimental effect on ACAT services (staff and assistance with input deliveries), causing members to seek alternative sources for obtaining inputs and depositing money.

Figure 1: Total monthly savings and withdrawals for 15 ACAT savings clubs, KwaZulu, 1985 (June 1985 = 100)

Savings Withdrawals

<table>
<thead>
<tr>
<th>J F M A M J J A S O N D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1400</td>
</tr>
<tr>
<td>1200</td>
</tr>
<tr>
<td>1000</td>
</tr>
<tr>
<td>800</td>
</tr>
<tr>
<td>600</td>
</tr>
<tr>
<td>400</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Agapea, Vol 29, No 4 (December 1960)
5.4 Number of annual KDA extension officer visits to members club (KDA)

Beies (1979:277) reports that KDA extension personnel ac-

tively promote community gardens. Members who belong to
garden clubs are thus expected to receive more KDA extension
visits than those who belong members to savings clubs.

5.5 Members annual on-farm income per household member (FINC)

Garden clubs tend to be market orientated, in that surplus
production is positively related to income per household member than savings club members. A
relation between savings and FINC is anticipated.

5.6 Monetary value of 'agricultural' assets of members household (WEA)

Chinike (1988:132) used an index of possession of farm assets to
measure success of cooperative members in Zimbabwe. Savings club members tended to have higher index scores (own
farm assets). Assets estimated to be valued were: tractors, tractors, wheel-hammers,
scotch carts, hand implements and knapsack sprayers. Garden club
members are expected to hold more wealth in the form of farm assets than savings club members, as they tend to be more market orientated.

Correlations between the six independent variables and the club group variables are given in Table 3. Coefficients agree
with prior reasoning on relationships between GAR and the discriminating variables.

Table 3: Correlation matrix of discriminant variables for 106
ACAT communal club members, KwaZulu, 1989

<table>
<thead>
<tr>
<th>Variable</th>
<th>PCT</th>
<th>PCD</th>
<th>SAV</th>
<th>KDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCT</td>
<td>208.46</td>
<td>104.26***</td>
<td>0.13</td>
<td>0.24</td>
</tr>
<tr>
<td>PCD</td>
<td>-0.30</td>
<td>1.00***</td>
<td>0.0029</td>
<td>0.0029</td>
</tr>
<tr>
<td>SAV</td>
<td>0.0029</td>
<td>0.0029</td>
<td>1.00***</td>
<td>0.0029</td>
</tr>
<tr>
<td>KDA</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>1.00***</td>
</tr>
</tbody>
</table>

6. Results

6.1 Discriminant analysis

Standardized coefficients estimated for the discriminant func-
tion distinguishing between garden and savings club members are shown in Table 4. Seventy-five percent of the variance in the discriminant function (Wilks' Lambda) was used to estimate the function, and 25%
explained by the functions. The function was significant at the 1% level.

Table 4: Discriminant function results for variables which best
distinguish between ACAT garden club and savings club mem-
bers, KwaZulu, 1989

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized</th>
<th>Standardized</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>6.26***</td>
<td>6.26***</td>
</tr>
<tr>
<td>Wilks' Lambda</td>
<td>0.70</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Canonical correlation 0.35

Predictive Accuracy

- Wilks' Lambda: 0.70
- All members: 1.00

Figure 1 shows total monthly savings and withdrawals for 15
savings clubs during 1985. Savings increase during the pre-
planting season months (August to November), when input
purchases are made. This implies that members of savings
clubs routinely use their club facilities to get access to inputs.
They may not necessarily use savings clubs to build up savings deposits.

Savings club registers are not being used effectively. Apart from being too insecure interest to encourage saving, registers appear too complex for use by club secretaries.

Constraints members to seek alternative sources for ob-
taining inputs rather than savings deposits.

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Constraints members to seek alternative sources for ob-
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Results suggest that policy makers can use garden and savings clubs to improve access of communal farmers in KwaZulu to inputs and technical information. Organizers of savings club movements should perhaps address the problem of ineffective ‘western-styled’ savings methods and concentrate on improving member access to inputs. Budget cuts restrict services and reduce member incentives to use clubs.

References


Results suggest that policy makers can use garden and savings clubs to improve access of communal farmers in KwaZulu to inputs and technical information. Organisers of savings club movements should perhaps address the problem of ineffective "western-styled" savings methods and concentrate on improving members' access to inputs. Budget cuts restrict services and reduce member incentives to use clubs.

References


