Diversity of the rural farming households and policy issues: an analysis based on a case study in the Northern Cape Province in South Africa

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Abstract*:*

The transition from apartheid to integrated development is a contradictory process characterised by negotiations between an intervention and a market-driven liberal approach. Regarding agriculture, it was expected that a highly efficient and economically viable market-directed farming sector should enable the development of "small scale black commercial farms". Some economic interventions were also planned to support the development of these farms. But both design and implementation of such interventions are problematic as rural farming households are very diverse and as the role of agriculture is more important and more complex than its sole contribution to income generation. However, on the basis of a research carried out in a former reserve in the Northern Cape Province (Leliefontein), it is shown how this diversity can be analysed and formalised. In particular, it is possible to model the diversity of rural households into typologies and to understand the strategies of each type of households with regards to its objectives concerning agricultural activities. An accurate knowledge of the diversity of farm situations may help discuss the consequences of alternative agricultural policy measures for households in different social situations.

Introduction

In South Africa the new political era has come up with much consideration on agriculture and rural development. Agricultural and land reform programmes are currently viewed as important aspects of development. They were likely to be important programmes for growth with an equity strategy in South African agriculture (Van Rooyen *et al.* 1994). In the framework of the RDP, according to the new policy orientations, Government services had to direct their actions towards "black" or "coloured" production activities (NDA, 1998).

However some lack of information regarding the existing situations in these communities, as well as the importance of the current changes, resulted in specific difficulties to design development and extension policies which could benefit them. Within these processes, one of the objectives of the research in South Africa is to produce relevant knowledge about these agricultural situations to help design, implement and assess adapted policy measures.

One of the problem faced by policy makers regarding agriculture is that rural farming households are very diverse and the role of agriculture is more important and more complex than its sole contribution to income generation. But in this paper it shall be demonstrated that this diversity can be analysed and formalised. In particular, it is possible to model the diversity of rural households into typologies and to better understand the strategies of each type of households with regard to its objectives concerning agricultural activities. Finally it will be shown that an accurate knowledge of the diversity of farm situations may help discuss the consequences of alternative agricultural policies for households in different social situations.

This paper is based on a research carried out in a former "reserve" in the Northern Cape Province (Leliefontein). This research was part of a research programme supported by the Franco-South African Scientific co-operation programme. It was co-ordinated by the University of Pretoria (J. Van Rooyen) and INRA (C.Laurent) and involved several institutions (U.Pretoria and INRA but also the Agricultural Research Council (DIA), the Department of Agriculture of the Northern Cape Province and the CIRAD-TERA). It has benefited of the commitment of many people especially, J. Van Rooyen, M.Makhura (UP), P.Bonnal (CIRAD-TERA), J.Zanberg (Department of agriculture, Northern Cape Province), and the inhabitants of the Leliefontein area[1].

[1] Of course, any mistake or misinterpretation is the authors'.

I. To assess the diversity of disadvantaged farming households

South African agriculture is expected to be "*A highly efficient and economically viable market-directed farming sector, characterised by a wide range of farm sizes, which will be regarded as the economic and social pivot of rural South Africa and will influence the rest of the economy and society*" (NDA, 1995), and policy statements argue that disadvantaged farmer focused development is required (NDA, 1995 and RDF, 1997).

In saying so, policy makers recognise (i) some feature of the existing diversity of farm structure (" a wide range of farm size") and (ii) the necessity to focus action on some target groups ("disadvantaged farmers").

There is no doubt that the major criteria of heterogeneity of the South African agriculture is the huge structural gap which was created during the apartheid period between a "white commercial agriculture" and some residual "black" and "coloured" farms. However, to develop new policy measures and assess their possible impact, a more accurate description of the reality of "disadvantaged farmers" may be needed. In this group of "disadvantaged farmers", it is known that micro level diversity is high, due to the unequal distribution of the means conditioning farming production (access to resources, markets, knowledge, etc.) (Eckert *et al*., 1995; Laurent *et al*., 1998). Transitional forces observed in many rural communities (migration, migrant labour, cultural changes), also accentuate these differences.

To properly assess this diversity one should examine the question in all its dimensions. Agricultural activity can be viewed as a "total social fact" (Mauss 1924), which means a phenomenon which involves a large number of institutions, which has multiple (social, economic, technical, legal, etc.) dimensions, and concerns very different social groups.

At the level of a household also, agricultural activity may have several functions. Studies concerning various countries (Larson, Narain 1998; Bowler *et al*., 1991; Laurent, Rémy, 1998) show that it can be misleading to consider that farming activities have only one function, to produce for the market with the aim of maximising professional income. People having farming activities may have various objectives, related to diverse economic logic (professional revenues from a complex set of activities, subsistence activities, etc.) or non-economic logic (social integration, etc.). The objectives can vary strongly from one farm to another.

Even when economic decisions are to be made, the "economic rationality" of individuals is "bounded" as they are confronted with uncertain situations. To avoid this uncertainty, agents resolve an individual optimisation function under a set of constraints conditioning the available resources (Simon, 1986). From an economic point of view, this results in the substitution of the maximisation criteria by satisfaction criteria. But, more important is the fact that the "reasons" why people behave a certain way are not all economic reasons. And they can change from one period of his life to the next.

Throughout rural economics (Chayanov 1913, Murray 1980, Bonnal *et al.*, 1994) it was emphasised that the lifecycle of the household affects its production organisation: the age of each individual grows, and the number of individuals contributing to production as well as their potential to do so are modified. Thus, objectives, the reasons of the decisions and the economic of the farms will vary accordingly. A farm household is not a stable entity.

In addition, household is generally represented as a unified entity functioning as a homogenous decision-making centre, which is often not the case. Such representations assume that there is unanimity within the household members regarding the pursued objectives (Ribier, 1992). This can be considered as abusive simplifications of the reality (Ancey, 1975; Gastellu, 1979; Katz, 1991). Within one household, particular positions concerning the production, consumption and accumulation activities can exist. The household's behaviour can then be defined as a combination of the different behaviours of the members of this household, and not as resulting of a hypothetical undifferentiated family rationality. The "unified farming" entity, may be an approximation, which is not acceptable when different entities, and decision levels are combined.

Lastly, farm households diversify also strategies by combining several gainful activities, which are related to agriculture or not. This allows lightening the risks and uncertainties by diversifying the source of income while keeping a possibility of food production for home consumption (Lipton *et al*. 1996, MacKinnon *et al* 1991). Farming households are not only inserted in agriculture, but are also integrated in a broader economic system; farm activity can be only a small part of the total activity. Farm management and household activities will then depend on the functioning of others sectors of activities. It is thus necessary to analyse the agricultural activity within a global economic and social context.

These different elements condition individuals' behaviour. This means that within the same range of economic size, it is accepted that good economic and technical performances (Carney *et al.* 1996) can be obtained through different ways of production and farm organisation (Laurent *et al.* 1998). The conversion towards one homogeneous "best farm configuration" will not be an emerging feature: there is no "one best" solution to cover all (farming) situations. Diversity may not be considered as an obstacle to development, but as a manifestation of capacity of the agricultural system to adapt to and to sustain different situations.

If diversity is recognised it implies that farming households may respond differently towards any development support initiative. Understanding the reasons of different farming households behaviours can provide means of analysing household reaction to different conditions and, hence, of predicting the consequences of policy interventions (Mc Gregor, *et al*, 1998). Such understanding needs a holistic picture of rural household diversity, meaning that the behaviour of the household is not only influenced by economic criteria, but also by social, technical or legal reasons.

These statements lead us to build a model of the functioning of agriculture,

- (i) taking care of farm structures in connection with an overall system of activities and income, and considering the criteria of bounded economic rationality, as well as non economic reasons which may guide the decision, and

- (ii) using specific rules to describe aggregated behaviours of farming households, giving the main feature of the diversity of the situations.

Therefore we have chosen to adopt a holistic and dynamic approach, which considers the facts and the actors within their social, historical and political context, thus describing farming households not only through economic variables. Then, the observed diversity can be formalised into a typology (Lazerfeld, 1937; Escobar *et al*., 1990, Landais *et al*., 1994). Typology building is a process that can be used to group and analyse activity units according to their main modes of operation and their characteristics. Typologies seek to constitute a range of types which simplify reality whilst accounting for the main particularities which allow each type in a collection that is to be studied, to be classified and analysed. As Landais *et al*. (1994) state, "*the main issue is (...)to make comparisons between farms considered sufficiently similar to allow them to be classified in the same type and their functioning to be analysed by using a single reference base".*

Such an approach seemed appropriate to describe and analyse the diversity of disadvantaged farming households. It has been implemented in the Northern Cape Province

II. A case study: building a typology in the former reserve of Leliefontein - Northern Cape

The communal area of Leliefontein, one of the nine "coloured" reserves of Namaqualand, is situated 100 km south of Springbok, east of Kamieskroon. Centred on the Kamiesberg[2], the reserve covers 192 000 ha. It is partly surrounded by "white" commercial farms. In the land reform process the community has bought some neighbouring farms but the rules to use that new land were not yet established at the time of the survey. The population of the study area during the survey period (1999) was about 10 000 people. Most of the residents live in the 10 villages of the area. Agriculture plays a capital role in the area but the agricultural production is constrained by a very arid climate and large extension of rocky lands (Archer 1995). Animal husbandry is the main farming activity and livestock grazes on commons (Rodhes *et al.* 1999). In spite of this harsh environment, the population of this area is willing to maintain and improve its farming activities. This requires adapted development measures. Therefore, in order to improve their extension services and to identify priority groups for development action, the Department of Agriculture of the Northern Cape wanted to undertake an analysis of the diversity of the small-scale agricultural activities in the area.

[2] Kamiesberg (1527m): name given by the locals to the former "reserve" of Leliefontein.

In order to build this analysis, a study was carried out in the area, in close collaboration with the services of the Department of Agriculture in Namaqualand (see figure 1).

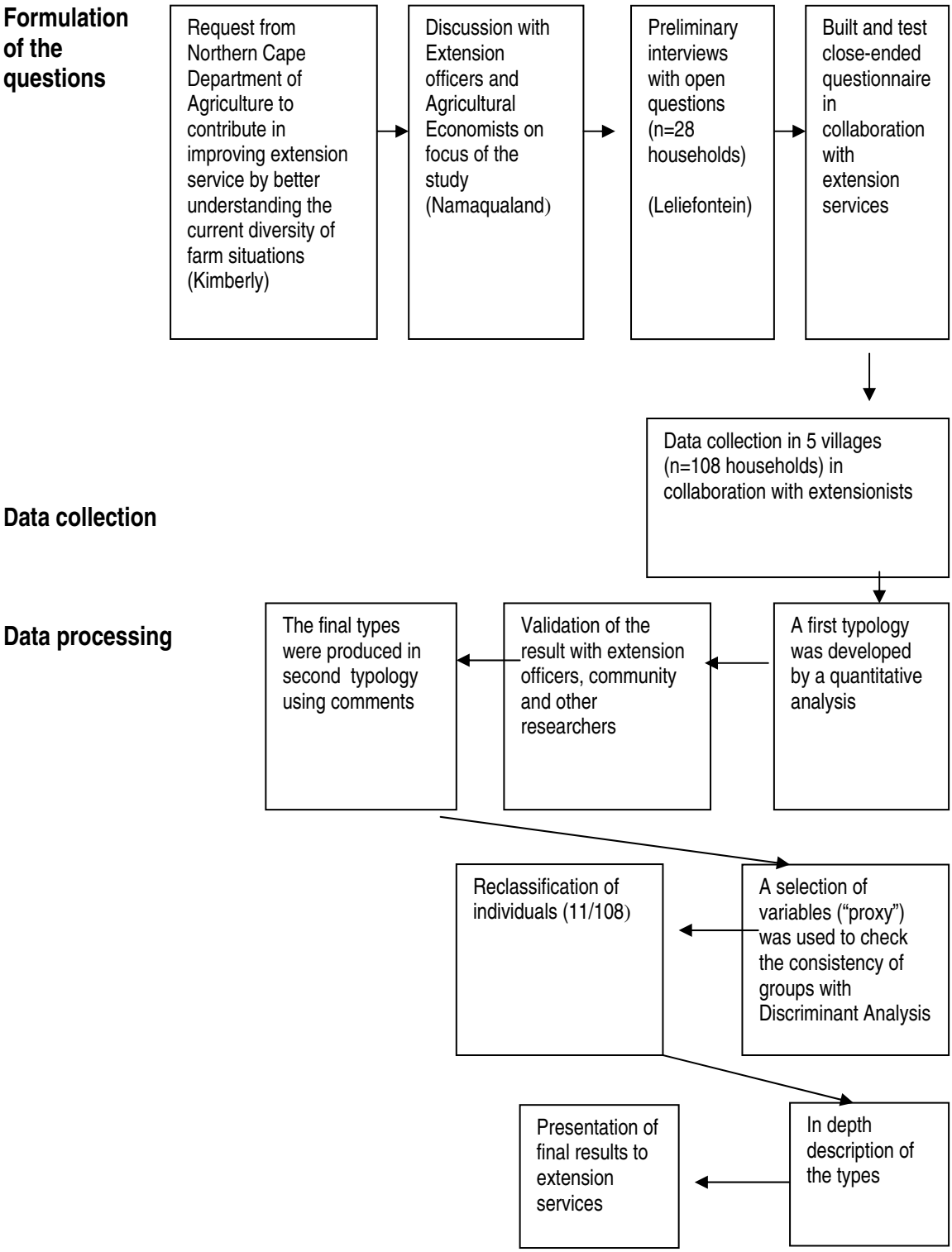

Figure 1: Methodological sequence of the research process

Source: Modiselle 2001

A number of information gathering activities were conducted in the area in 1999. This included interviews with representative of different institutions, first sociological interviews of households of the area (n=28), households survey (n=108) based on close-ended and open questions, demographic and employment information for each individual of the households (n=518), monographs of peoples' life, and various informal discussions during the field study period and the analysis of existing data and literature concerning the area.

The data processing was made according different lines with both qualitative and quantitative analysis. Details are given in Modiselle 2001 and Anseeuw 2000.

The questionnaires as well as the data processing were design to take account of the different aspects mentioned above, in particular:
a) *The different functions of agricultural activity and the reasons driving the decisions regarding farming activity*: all kinds of households were interviewed regardless of whether they were farming or not. Farmers gave the reasons that compelled them into farming.
b) *The decision unit:* several questions were designed to understand who (person in the household or relative or migrant worker, etc.) was making the decision in different circumstances (children education, livestock care, etc.).
c) *The life cycle*: monographs were complemented with open questions regarding the history of each individual.
d) *The system of activities:* information on the different activities and sources of income of the households (salaried activities, etc.) was collected.

It was then possible to design a typology of the rural households of the Leliefontein area. Fifteen deduced variables were retained for the follow-up of the typology. Taking into account the initial question, these relevant, not-correlated, variables are related to several main points: the activities of the different members of the household and the non-agricultural sources of income, the decision making process in the household, the financial management and the agricultural technical systems.

The results were presented to and discussed with the residents of the area, the Department of Agriculture and various stakeholders involved in the area.

III. Rural households and farming: a typology.

As shown by former study (May 1997), it was found that the unemployment and poverty rates were high in the area. The lack of job opportunities in the Leliefontein area obliges a large proportion of young people to leave the area to get a remunerated activity while children and older people find in Leliefontein a place of safety. Therefore it does not make sense to consider the area independently from its

links with other activity areas. It is part of a wider organisational system, which includes income-generating activities in other parts of the country.

This results in high dependency rates towards social and family financial transfers. Among the households of our sample, 87% receive social transfers (for 37% of the families, these transfers are the main source of income), and 33% benefits from family transfers (Anseeuw, 2000, Modiselle, 2001). This area is not an exception. Similar high figures were recorded in other places in South Africa (May *et al.*, 1994, Bonti-Ankomah *et al.* 2000).

Farming is a commercial activity for some households, but it is also an activity to secure means of living (mainly auto-consumption) and a way to build patrimony for some people who were interviewed. Therefore, the so-called "community" (Kepe, 1998) of Leliefontein, appears quite heterogeneous.

III.1. The different functions of farming within the Leliefontein population

The history of the area shows that for many households communal farming is more important than the single objective of income generation. They are still investing in these activities even if communal farming is not always considered rational from an economic point of view. Table 1 represents the different functions of farming in the Leliefontein population.

Table 1: The different functions of farming within the Leliefontein population

	Professional area	**Social area**	**Family area**
Economic functions	• Making an economic living. Focus on profit in a sustainable (and often a diversified)farming system	• Economic security within a social community system • Redistribution of resources : intra-generations transfers / inter-generations transfer	• Household consumption and subsistence • Investment (saving)
Social functions	• Professional status • Boosting their status • Contribution to employment generation	• To have a social status • Social integration • Livestock keeping is a tradition	• Reduced dependency on external institutions and relationships
Religious functions		• Donkeys are still honoured by some families because of their biblical connotation.	
Hedonistic function (Hobby)			• In some financially stable families, women keep animals especially, lambs as pets

Source: Leliefontein Surveys 1999 (Modiselle 2001)

For the professional area farming means mainly a business with profit making and money generating goal. However, farming is not seen as a source of income only, it has also social functions (professional status, which can be boosted through their farming activities). In the social area, farming is viewed as an economic security within a communal system and enables the process of redistribution of resources. Nevertheless, farming is socially more complex if we consider that it conditions a social status (ownership of cattle for example) and has religious functions (the donkeys for example). At a family area level, farming does not only mean consumption and investment, but also concerns a decreased dependency of the household towards external agents (family transfers) and may even be linked with an emancipation process within the household (women keep lambs as pets).

Within one household agricultural activity can meet several objectives in the same time. On the other hand, it is common that the priority differs according to gender (for example, food security for women and income generation for men) or that farming fulfils several functions for a same person. However, it is usually possible to identify what is the priority for a household when processing the results of open interviews.

III2. Seven types of households with farming activities

Actually, neat distinction appears between seven different types (Table 2). Detailed description of these types is given in Modiselle 2001 and Anseeuw 2000; however, the main feature of the household's sources of income, strategy and possible trajectories can be summarised as follow.

Type 1: The "Autonomous" (7/108). * This is the type of materially well off[3] people who are operating as autonomous entities in a larger community. They farm mainly for the market. They generally live in brick-built houses that are well furnished and can be retired professionals, shop owners or people who have inherited some money from their family. These households have financial autonomy. There is a regular income that may either come from their businesses or pensions. The average total income of the group is R43 800 per year. They have large numbers of livestock (cattle, goats and sheep) which are looked after by hired shepherds. Both the head and spouse usually do decision-making and it is quick since both parents are at home. They have motorised transport means such as bakkies.

* They follow an autonomous strategy due to sufficient funds. If the issue of land ownership can be cleared and extension support is provided, this type is likely to expand to commercial farming activities. However the existence of this type will depend on succession since several heads of households are now becoming aged and are pensioners.

[3] Which does not mean that these people are rich, there are only, in comparison, better off than the other households

Type 2: The "Livestock Holders" (12/108). * This type gathers households where the head of the family or family members (can be the sons or even grandsons) look themselves after the livestock and expressed the will to make a living out of commercial livestock farming. They are middle-aged people who had previously worked (could be pensioners or those who took voluntary packages from work, and are new entrants in the livestock farming). Decision-making is divided since the heads are mostly out at the stock post. Thus men decide more readily on farming issues while women decide on household issues. The average income per household is R20 500 per annum.

* The members of this type are engaged in an investment strategy towards professional farming with the aim of making livestock holding a successful business. Their full time engagement with no specific hired labourers shows their determination at the moment of the survey.

* There is the possibility for households of this type to move to Type 1 should financial resources be available. However members of this type can also move to Type 5 (social transfer dependants) if they get to a stage of depending more on social grants, i.e. when ageing.

Type 3: The "Regular Income Earners" (22/108). * This type consists of the professional and other skilled people who have regular income generating activities. When farming, it is aimed at generating commercial income. Either they live in their homes or they live away and come home during weekends, month-ends or fortnightly. Their annual average total income is R27 000. Extra money can be put into building the livestock flock or herd (they keep cattle, goats and sheep). Those who come home everyday can readily decide on anything that concerns farming whereas for the heads who works away, the decision will be made when they are back home. They can either hire a shepherd or have some informal agreement with neighbours to keep their livestock for them.

* The members of this type are engaged in an investment strategy towards farming with the aim of making livestock holding a successful business, however they are not always directly involved in the farming day to day activity as they have full time jobs. Livestock farming rather complement their external income. They employ both hired labour and family labour.

* This type may move towards Type 1 (Autonomous) as the heads retire or be part-time as a new type of "part-time commercial farmers" in the future.

Type 4:The "Irregular Income" (11/108). * The people in this type are engaged in temporary jobs and have unreliable monetary income. Their annual average total income is R15 600. They benefit from family support. They say that they depend on livestock farming as a security and that they are not prepared to take permanent jobs that will keep them away from this activity. They will rather engage in piece jobs. They may be the middle aged livestock holders or the young family members of the livestock holders who are looking after the animals themselves. Once members of this type get involved in the piece jobs they group their livestock together under the responsibility of one shepherd who will be paid for, while they are working. Another possibility is asking a neighbouring shepherd to take care of the livestock without paying him.

* They adopt a 'booster' strategy in the sense that they engage themselves in part time jobs to supplement or boost their farming income. They either utilise own labour or hire it out.

* There is a possibility for the members to move to Type 6 (Family Dependent type) and Type 7, (Poorest), when temporary job opportunities cease. There is also the possibility that they may

move to Type 2, (Livestock Holders), should they decide (and have the possibility) to generate more income from livestock farming.

Type 5: The "Social Transfer Dependents" (44/108). * This type is made up of the people who are mostly handicapped, pensioners or are receiving some form of government's grant. They keep livestock for household consumption or to generate funds when needed (animal sales within the village). It is the largest type. Their annual average total income amounts to R21 800 per household. They can make little money with the sale of farm products. Most of those who are old and owning livestock built their flock when younger. The owner himself, a family member or a hired person takes care of the livestock.
* Movement of this type depends on the succession process for these households whose heads are pensioners. Due to patrimonial rights new households heads can start afresh from this situation and invest in livestock and therefore shift to Type 2, (livestock holders).

Type 6: The "Family Dependent" (5/108). * The households in this type are having irregular financial support from relatives and other people. Thirty percent of the total income is derived from family support (remittances). They also receive other support in kind. The members of this type have medium sized herds. Some of the livestock also belong to relatives. The person who takes care of the animals can be a member of the household, a hired shepherd or the livestock owner. Decision-making on resource allocation does not come from within the households only but also from outside, especially from people sending money to the household.
* They use a dependency strategy to secure remittance (money and food) and depend on other people (especially relatives). Decision-making is mainly from people from outside. For example, the members of the family who work away from home send money to a household for ploughing the lands. Such family members who make provision for farming activities are the ones who decide whether to plough or not. The members of this type use own labour.
* This type could move to Type 5, (Social Transfer Dependent) as the heads get pensioned or to Type 3, (Regular Income Earners) as job opportunities arise.

Type 7: The "Poorest type" (7/108). * This type consists of the poorest families (whose size is variable) and who live in poor housing structures. These households are headed by men who have low levels of education. Their annual average total income of R2 600 is far less than the acceptable minimum annual income of R9 000 for a rural household (Eckert, *et al*, 1997). There is less flow of income for example, cash remittances and government grants. The households of this type are not completely isolated. In a sense there is still a spirit of togetherness amongst the households in the villages in as far as working together is concerned. When they own some livestock, they have only few animals.
* This type has survival strategy. The members of the type posses limited food or money and display an inactive involvement in farming activities. They supply labour to other households.
* If job opportunity becomes available, there can be a possible movement towards Type 6, (Family Dependent) for example, if an employed family member sends remittance to the household and to Type 4 (Irregular Income Earners) if a member of such household gets a job.

Table 2: Summary of types of farming household

"The Autonomous" (n=7)	"The Livestock Holders" (n=12)	"The Irregular Income Earners" (n=11)	"The Regular Income Earner" (n=22)	"The Family Dependants" (n=5)	"The Social Transfer Dependants" (n=44)	"The Poorest" (n=7)
Various sources of income. Highest income group of the area (R43 800 per year per household on average). Autonomous strategy due to sufficient funds; can be compared to "white"commercial farmers. Sell farming products, employ farm labour.	Want to make a living out of livestock keeping; entry into livestock farming after a previous job. Engaged in an investment strategy towards professional farming with the aim of making livestock holding a successful business. Own labour.	Temporary jobs and unreliable income (sometimes far from the area); they can be very poor. 'Booster' strategy: engage themselves in part time jobs to supplement or boost their farming income. Own labour or hire it out.	Regular income from non-agricultural activities include households (long-time migrant workers). High income; save money to build the herd. Employ labour.	Receives regular family support (cash and in kind);. Relatives usually interfere in the decision making. Several women headed households (n=3/5). Own labour. .	Households depending on welfare grants. Mainly pensioners. Few handicapped persons getting health allowance. They often utilise hired labour or are dependent on communal aid systems.	Income per capita is very low (AVE=R615/year). They cannot even afford to plough arable land if they have access to Integrate in mutual aid systems Livestock is used mainly for their food security.
Livestock keeping						
Salaried shepherd	Individual livestock keeping	Shared livestock keeping	*Family livestock keeping or *Shepherd *Individual livestock keeping			Reduced livestock activity
Large herds (AVE=50 LSU)*	Medium size herds (AVE=14 LSU)	Medium size herds (AVE= 14 LSU)	Medium size herds (AVE=11.8 LSU)	Medium size herds (AVE=13 LSU)	Medium size herds (AVE=11.5 LSU)	Small herds (AVE=5.5 LSU)

* "AVE" = average in the type. 1 Large Livestock Unit (LSU) = 1 head of cattle or 5 heads of small livestock
Source: Leliefontein survey. (Anseeuw 2000, Modiselle 2001)

III.3. Trajectories

A typology gives a picture at a particular moment. A farm belonging to one type can evolve in future into another type. For instance the saving during a salaried period may have a crucial effect on the later evolution of the households of Leliefontein. This was especially true over the last years, as unfavourable climatic conditions have reduced tremendously the possibilities to generate a monetary income from agriculture. Nevertheless a remunerated activity does not always enable one to come through certain precarious situations (in particular due to the lack of social security cover (health and unemployment insurance, etc.).

Actually, several mechanisms explain how a household can shift from one situation to another. Some examples are given in figure 2.

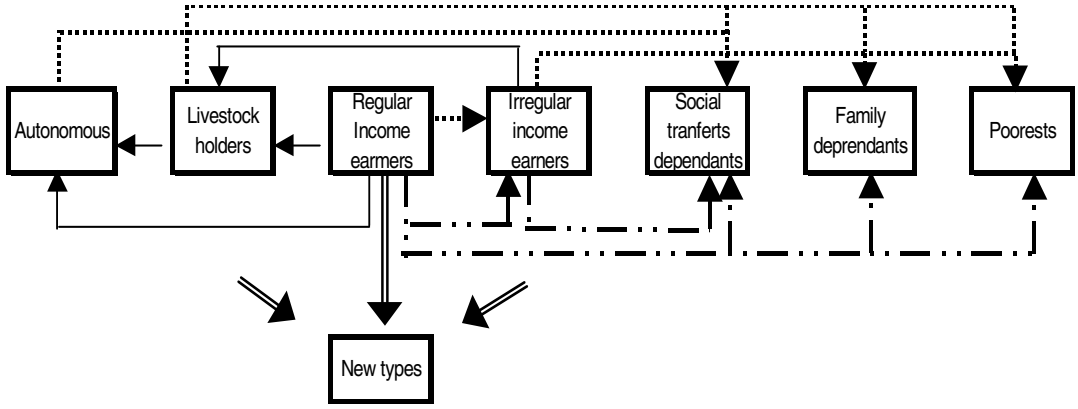

Figure 2: Examples of possible trajectories in the Leliefontein area

- **The saving dynamic** (⟶) schematises the importance of regular source of income during working life. It makes possible development of production activities thanks to (i) infrastructure development (accommodation, mechanisation, etc.), (ii) financing capacities, (iii) possibility to employ remunerated labour; it and may induce shift from one type to an other.
- **The de-capitalisation dynamic** (⋯⋯▶) Saving is mainly in the form of livestock, due to the lack of financial services at Leliefontein. The unfavourable climatic and natural conditions can reduce rapidly the livestock flock, generating situation changes.
- **The unemployment dynamic** (——▶): The "irregular wage earners", reaching a certain age, are often confronted with difficulties to find remunerated activities. Some people with regular salary may also lose their job. The lack of saving during the previous years, may result in a deterioration of their situation.

Not all trajectories are represented on this figure. However it shows that a typology is not stable. Such an approach, taking care of the different possible dynamics of the farms (saving, de-capitalisation or impoverishment), should complement the analysis of the diversity of situations and the resulting inequalities (production, factor allocation). This may help then to design adapted policy measures (land regulation, credit possibilities, technical possibilities, research and extension) for the target trajectories.

IV. The consequences of recognising diversity

The diversity, which has been identified previously, implies that different types of farming households may need different kinds of support. In reverse, it implies that a given policy measure will have very different impacts according to types. A typology of farming situations may allow being more specific about these differences as it shall be seen briefly in the following three examples.

IV.1. Extension policy and diversity of technical systems

Regarding technical support which can be given to farming households, it is often assumed that technology is not scale dependant, therefore extension services could provide the same kind of advice to all farmers. This is denied by most of the literature on farming systems, which shows that usually there is not "one best solution" to deal with all farming situations but rather several ways of producing, which are more or less adapted to each particular situation and set of objectives of a given household.

In the Leliefontein situation it is easy to confirm again this result. For instance, the common knowledge in the area was that most of the people use to keep livestock, mainly sheep and a few goats. Thus, the logical implication would be to focus on extension service for sheep keeping. But actually (figure 3), only one group, the "autonomous" have flocks where sheep are the majority. All the others keep more goats than sheep. This is the trend that is generally followed in the community since it means better protection against production risk. Goats have a better ability to survive an inhospitable environment and are relatively independent. It is possible to make more money out of sheep but they are less hardy. Thus extension service focusing on sheep keeping (i) will ignore a part of the problem (and its solution regarding goats keeping improvement) and (ii) will benefit mainly one group.

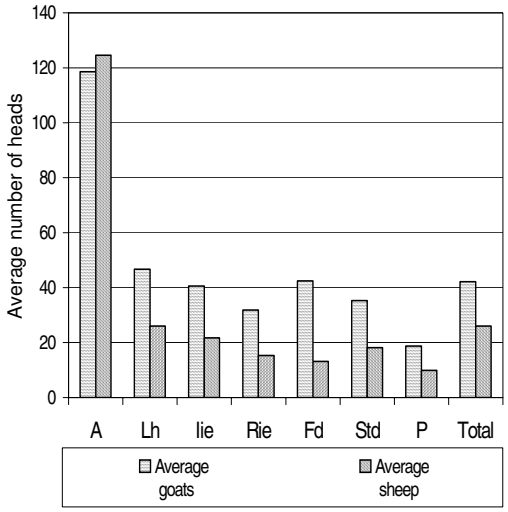

figure 3. Number and proportion of goats and sheep according to types

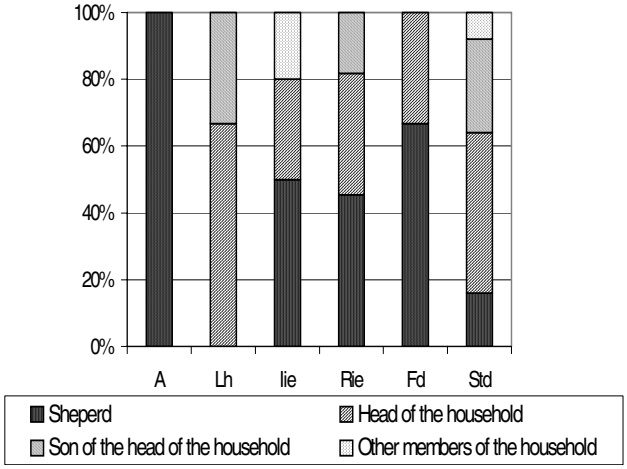

figure 4. Person having the main responsibility of livestock care

In the same line, one may remark that according to types, the person who actually takes care of the livestock differs (figure 4). He is always a salaried shepherd[4] in type 1 while in other situations it can be a member of the family. Thus the decision on who will be the target person for technical advice becomes quite important. Not all small-scale farms are "family farms" (i.e. farms where most of the labour is provided by the family). If a policy wants to support in priority the development of type A, then the question of the training and social status of farm workers arises. In that case, extension service assuming that small-scale commercial farms are run through family members labour would probably have little impact.

[4] who generally have real technical knowledge learnt from other shepherds, from one generation to the next (see L.Debeaudoin. 2001. Forthcoming)

Such examples of discrepancy could increase if rural and agricultural development policies focus on a limited target group and assume that others could benefit from similar advice.

IV. 2. Commercial production and diversity of households situation

Basically, there are three major situations: those farming mainly for the market to make agricultural income, those who have a reduced activity and cannot farm for the market even if they are willing to, because they are too poor, and those who farm for food and housing security rather than professional income. All belong to the group of "disadvantaged" farmers. They are not regarded the same way by the development of commercial farming.

Since February 2000, The National Department of Agriculture is engaged in a new programme «The Black Commercial Farmer Programme»[5]. This programme intents to prepare the entry of "disadvantaged" in the market-oriented farming sector (National Departments of Agriculture and land Affairs, 2000, p.5). It assumes that the strengthening of a structured black commercial farming sector will allow to create employment and thus to boost rural development (National Departments of Agriculture and land Affairs, 2000).

In the situation of our case study, it might be true only if (i) means of production (land, credit, extension support) are not *de facto* confiscated from the other types[6], including the households willing to produce food primarily for home consumption (who are the majority of the rural population) and if (ii) specific programmes are set up for the poorest people who cannot save any money to start a productive activity, build skill or even seek an employment far from their home place. Regarding only extension (which is a small part of the support they need) there is a risk of increased exclusion of the poorest group as the technical systems they can afford are different from those who might benefit from increased support; thus they can be left aside from any progress from research and extension services if those focus exclusively on commercial farming[7].

IV.3. Local development and diversity of family life cycles

In addition to the previous facts, one must also mote that households may have different conceptions of rural development priorities.

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[5] This programme will be continued and developed through the establishment of the "Integrated Land and Agricultural Programme".

[6] In the case study area one has now to have R1700 before he can be allotted a piece of land from the land that was bought from the "white" commercial farmers for the residents of those villages

[7] the agricultural subsidies that the commercial farmers enjoyed during the apartheid period are no more available for the small scale farmers, it is only "streamline extension" that is expected to support them, hence it is vital to improve it for all.

There are two reasons why the area of Leliefontein has a high rate of people, relying on social transfers and family remittances to survive. The first one, often described is that the economic potential of this area does not allow many young people to stay and make a living in the area. The second one, as important, is that labour conditions and lack of social insurance in other sectors of activity often prevent migrant workers, once they are retired, to stay with their family in the area where they used to work. For the types 5 and 6 ("Family dependants" and "Social transfer dependants") the objective of staying in the area and having some farming activity is mainly to ensure home consumption and benefit from some security (housing, food). This concerns also the households of types 3 and 4 who get a part of their income from activities outside the area but include the farming activity in Leliefontein as part of a complex system of activities and income. For all these people the former "reserve" still plays a very strategic role of social security area and they wont it to continue to play this role.

Therefore, any policy which would deliberately ignore that issue and focus on a strict local development analysis, might deprive these households from basic survival means (for example, if land was to be reserved for working people only) and disorganise systems of activity which are rooted in several areas.

Conclusion

The case study of Leliefontein shows that it is possible to describe the diversity of individual farming households situations with regards to various development policies.

The use of typological approaches may contribute to a better understanding of the broader agricultural environment and of the reasons of the existing diversity. Thus it may help to better assess the issues of alternative policy choices and avoid the exclusion of certain types of farming households due to the ignoring of specific constraints they meet.

These results invite to be cautious regarding any policy measure based on the idea that farming households dynamics can be understood through a unique farm model. Even for new measures which focus on people willing to farm on commercial basis and having some assets, it could be misleading to base the different accompanying policy measures on a single model ("small scale commercial family farm" for instance) as there is still some diversity among this group (full time versus part time, family farms versus farms with hired labour, etc.)

Moreover, by identifying specific patterns of farming activity it might be possible to foresee development potential where a single model approach only sees obstacles.

Bibliography

ANCEY, G. (1975). Niveaux de décision et fonction objectif en milieu rural africain. AMIRA, Note de travail no 3.

ANSEEUW, W. (2000). Household, family, economic entity: The identification of relevant economic entities for development. (A case study in South-Africa). Rural, agro-ecological and development economics. INRA.

ARCHER, F.M. (1995). Current and future land use in the Namaqualand Rural Reserves. Unpublished report, Surplus People Project.

BONNAL, P.; ZOBY, J.L.F., DOS SANTOS, N.A. (1994). Définition et discussion d'un dispositif de recherche développement: cas du projet Sylvânia dans les Cerrados (Brésil). In: System oriented in agriculture and Rural Development. International Symposium. Montpellier, France, 21-25 Nov. 1994, 178-184.

BONTI-ANKOMAH, S. AND MLAMBO, P.M., (2000). Situational analysis of households' food security and nutrition programmes in South Africa. National Institute for Economic Policy (NIEP). Johannesburg. South Africa.

BOWLER, I.R., BRYANT, C.R., NELLIS, M.D. (1991). Contemporary rural systems in transition. Cab International, 2 Vol.

CARNEY, C. & VAN ROOYEN, C.J. (1996). Empowering small farmers through collective action: The case of technology development and transfert. Agrekon, 35, 228-234.

CHAYANOV A.V.(1966) Ed 1913. The Theory of Peasant Economy (Manchester University Press.

D' HAESE, M., VAN ROOYEN, C.J., VAN HUYLENBROECK, G., D' HAESE, L., (1998). Problem-solving strategies for small-scale emerging commercial mango farmers in Venda. DBSA, Vol 15 (3).

DEBEAUDOIN L. (2001) An analysis of livestock farming practices in a communal rangeland: Leliefontein, Namaqualand. Master thesis. Western cape University. (forthcoming)

DOSI, G. (1988). Sources, procedures and microeconomic effects of innovation, Journal of Economic literature, Vol. V, 4, 29-82.

ECKERT, J.B., WILLIAM, W. (1995). Identifying serious farmers in the former Ciskei: Implication for small-scale farm research and land reform. Agrekon, Vol 34 (2).

ESCOBAR, G. BERDERGUE, J., Ed. (1990). Tipificacion de sistemas de produccion agricola. Red Internacional de Methodologica de Investigacion de Sistemas de production (RIMISP), Santiago de Chile, 284p.

GASTELLU, J.M. (1979). Mais où sont donc ces unités économiques que nos amis cherchent tant en Afrique ? Abidjan, Côte d'Ivoire, ORSTOM.

KATZ, E. (1991). Breaking the Myth of Harmony: Theoretical and Methodological Guidelines to the Study of Rural Third World Households. Review of Radical Political Economics, Vol. 23, no3 & ', , p.34-56 (1991).

KEPE T. (1998). *The problem of defining "community". Challenges for the land reform programme in rural South Africa.* Land reform and Agrarian Change in Southern Africa. An occasional Paper Series. PLAAS / School of Government. University of Western Cape.

KIRSTEN, J., PARKER, A.N. AND VAN ZYL, J., (1996). Poverty, household food security and agricultural production: Evidence from KwaZulu Natal. Agrekon, Vol 35 (4).

LANDAIS E., PERROT C., 1994. Research into typological methods for farm analysis. The why and wherefore. In Brossier J., de Bonneval L., Landais E. Ed. 1994. *Systems studies in agriculture and rural development*. INRA, Sciences up-date. Paris. pp. 373-381.

LAURENT, C. CENTRES, J.M. (1990). Dairy husbandry in Tanzania. A development programme for small holder in Kilimanjaro and arusha Regions. INRA, 112p.

LAURENT, C., VAN ROOYEN C. J., BONNAL, P., CARSTENS, J. AND HUBERT, B. (1998b). Systems approach for agriculture and rural development in the South African transition situation. 15th international symposium of the association for farming systems research/ extension. 30th November –3rd December 1998.

LAURENT C., REMY J. (1998). Agricultural holdings : hindsight and foresight. *Etudes et Recherches sur les Systèmes Agraires et le Développement*; pp.415-427.

LARSON O., NARAIN P. (1998). *International Standards and Definitions for Agricultural Statistics and Requirements for World Census in Agriculture*. Conference Agricultural Statistics 2000. Washington. 17-20 March 1998. 11 p.

LAZERFELD, P.F. (1937). Some remarks on the typological procedures in social research. Zeitschrift für Sozialforshung 6.

LIPTON M., de KLERK M., LIPTON M., (DIr) (1996) Land, Labour and Livelihoods in Rural South Africa. 2 Vol., Indicator press

MACKINNON N., BRYDEN J.M., BELL C., FULLER A.M., SPEARMAN M., (1991). Pluriactivity, structural change and farm house vulnerability in Western Europe. *Sociologia Ruralis*. vol. XXXI-1, pp. 58-71.

MAUSS M. (1924). Essai sur le don. *L'Année sociologique,* 2nde série, 1923-1924

MAY, J., PERSAD, R., ATTWOOD, H., AND POSEL, D., (1994). Rural Poverty and institutions. Land and Agricutural Policy Centre, Johannesburg, South Africa.

MAY H. 1997. *Natural resources and rural livelihoods: some experiences from Namaqualand, Northern Cape.* LAPC Conference on rural Poverty and Livelihood. Helder conference Center, Johanesbourg, South Africa.

MC GREGOR, M., ROLA-RUBZEN, F. AND MURRAY-PRIOR, R. (1998). Micro and Macro-level approaches to modeling Decision making: In Rural livelihoods, Empowerment and the Environment. AFSRE. 15th International Symposium held at Pretoria. South Africa. (Unpublished).

MODISELLE, D.S., (2001). Rural household diversity in the Leliefontein district of the Northern Cape Province of South Africa. M Inst Agrar Thesis. University of Pretoria.. Pretoria.

NDA: NATIONAL DEPARTMENTS OF AGRICULTURE AND LAND AFFAIRS (2000). The Black commercial Farmer Programme : A component of an integrated Land Redistribution Programme of the Ministry of Agriculture and Land Affairs. Pretoria, draft paper, 7 April 2000.

NDA (1998).. Agricultural policy in South Africa: A discussion document. Pretoria

NDA (1995).. White paper on agriculture. Pretoria, Republic of South Africa, 37p.

RDF: RURAL DEVELOPMENT FRAMEWORK, (1997). http://www.polity.org.za/govdocs/rdp/rdevframe.html

RIBIER, V. (1992). Les tentatives de la micro-économie classique de mieux prendre en compte la réalité agricole. In : Economie institutionnelle et agriculture. Montpellier, France, Actes du XIIIème séminaire d'économie rurale.

RODHE R., HOFFMAN T., COUSINS B. (1999). *Experimenting with the commons.* land Reform and Agrarian changes in South Africa. An occasional paper Series. PLAAS / School of Government. University of Western Cape. 32 p.

SIMON, H.A. (1986). Rationality in psychology and economics. Journal of Business, 59, 209-224.

VAN ROOYEN, C.J., NGQANGWENI, S., AND NJOBE, B., (1994). Comments on possible impact of the "Reconstruction and Development Programme" on Agriculture in South Africa. Agricultural Economics Association of Southern Africa, Conference, Pretoria.

Annex: Average Income for different types

	The Autonomous (n=7) 6.5%	The Livestock Holders (n=12) 11.1%	The Regular Income Earner (n=22) 20.4%	The Irregular Income Earners (n=11) 10.2%	The Family Dependants (n=5) 4.6%	The Social Transfer Dependants " (n=44) 40.7%	The Poorest (n=7) 6.5%
Gender-head							
Male*	7	6	6	4	3	25	6
Female*	0	6	16	7	2	19	1
Average income							
Total*	*43 800*	*20 600*	*26 900*	*15 600*	*27 300*	*21 800*	*2 600*
Minimum	15 000	2 400 (a)	8 400	6 900	11 400	6 800	1 100
Maximum	97 000	48 000	44 400	32 590	45 610	48 600	5 200
Agricultural expenditure**	14 040	1 900	3 370	3 484	2 830	1 680	1 620
Irregular income**	430	1 220	1 370	4 960	1 440	740	1 220
Remittances (y=1; n=0)	0	0.50	0.64	0.36	1	0.75	0.43
Amount of family Remittances**	0	600	1500	1300	4300	1000	200
Income from regular activity**	1 800	3 700	15000	0	1 400	150	0
Social transfer**	7 950	7 800	2 300	2 180	5 350	10 300	0
Agricultural sales**	8 740	830	2 310	1 880	530	530	430
Outstanding credits (y=1; n=0)	0.57	0.50	0.77	0.67	0.29	0.66	0.71

Units:
** Number*
*** Rands per year, average per household*

(a) Such livestock holders bought a small numbers of livestock with the intention of increasing the stock they hold. Some may have low income because of recent problems they encountered, for example, drought or the fact that they have just started with livestock farming.