

## Agri-‘culture’ and farmer identity in Botha-Bothe District: The context for conservation agriculture

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# **Agri-‘culture’ and Farmer Identity in Botha-Bothe District: The context for conservation agriculture**

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This working paper is part of a larger study of the social networks supporting local innovation (technology networks) for conservation agriculture in conjunction with the Long-Term Research Activity in Lesotho (Eash et al., 2011). It presents the findings of a qualitative survey of the perspectives of different actors within the agricultural sector of the northern Lesotho district of Botha-Bothe. These findings complement two quantitative surveys. The first of these was a household baseline survey (Lambert et al. forthcoming) which provides data to generate the structure of farmer social networks and to document their orientations toward the three basic technological (ideological) frames: conventional agriculture; risk averse agriculture; and conservation agriculture (Lamb et al., 2010). A follow-up survey of agricultural service sector/community actors based on farmer contacts identified during the household survey will complete data collection on the network structure and the technological frames.

The qualitative findings presented here explore agricultural livelihoods in the context of local meanings which shape farmer identities and relationships within the district. As such it relies on the stereotypic representations formed from the subjective perceptions of local actors. Questions concerning and description of the empirical network structure and actor behavior are put on hold while we explore how locals construct their social environment and characterize the focal research categories of farmer, extension agent, NGO representative, and trader. This constructed reality allows us to better understand how to interpret the meaning of and motivation for actor behavior and network relationships. The underlying question posed in this investigation is: who do Botha-Bothe agricultural sector actors believe is a farmer? How do they interpret farmer relationships with other local actors?

## **Methodology**

To better understand the culture of social relations in the agriculture sector of Botha-Bothe District, a small qualitative survey was conducted applying a set of six questions to elicit interviewee perspectives on farming in the region. The questions were designed to initiate a discussion at the level of general attitudes about farming and left room for the respondent to elaborate in the direction they chose to take the conversation. Notes were taken to capture close to verbatim what the respondent said. The lead author asked all the questions and recorded all answers in English. The open-ended nature of the discussion allowed the respondents to interpret the questions according to their preconceptions. A set of additional questions on success in farming, retrenchment, conservation agriculture, and any unexplored themes evoked

during the discussion were also asked. Notes on the latter questions were taken down in a notebook after putting away the formal survey instrument.

Collaborating with the Botha-Bothe District Agricultural Office, a sample of respondents was identified according to the following categories: farmers, extension agents, NGO representatives, and agricultural input suppliers. A total of 13 individuals (including 4 women) were interviewed (3 farmers, 4 extension agents (in 2 groups of 2), 3 NGO representatives (1 group of 2), 2 trader representatives (a sales clerk and a manager), and the manager of a farm center for 10 interview sessions of at least 45 minutes each and up to two hours in one case. Responses were recorded on the survey instrument. All respondents with the exception of the traders were open and ready to discuss agricultural issues immediately on contact. The traders were more elusive and two originally targeted were actually replaced (one, by a sales clerk, and the other, by a manager in another establishment).

The authors acknowledge that the sample was not exhaustive and some voices that would have been interesting to have heard were missing. The purposive sampling methodology was designed to capture a range of agricultural service sector categories, including some leading farmers.<sup>1</sup> Within the timeframe of the survey conducted, the following stakeholders were not accessible: tractor service providers, wholesalers, and processors. In addition, representatives of the majority subsistence maize producers and women farmers were not included.

Textual and narrative analysis was performed on the notes taken during the interviews, summarizing the main points as they were formulated by the four categories of respondents. Relations between these categories were described and analyzed. Additional textual analysis was conducted across categories identifying where consensus emerged on particular themes (farming successes, retrenchment, government, and conservation agriculture).

The following narrative briefly summarizes the interview responses as they were posed. The third section of the paper re-constructs how each category of actor perceives farming in Botha-Bothe. The next section describes the dyadic relationships between these categories to better understand the local meaning of their interrelationships. Finally, the paper examines what respondents felt constituted success in farming. We end with a discussion of issues involved in the characterization of the Botha-Bothe farmer in the context of conservation agriculture (CA).

## Summary responses

- What are the key priorities of farmers and other agricultural agents for agriculture production in Botha-Bothe?

Overall, the key priority for farmers is subsistence through crop and/or livestock production. The main cropping system consists of maize, beans and sorghum produced in conventional agriculture systems while livestock production consists of small herds of cattle, sheep and goats raised under communally managed rangelands. Generally, cattle are kept for both draught power and milk production. Most cattle are dual purpose indigenous breeds. This is consistent with food security as the primary production objective. However, farmers will sell surplus produce in

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<sup>1</sup> The survey was not designed to be based on a representative sample of small holding subsistence producers; the household survey for the District of Botha-Bothe will best serve that purpose.

good years or sacrifice their subsistence stocks both in crops and animal products to meet cash based household expenditures such as school fees, clothing, and other household goods. Small stock farmers keep their livestock for wool and mohair production which is a purely cash driven system. However, other household animals mainly tended by women (e.g. indigenous poultry and piggery) serve for both household consumption and income. Horticultural products, such as fruits and vegetables, are produced for household consumption and surpluses may be sold for cash. Increasingly, smallholder farmers with access to irrigation are producing vegetables for the market.

- What are the differences in types of farmers and farming systems in the highlands and lowlands of Botha-Bothe District?

The key difference between farmers in the highlands and the lowlands is the cropping calendar and proportion of livestock to arable land. In the lowlands, crop production is dominant and there is a potential to farm around the year with two cropping seasons. In the highlands, pasturing livestock is more common due to the lack of cultivable land. This distinction leads to distinctive rhythms in market sales and differences in interest group affiliations (dairy, poultry, wool and mohair, etc.). There is also a major difference in ease of interaction: while the lowlanders are more open to novelty and change, the highlanders are seen as being closed to new ideas.

- What are the key threats to successful farming in the region?

The primary threats to successful farming in the region come from the climate (drought or too much rain) and lack of markets for production. Poor soils, pests, and lack of a proper mind-set for farming were also identified.

- Does it take the same skills and knowledge to be a good farmer in both regions?

Everyone agreed that the same knowledge and skills for farming were required in both regions, but there are nuances. One should know more about livestock in the highlands, and more about crops in the lowlands. Furthermore, while everyone had need of additional knowledge and skills which could be provided by extension, lowlanders were perceived as more likely to take the opportunity to benefit from new knowledge.

- What are some successful ways input suppliers, NGOs, or local leaders have been involved in extension activities?

Assuring the supply of inputs and the demand for outputs is certainly important for farmers and traders. According to farmers and some traders supplying information is also a critical element in these exchanges. NGOs and extension combine training through workshops, demonstrations, and other events with the subsidized supply of inputs. Linking farmers to markets is also important for both NGOs and extension.

- What does a farmer look for in an input dealer, extension agent or NGO as a good partner in agricultural production? (and vice-versa)

Farmers are looking for good prices, trusting relationships, inputs, new ideas, knowledge and skills, and tractor services. Agricultural service sector agents are looking for good prices,

trusting relationships, and partners who are passionate about farming and seeking new knowledge.

## Four Agricultural Perspectives

### Farmers

Farmers express their priorities in terms of their resource base and how they can produce with it. Soil fertility is very poor with declining productivity levels and high requirements for fertilizer and manure amendments, which are not always applied. Horticultural produce is sold in town and at farm gate but sometimes spoils in the field for lack of a ready buyer or a storehouse. The major difficulties are lack of funds for investing and poor market opportunities. Farmers need support for fertilizer purchases and soil testing. Recently, some diseases have begun to emerge in cabbage. Weeds are also a problem.

Farmers differentiate themselves in terms of production and organizational affiliation. The different types of production include: subsistence staples; commercial horticulture; livestock production in large stock (cattle) and small stock (sheep and goats), piggery and poultry. There are very few commercial and many subsistence farmers. Interest groups consist of: poultry, dairy, wool and mohair, and women's associations (nutrition). The lowlands can potentially produce two crops a year: winter (winter wheat, peas and fodder crops) and summer (maize, sorghum and beans). Vegetables can be grown in both seasons. In contrast, the mountains, with their extensive rangelands, are most suited for livestock production. Summer wheat, legumes maize and vegetables are also grown in the highlands. Some farmers are in small to medium scale dairy production in the lowlands and foothills while the largest wool/mohair producers are in the highlands.

Farmers agree that there are two primary threats to farming in Botha-Bothe: the climate change and the market chains. The number one threat over the last 50 years has been drought, yet there has been a lot of rain recently! Another threat is hail. There are places suitable for irrigation. A hundred thousand hectares could be irrigated. However, irrigation can be threatened by heavy rainfall, like the ones which ruined crops last year leaving many farmers with no sales from October to March. Conservation agriculture farmers, on the other hand, had already planted their fields and the ground cover protected them from erosion. Traditional healers have been called upon to protect certain fields. The cold temperatures prevent early planting.

The second threat to successful farming is the market conditions. From the perspective of the farmers, the government is implicated. Sales outlets for products must be formed. Conservation agriculture producers were not able to sell their surplus maize this past year. The Ministry of Agriculture and Food Security (MAFS) offers permits to buyers to make purchases of agricultural products in South Africa. The resulting competition restricts the market for Basotho produce. Once, one could deliver eggs daily to the poultry coop and get a check at the end of the month. But the government closed down the wholesale market. The coop had a monopoly on eggs from South Africa which they would use to top-off the supply as needed. The government opened the door to free trade and that market was lost<sup>2</sup>. Now it is more difficult to find customers

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<sup>2</sup> Actually, the coop collapsed first and then government opened free trade. Even then, there was a long period when permits were required to import eggs from South Africa as an instrument to protect local producers. To blame

for their eggs. Further, the government has enacted a new law which some farmers see as threatening their access to land. They believe it says that if a farmer does not plow, they may take the land and give it to others<sup>3</sup>.

### Extension Agents

Extension agents perceive the priorities of farmers in terms of planting maize, beans, sorghum, and raising livestock. In the highlands, the farmers prefer animals (sheep, goats, and pigs). They also use animals to plow their fields. In the lowlands and the foothills, farmers use both animal and mechanical traction for plowing. The main objective of production, in either case, is first and foremost subsistence production for food security. They sell animals for school fees and other cash expenses. Some farmers produce vegetables or wool and mohair for commercial purposes. Some vegetables are planted, in key hole and homestead gardens. Some may be engaged in crafts (sewing, knitting, candles, piggery, dairy, etc.).

In the highlands, fields are very small. Farmers rely on animals for cash and produce crops only for consumption. Men raise livestock for wool and mohair; women work on food crops (they may also work with animals, particularly if the man is absent). This allocation of labor is similar in the lowlands. Farmers in the lowlands rear animals for dairy (sale of milk) and other small enterprises (broilers, layers, and piggeries). Occasionally, some will hire a herder to look after their livestock; then men and women can work in the fields together<sup>4</sup>.

Extension agents differentiate farmers according to ease of interaction, what is produced, and who is involved (gender roles). They noted a difference in openness and responsiveness to new knowledge acquisition between the highlands and the lowlands. In the highlands, the farmers are slow to understand; they often can't or won't ask questions. In the lowlands and foothills, people are more open and listen to the news, radio, and also ask questions. According to extension agents, the skills and knowledge required for good farming include: timing and method of plowing; time of planting; knowledge of soil types; recordkeeping; which varieties to plant; familiarity with common diseases and weeds and methods of control; conservation agriculture; and knowledge for the control and prevention of animal diseases.

Extension sees the primary threats to farming in terms of the climate, poor soils, pests, and the overall economic situation of the farmers. Weather conditions constitute the primary threat to successful farming, particularly drought and freezing temperatures in winter. Secondly, the soils have poor fertility due to soil erosion. In the highlands, the terrain is not suitable for arable cropping. Outbreaks of pests and diseases are also problematic. They have a new threat these

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the government for the collapse of the egg cycles is an oversimplification if not a distortion of the facts. This was not a government enterprise but a farmer-run coop. The poultry coop was mismanaged and interfered with by certain authorities who enforced a preferential access to this market at the expense of ordinary farmers produce. When the poultry farmers could not put their act together, then the open trade policy was adopted.

<sup>3</sup> There is a new Land Act which has received a lot of criticism from various quarters but the main objective is to facilitate use of land for leveraging capital. The idea of forfeiture of land when you don't plough it comes from the laws of Lerotoli 1945 and has nothing to do with the new law.

<sup>4</sup> There is also the practice of transhumance. A practice where farmers across Lesotho migrate animals to highlands plateaus for summer grazing and bring them to village grazing areas and lower highlands for the winter. The farmers in the highlands often stay in the plateau areas for the winter while the lowland farmers will come all the way back to the village grazing lands.

days: an invasive weed has infested several fields completely taking them over. Further, many farmers don't have the funds for paying tractor fees or purchasing fertilizer and seeds. The latter problem is due to unemployment: the farmers don't have jobs and a paycheck at the end of the month.

## Traders

For traders, farmer priorities are perceived as extrinsic. Farmers are primarily concerned with finding markets for their produce, feeding their families, and obtaining cash for school fees, clothing, and other household goods. To this end, farmers are looking for good prices. On the other hand, the traders have the need to develop trusting relations with the farmers. Traders sell a wide range of merchandise of which farm inputs and implements are a minor component. They are largely looking to make sales for higher value inputs and/or outputs or in large quantities with big buyers like LHDA, World Vision, MAFS, Correctional Services, Military, Hospitals or even other small businessmen.

Traders appear to differ in their approach to successful improvements in agricultural production for the region. On the one hand, the key to success as an input supplier is to be seen as taking the time to talk to people and find out their needs. The Mosotho farm center manager (who only sells farm inputs) is distinctive in this regard, but not alone. He aptly puts it: "If you don't have what farmers need (or can't get it) then you should direct them to where they can get it. It is important to develop relationships for success: tell the truth, be dependable and honest and make the connection to the customer's need, as well as collaborate with extension". On the other hand, some traders see their role as limited to the purely commercial sphere. Farmers should produce and sell to traders. The traders should sell to the consumers.

Farmers were differentiated in terms of product and the rhythm of their interaction. According to them, the different types of farmers include cattle farmers (for milk and meat); chicken farmers (meat and eggs); pig farmers (meat); sheep (wool and meat) and goats (mohair), as well as crop farmers growing sorghum, maize, beans, and vegetables (cabbage, beet root, carrot, green pepper, onion, green chili, etc.). Livestock farmers are found in both the highlands and the lowlands, while crop farmers are largely in the lowlands. What is distinctive about them is when the money comes in. In the lowlands plowing/land preparation can begin in July through December and they can have two crops; whereas in the highlands, the window is much smaller, from August to October with the opportunity for only one crop a year. Crop farmers in the lowlands can earn money in the winter and the spring. Chicken farmers have big income seasons at Easter and Christmas because of the high demand for products during the festive periods. In addition, the chickens don't lay enough eggs during the winter. Sheep and goat stockers harvest wool and mohair and are paid some time later.

Traders identified two primary threats to farming in the region: markets and climate. The number one threat for farmers is having outlets for their produce. The climate is also a major threat as there can be too much rain (particularly during the 2009 and 2010 seasons) or drought. Consequently, production varies from year to year. The retrenchment of migrant workers has also increased the significance of the costs of plowing.

For the traders, the same knowledge of farming is applicable in both regions. However, there are differences in their capacity to learn new technologies. In the highlands, most people are not well educated. They need training in order to know how to best care of livestock. Of course, those in



the highlands have special constraints: they need their seeds on time (they need a supply which is close by). They also are not using fertilizer (only various forms of manure). Lowlanders have the advantages of land and rain; seeds and fertilizer are more available. In the lowlands, people are better educated and trained.

### **NGO Representatives**

NGO representatives emphasize food security as the priority for farmers in the District and generally agree that only a very few grow for profit; most only sell if there is a surplus. Market production is expressed through livestock (most often poultry or pigs) or crops (vegetables). Maize and beans are largely for subsistence and they still grow some wheat and sorghum. Poor maize yields mean that farmers must devote the vast majority of their land to this staple. Only after securing sufficient maize production for the year can they consider growing vegetables (important for other nutrients) and other crops.

The NGO representatives distinguished farmers in two different ways: (1) ease of interaction; and (2) cropping calendar. In the highlands, the farmers appear to be hesitant to go beyond village boundaries and it is much harder for them to get out of their comfort zones. In contrast, farmers in the lowlands are quick to pick up on ideas presented at workshops. This distinction is true for both subsistence and commercial farmers. The limitations of the topography (rivers, floods, bad roads, etc.) make the highlanders more isolated. There are two seasons in the lowlands: October to December planting maize (beans through January); and April into May planting peas and winter wheat. Two crops can be raised on the same land. In the highlands, only one season is possible. Consequently, highland farmers tend to raise livestock rather than grow crops. Everyone in the rural context is a farmer, but only some farmers are commercial.

The NGO representatives agree that it takes basically the same skills and knowledge to be successful farmers in both regions. The key skills involve being a good steward of resources; technical know-how; and a capacity to integrate information on the climate into adaptive practices, e.g., using drought resistant varieties. It is necessary to know when to plant, when to weed, etc. Time management is critical; many farmers are too lazy, when it's time to weed they would rather be a herder.

The NGO representatives identified two separate sets of threats to successful farming in the region. On the one hand there are the major challenges of the climate, the market, and pests. Farmers cannot be sure of rainfall any more when planting in November (as in the past). Drought is common. They also don't know how to find a market for their surplus production. In contrast, another NGO representative feels that the key threats to successful farming in the region are the lack of a proper mind-set for farming, public opinion, and jealousy. Most people would identify climate impacts, but he believes that mind-set is the central issue. How people see themselves (what is a farmer?) is critical. Many rural dwellers don't want to be identified as a farmer, it's derogatory.

## **Dyadic Network Relations**

### **Farmer-Extension Relations**

The relationship between farmers and extension agents is mixed. From the perspective of Extension, farmers are expecting new knowledge through training workshops (in record keeping, conservation agriculture, how to apply fertilizer, and good nutrition practices), soil tests,

improved inputs (seeds and fertilizer), and tractor services from the Ministry of Agriculture and Food Security (MAFS). In return, the farmers are expected to come to the extension resource center so that extension agents can solve their problems.

Farmers are highly concerned about their relationships with extension. It is from extension that they seek new ideas, knowledge, and skills, as well as gain access to tractor services at lower prices. Subsistence farming and commercial farmers can access machinery and technology provided by the MAFS. However, the problem with tractor drivers is that they are not around when they are needed. Tractors are often driven by soldiers and move from district to district as they cover the needs of farmers countrywide. When the Ministry tractor is not available, there are private contractors available at a higher price. However, there doesn't appear to be a sufficient number of tractors during peak demand.

One farmer noted that the MAFS "talks above the people, not where they are". The extension service doesn't use proper methods for semi-literate people, they need more demonstrations. Technology dissemination needs to be improved by extension. They need to be more sensitive to the population. They should be providing a complete and appropriate technology package – the right things at the right time – with a market outlet for produce.

Another farmer noted that agricultural advisors need to be close to the people to know their problems and have solutions for them. They need to know technical information. In one case, the extension agent couldn't identify the pest infecting a farmer's yellow maize. The farmer had to go to South Africa and got advice from the coop that sold him an insecticide and told him how to use it. It worked. Local suppliers had the chemical but didn't know what to do with it. In another recent case, some diseases began to emerge in the cabbage. A pathologist was needed to take samples to the expert at the research station. Weeds are also a problem. Extension agents are not always seen by farmers as there for them: 'they are either lazy or don't know the answers'. Still, some farmers keep coming back with questions and seeking answers. Extension advisors have been credited with contributing to farmer success.

Extension agents recognize that farmers are poor and that it is their job to help them. In their turn, farmers expect extension agents to supply them with farming knowledge and improved inputs (seeds and fertilizer). In this regard, farmers are seen as seeking handouts, but many farmers don't have the funds for paying tractor fees or purchasing fertilizer and seeds. Nevertheless, the extension service feels obliged to ensure that farmers can feed themselves. A sense of paternalism can be felt in some relations.

Farmers used to perceive extension as coming with solutions. The farmers believe that they have the basic knowledge and skills for farming. However, there is an important role for extension to help them come up with new ideas. The approach is changing now and extension agents have developed new skills. The extension service has introduced a new approach, Action Learning Cycle (ALC), which promotes participation and ownership, learning by doing, local solutions to local problems, and importance of organization at the village level as well as promoting the role of extension agents as facilitators. Extension agents hope for understanding from farmers – 'we have to listen to each other'. They are looking for farmers who really have a passion for farming and are seeking knowledge about how to farm better. Resource center agents seem to be honestly concerned with farmers. These agents also recognized that they have a need for additional training to meet the changing needs of more commercially involved farmers.

Consultative relations are growing between farmers and extension agents, but challenges remain. Extension agents in the highlands feel that farmers are slow to understand; they often can't or won't ask questions. In the lowlands and foothills, people are seen as more open and listen to the news, radio, and ask questions, but sometimes those questions are left unanswered.

### **Farmer-Trader Relations**

From the perspective of traders, farmer-trader relations are fundamentally based on a pure economic exchange of goods for cash. In the olden days, the trader sold inputs and bought outputs and was in local places. Farmers could buy and sell whatever was required, including pesticides. The traders also provided information with their products. The government closed this system down and opened the marketing board but it didn't survive. Now there is a void. NGOs (like World Vision) supply production inputs, information, and training for farmers. Traders are only slowly being brought back in. In some locations, they come to buy vegetables. Although they could provide output markets, trader commerce is largely involved in the supply of inputs: fertilizers, seeds, implements, yokes for cattle, etc. to replace those supplied by traders in South Africa.

There are barriers between farmers and traders. Farmers don't trust traders. They see them as rich and alien, hence under certain circumstances worthy of being cheated. Once a farmer gains the trust of a trader by supplying a good product, he may try to trick the trader by replacing healthy produce over poor quality produce. On the other side, the traders' greatest concern is whether they can depend on a steady supply of quality product. They need each other, but there is a cultural distance between them. Many (but not all) traders are of either Indian or Chinese descent, with different religious and cultural practices. This cultural distance is bridged through formal mechanisms of introduction to one another, often involving the inspection of identification documents.

Traders should be talking to farmers to learn about their production needs. This exchange of information could become the basis for building trust on both sides. However, repeated interaction to build confidence is unlikely since traders have little incentive. Farmer purchases account for only a small portion of trader revenues (with the exception of the Farm Center run by a Masotho). Transport of inputs has been a major expense for farmers. The new FAO subsidy program for input supply (seeds and fertilizer) uses traders to make deliveries at the village level. While these traders can profit from the input subsidies, they must cover transport costs from the warehouses in Maseru. Furthermore, the delivery dates were set by FAO, not by the traders<sup>5</sup>. This has not built confidence among traders in the efficacy of the scheme nor the potential for building a lucrative market. It is felt that if the government was really serious about supplying seed to the farmers they would be offering a big tender for open competition. The current program doesn't operate on market principles and consequently lacks incentives for the system to function properly.

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<sup>5</sup> For the past 4 years, FAO intervened by assisting households affected by soaring food and commodity prices in the country. They provided such households with agricultural inputs. Traders were requested to supply the inputs to farmers in what is called Input Trade Fairs (ITF). Initially, FAO set the dates for ITFs, many farmers especially in the mountain areas got their inputs after planting time. This has been resolved with better coordination between FAO and the MAFS.

Market opportunities do exist. Traders want farmers to grow to the standard of commercial farms. They are reluctant to buy from them otherwise. Indeed, some farmers have developed stable marketing relations with commercial establishments, but this is spotty and even the same farmer may only be able to do this for a part of the crops he produces. Some traders have even come to farmers' fields to buy vegetables. Market variability can create new opportunities. For example, rape seed is normally sold to market women in Botha-Bothe. However, last year hail damaged much of the rape crop around Maseru. Consequently, farmers from the Botha-Bothe region who had a bountiful rape crop (due to irrigation) attracted the interest of traders from all over the country. Those farmers have now established a connection to this market and learn about market opportunities by phone.

### **Farmer-NGO Relations**

Farmer-NGO relations are structured around mechanisms for the transfer of knowledge, information and skills, often lubricated by the expectation of free inputs. One NGO uses theoretical and practical workshops, farmer fairs, farmer competitions (in quantity and quality of production for prizes), and handouts about inputs. Another focuses on transferring farming technology in the context of life skills training, where changing the 'mind-set' is seen as part of the process.

Agricultural service sector actors have a variety of motives for working with farmers. NGO representatives see these relationships as complex and evolving. It is said that some use the relationship to get votes in local elections; others are simply getting rid of the money given them by the donor agencies. Clearly, farmers are looking for inputs. If they are free, then quality and whether they get them from an input dealer, extension agent or NGO representative is not important. NGOs seem willing to provide the inputs. World Vision, Blue Cross, Red Cross, Serumula, and Rehobotho Mission supply seeds, fertilizers, broilers, pigs, dairy inputs, layers, and chicks (*likoekoe*) according to the particular type of intervention. Eleven Oaks is another NGO which has been supplying irrigation equipment and supplies to certain targeted communities. The Red Cross has also contributed drip kits. NGOs expect the farmers to then adopt the new practices.

NGO personnel develop personal relationships with some farmers to reinforce the messages they deliver. It is realized that even with furnished inputs, uptake of improved practices can be resisted. Interestingly, the farmers interviewed had little to say about NGOs. The sample was essentially restricted to extension-related farmers and the mythic poor maize planting farmer hasn't a voice in this paper.

NGOs have more to offer than knowledge and material inputs, they can also provide connections to the market and other resources beyond the village. World Vision started working with a group of subsistence farmers in Manamela who attended one of their workshops on poultry production. They became interested and began production. However, they couldn't sell their poultry locally because there were no established poultry merchants in Botha-Bothe. So when the Manamela farmers got going, World Vision connected them with poultry traders in Leribe.

### **Farmer-Government Relations**

The farmers know that the traders want them to grow to the standard of commercial farms. Farmers, however, see this as a problem for government. The government needs to put in place policies that encourage purchasing from Basotho farmers. The government should be advising

the diamond mines, local business people, schools, and military bases to buy Basotho products. Farmers can produce more than they can currently sell, but unless local traders buy their output they are unlikely to make much effort. The problem seems to be the big shops headquartered in South Africa and where purchasing decisions are being made.

This also means that extension should be helping farmers learn to produce to standards. Technology dissemination needs to be improved. They should be providing complete and appropriate technology packages – the right things at the right time – with a market outlet for produce. Bank loans also need to be arranged.

### **Extension-NGO Relations**

The relationships between extension and NGOs appear to involve a certain amount of rivalry and competition. NGO representatives work with a few groups of farmers in their chosen areas of operation, while extension agents cover the entire district and work with all farmers, both individually and in groups. World Vision, Blue Cross, Red Cross, Eleven Oaks, and Serumula provide workshops and inputs. These inputs (broilers, pigs, dairy inputs, layers, drip irrigation kits, and chicks) are frequently given as gifts. In the past, NGOs normally worked on their own but they are now trying to collaborate with extension to serve their common client. Farmers, however, tend to pay more attention to NGOs messages and initiatives because they have something in hand to offer them. From the perspective of extension, NGOs work hard when they are there, but as soon as they leave things collapse.

NGO programs include theoretical and practical workshops, farmer fairs, farmer competitions (in quantity and quality of production for prizes), providing inputs, and input information. However, NGO representatives are coming to realize that training programs should include at least one member of the local resource center staff. World Vision has developed a procedure for collaborating with extension in the communities. They first come to the extension office and ask advice and then they go together to the community. The people are convoked and the extension agent introduces the World Vision team to the community. In that way they become familiar with each other. Rehobotho Mission is also developing a new relationship with extension built on mutual interests and complementary roles. They see technical experts (at the extension resource centers) as critical to successful technology transfer. All training programs should include at least one member of the local resource center staff. This is good for building the partnership. The NGO can be the catalyst for change and uses the extension agents to provide technical expertise.

### **Trader-Extension/NGO Relations**

There is a new program involving selected traders who will sell inputs at depots close to the extension resource centers thus reducing transportation costs for farmers. Traders look for big buyers (World Vision, Ministry, correctional services, etc.) and this looks like a promising relationship.

### **Farming for Success**

The secret of success in farming is to have ‘muscle’ (usually this means capital, but may mean physical labor) and work hard toward one’s goals. With capital and hard work anything can be possible. With no other source of income and no loans available because of lack of security a farmer with livestock and implements can be successful. If the farmer doesn’t have these, he

can't be successful year after year. Today you need to spend up to 5000 maloti per hectare in order to attain commercial production levels. You need to invest in irrigation and fertilizer.

Almost everyone has land to provide a bountiful livelihood for their families. Several respondents noted that a passion for the lifestyle of farming distinguishes farming success from failure. The opportunity is always there. People just need to be motivated. Hard work is a critical ingredient, but it also means focusing on one's goals. A family has to work hard so that children can go to school, be well dressed and fed. Money should not be spent on unnecessary purchases. If you have people working for you, you also must keep an eye on them. Of course, some don't have land and that holds them back.

Successful farmers listen, ask questions, and 'have a way forward'. They have a goal in life, perhaps to send their children to school, sometimes just to give to the needy. Successful farmers are buying into the new ideas. For example, wool producers are interested in higher productivity hybrids. They listen to the radio – there is a radio program with agricultural information (crop management, nutrition, market prices, technologies, etc.). Often farmers will ask extension agents questions about something they heard on the radio.

Successful farming does not depend on high levels of educational attainment. There are those who are well educated (with a high school degree) but don't want to go to the fields. They don't invest in land when/if they do make a profit from their production. They just want to work for consumption, rather than higher levels of productivity.

It is necessary to understand the value chain to become commercial using appropriate inputs. Vegetable production has been a very successful enterprise for many. There is a good market in town for vegetables. Livestock production has also been successful based on improved breeding and feeding for wool production. Appropriate technology and a proper market provide the needed incentive for farmers. It is important to strengthen the extension service to make it more helpful to farmers. Extension doesn't have the resources to go out to the village all the time. The farmer must be proactive.

### **Failure is possible, too**

There are plenty of irrigation schemes that have failed. Most of these involved groups where not everyone was prepared to work hard. The government has been subsidizing irrigation development schemes and contributing seedlings and manure, but people really don't understand all that is involved in the production process. They just accept what they are given until it dwindles away. Some observers believe that one must be politically connected to acquire an irrigation scheme in one's village.

Farmers have often relied on donors and when the inputs run out, the enterprises they were supporting become unsustainable. The Lesotho Highlands Development Authority (LHDA) has been a significant actor on the local scene over the years. They provided inputs and animals to communities and individual farmers up until about three years ago. Many farmers became used to these gifts and are now only waiting for another donor. For example, a LHDA piggery project involved a group of farmers who were given pigs and feed to raise and sell them. The project lasted from 1994 through 2004. Only 4 farmers of 12 are still producing; the rest failed when the project ended. Capital is not enough, the key to success requires farmers to work hard and have goals/targets, a vision of the way forward.

## **Farmer Success Stories**

**Case #1:** One very successful farmer, about 50-55 years old, has 5-7 tractors, cars, a combine and a staff. His career started in the mines as a mechanic for about 15-20 years. When he came back he started a taxi business that grew. He does his own repairs on his tractors and cars. He produces considerable quantities of wheat which he sells direct to the Maseru Mills, as well as maize, sorghum, and beans. He also does custom tractor work for a share of production.

**Case #2:** One woman was very successful as well. She worked with her husband and children and now all the children have university educations. She grows vegetables and raises chickens and cows. In fact, they have already planted their fields (vegetables) with hired labor.

**Case #3:** An ex-government employee with a degree in agriculture retired from work as a District Extension Officer 20 years ago. He had been working for the Ministry of Agriculture since colonial times. He was a member of the dairy farmers association which sold at the depot for delivery to Maseru. He also raises chickens and goats, and has a very large orchard of fruit trees along the borders of his vegetable terraces.

**Case #4:** World Vision worked with a group of subsistence farmers from Manamela who attend one of their workshops on poultry production. They became interested and began production. However, they couldn't sell their poultry locally because there were no established poultry merchants in Botha-Bothe. So when the Manamela farmers got going World Vision connected them with poultry traders in Leribe. They have been selling poultry regularly ever since.

**Case #5:** A group of vegetable farmers established themselves in the Botha-Bothe area some time ago with the help of the Lesotho Highlands Development Authority (LHDA). Once established they slowly began to take over the local market, replacing imported vegetables. They have developed good relations with the local vegetable sales women in Botha-Bothe and the surrounding villages.

**Case #6:** When they first met him he was just like everyone else – but after working with him, he began to realize their sincerity. The friendship that was given was important to him. He started trying CA in his fields. He got good results but was challenged by other farmers who had realized even better yields. This convinced him that he should be following all of the best practices, not just picking and choosing. Then he got a chance to go to the center in Zimbabwe. He was fully converted by what he saw there. He took real ownership and continued to be faithful to these best practices. He now regularly harvests over 5 tons/hectare and has many visitors come to see him from around the world.

**Case #7:** A lady from Mokotjela visited their village and asked for lessons in CA for her village, writing the request on her host's wall with a stone. A few weeks later they went to her village and trained eleven people. Mulch was critical and these villagers realized its importance. They went up the mountains to cut large quantities of grasses. Indeed, during the drought at the next planting time they were the only ones to get a successful harvest. They made the extra effort and it paid off. The group in the village grew under local leadership.

**Case #8:** A man in Maseru was working in a bank until he lost his job. He then started a farming business with good capital behind him. He bought irrigation equipment and a greenhouse and invested in growing cabbage, lettuce and other vegetables. He didn't have a problem finding locals to sell to in Maseru: he sold in the streets and to the hotels, etc. He is providing the seedlings on his own farm, but he is very specialized.

**Case #9:** Fifteen years ago he returned to Botha-Bothe from Maseru to look after his aging parents. He had been employed as an electrician and mechanic at Pioneer Motors in Maseru. He farms 3.5 hectares, predominantly in horticultural crops (green pepper, butternut squash, beet root, green beans, carrots, onions, tomatoes and green mealie (green corn?)). He does best selling green peppers which he has managed to get a contract with a shop to which he delivers one van load every three weeks. For his other crops he has more difficulty finding a steady and appropriate sized buyer on the market.

**Case #10:** An association has established a farm of 17 hectares in 42 fields producing cabbage, other vegetables and early maize. They have an irrigation pump lifting water from the river to a large reservoir at the top of an adjacent hill. When the irrigated area was set up, those whose land was affected could participate. Some withdrew and were given land in another area for field crop production. The association was supported by World Vision who provided the original greenhouse. The association was so profitable jealousy may have prompted the destruction of the greenhouse and murder of one of the original members. These events weakened the association and their market linkages. The association has come back and they are currently strong and productive. The Ministry of Agriculture has supplied a second pump to operate as a back-up to the replaced original pump.

**Case #11:** Another farmer along the river produced tomatoes and butternut squash and was the first on the market last year. He did well. He had extension advisors and did a good job. He also had a good maize crop. He is always out working in his fields.

## **Farmer Identity: Implications of the findings**

An underlying question motivating this study was: Who is the farmer of Botha-Bothe? For many of those interviewed, the contemporary farmer of Botha-Bothe is a passive participant in the seasonal cycle of production who “plows, plants maize, and waits for a handout”. This image was repeatedly invoked by the majority of respondents, albeit in slight variations. In many ways this is an unfortunate characterization; nevertheless the characterization by agricultural service sector actors was quite real. Yet these same respondents have identified cases of successful farming where the ‘farmer’ is truly an active agent in the development of the agricultural sector as a whole. Not everyone in the rural areas is a farmer, but nearly all rural dwellers are land owners and are often lumped together descriptively as farmers by others in their regions. Farming clearly isn't for everyone. It takes effort and a certain amount of determination year after year to confront the vagaries of a fickle climate and an unfair market. The farmer expects drought and prays for rain, but can quickly be faced with waterlogging when the rains do come.



Not much has been written about the farmers in Botha-Bothe over the years according to the archivist at the National University of Lesotho Library. Research in other regions (Castelli Gattinari, 1978; and Seckler and Nobe, 1978), however, tends to confirm the evolution of farming in the region that one elderly farmer characterized in this way: “In the olden days, there was soil fertility and no machines – ‘just plow and plant’. The costs of production were reasonable. Now we have subsistence farming and commercial farmers with machinery and technology provided by the Ministry of Agriculture.”

The coming of machines was transformative. The plow drawn by a team of oxen expanded Basotho capacity to produce crops enormously in just a few years. That era is now long past. Soil fertility was mined for record crop production without inputs in the early days (19<sup>th</sup> century) and continued plowing has led to severe erosion of the remaining soil. The era of the plow transformed who was a Basotho farmer. Once, both men and women had shared roles in farming. However, the plow not only reshaped the land it reshaped social relations on the farm (Showers, 2005). Men, whose primary responsibility was livestock, became the initiator of crop production, too.

As the soils depleted, the mines and other job opportunities opened up across the border in South Africa. This allowed the Basotho farmer to attain a modern lifestyle while retaining a rural heritage and economic base. At first it mattered little to the role of farmer that ‘plow and plant’ could be maintained through cash transfers from migrant labor. However, continued plowing brought lower and lower yields, which wasn’t critical to livelihoods as long as the income kept coming. Being able to purchase livestock and grow crops for subsistence allowed the Basotho man to be a farmer – to plow and plant – maintaining a way of life for many rural households.

Satisfaction with farming as a retirement from migrant labor fed the family, although it might have to be supplemented by non-farm income. The identity of farmer as a lived experience was attainable for a moment longer. Retrenchment from the South African mines brought this era to a close through the loss of income to put towards the costs of plowing. For the most part, agricultural production was only slightly reduced as these were old and not very dynamic producers in any case. South African agriculture supplied the market. Now more land is in fallow. In the process, there was a change in the perspectives of those who have control over the land.

Those who were retrenched and had not dissipated their resources in modern living tended to either buy more livestock (traditional response) or buy taxis or tractors (modern response). Taxis or tractors put them back to work transporting or plowing, often for others. It does not appear, however, that the vast majority of those that have been retrenched actually return to work the land themselves. They are not prepared for farming on their own and would rather work for farmers in South Africa. Those who seriously intended to farm need direction, but were not told what to do and what not to do. There is a perception among the retrenched that they need a job (and farming is not a job). There are very few returned migrants who develop agriculturally oriented enterprises, although they may still live in the village, possess land, and be interviewed as representatives of farm households.

One of our respondents said that the key threats to successful farming in the region are the lack of a proper mind-set for farming, public opinion, and jealousy. How people see themselves (what is a farmer?) is critical. Many rural dwellers don’t want to be identified any longer as a

farmer; it's derogatory. On the other hand, some feel that farmers are only those with tractors and/or irrigation pumps, which is seen as positive. Yet most that each year plow and plant are those that can mobilize a team of oxen. These are the ones targeted for conservation agriculture (CA). Changing the mind-set of the rural population is critical, but the successful introduction of CA will involve a new definition of what a farmer is.

Post Script: Analysis of the attitudinal data from the household survey should help us to better identify who those farmers are in this context.

### **Addendum:**

In writing this paper, the authors engaged in a dialogue about what the subjects told us concerning their perspectives, paradigms and perhaps prejudices on local events. The presentation of local perspectives in the analysis was challenged by one author because it went against what he believed to be the truth about those events or relationships in question. With the foregoing in mind, the authors have subsequently agreed to express the local opinions, however uncomfortable, without prejudice to standing scientific explanations of reality as observed.

When researchers present alternative versions of 'the facts' it may confuse the readers. However, the whole point of doing the mindset analysis in the technology network research is that individual and/or collective versions people hold of the same experiences do indeed differ. Furthermore, people often discount or even ignore alternative descriptions. The authors believe that important breakthroughs may come from the analysis of these anomalies.

The significance of this issue is that statements about reality or paradigms are what scientists rely on to communicate best practices. This has an impact on extension messages, particularly those that are at odds with existing mindsets. We hope that any alternative perspective, if it is supported by robust sampling of opinion would truly help scientists to more fully understand people's beliefs and thus be able to communicate with them more effectively.

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