

## Poverty and household food security of black South African farm workers: the legacy of social inequalities

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### Abstract

*Objective:* To assess socio-economic indicators, nutritional status and living conditions of farm workers and their families, with the purpose to develop research and intervention programmes aimed at enhancing nutritional status and quality of life.

*Design and setting:* Three farm schools in two districts of the North-West Province and farming communities were selected. Anthropometrical measurements, structured face-to-face questionnaires and focus group discussions were carried out in 2002 and 2003 by a multidisciplinary research team.

*Results:* Access to electricity, water and sanitation, as well as monthly food rations or subsidies, vary and depend on farm owners. The majority of adults have education below or up to grade four, farm schools provide only up to grade seven. Distance to farm schools and intra-household issues hamper children's attendance and performance at school. Household food security is compromised due to a lack of financial resources, infrastructure and also household resource allocation. This impacts negatively especially on children, with half of them being underweight, stunted or wasted. Employment is usually linked to men, while most women have access to casual jobs only. Insecurity of residence and the perceived disempowered position towards farm owners add to feelings of hopelessness and stress.

*Conclusions and recommendations:* This study highlights destitute living conditions of farm worker families. Apart from structural and financial constraints, paternalistic structures of the past might also hamper development. Based on these findings, follow-up research projects and in-depth investigations into underlying social issues with regard to nutrition insecurity and livelihoods of farm workers were initiated.

**Keywords**  
Poverty  
Socio-economic factors  
Household food security  
Farm workers  
FLAGH programme

The THUSA (Transition and Health during Urbanisation of South Africans) study identified farm workers\* in the North-West Province as an extremely vulnerable group regarding their poor nutritional status, physical and mental health<sup>1</sup>. In particular, children living on commercial farms were found to be very vulnerable and more likely to be stunted and underweight than any other children, as was also highlighted in a report by the United Nations Children's Fund<sup>2</sup> and confirmed in the recently conducted National Food Consumption Survey<sup>3</sup>. Studies investigating the health status of farm workers emphasise that they

represent a seriously and tragically underserved worker population whose health is adversely affected by occupational hazards in agriculture, migrancy, social discrimination and poverty<sup>4,5</sup>. These studies also point out high levels of alcohol abuse, domestic violence and chronic malnutrition. A study on the influence of physical activity levels and body composition on children on farms<sup>6</sup> suggests that the extent of developmental coordination disorder is not influenced by the level of physical activity, but that nutritional status might be an influential factor.

The present-day situation of people working and living on farms originates from South Africa's history of racial and political inequities<sup>7–9</sup>, resulting in limited means of legal protection from human rights violations and work-related abuses<sup>10,11</sup>. Therefore, farm workers and their families had very limited access to education and other opportunities of

\*Farm worker' in the THUSA study refers to dependent wage labourers and their families who work and also live on white-owned farms. For reasons of simplicity, the term 'farm workers' will be used here, which includes present family members.

advancement and thus lacked the skills to engage in the wider economy.

Within a multisectoral approach integrating the social and natural sciences, the FLAGH (Farm Labour And General Health) programme was initiated as a follow-up of the THUSA study. The aim of the FLAGH programme is to enhance the quality of life of farm workers and their families by designing and implementing research and intervention programmes. The present paper reports results of a number of initial assessments with regard to socio-economic and nutritional status which were carried out in 2002 and 2003 at three farm schools in two different districts and among farm worker households in several farming communities attached to these schools. Furthermore, we report selected findings from a subsequent study on dietary practices among schoolchildren and their mothers at one of the schools and in attached farming communities, which was carried out in 2003. All of these studies, although they had different foci, were carried out as preliminary assessments with the aim of obtaining data on general living conditions and nutritional status in farming communities and to serve as a basis for follow-up research and future programmes.

## Methodology

### *Design and setting*

#### *Study sample*

In 2001, three commercial farms in the Ventersdorp district, North-West Province, were selected and approval from farm owners was obtained to do research. In 2002, the socio-economic and nutritional status of all people (74 men, 62 women, and 43 children between the ages of 1 and 16 years) working and/or living on these farms was assessed. Children from these communities attend a farm school (School A) which is situated on one of the three farms and is at a distance of 50 km from the nearest town. At this school, also a feeding intervention and a vegetable garden were started after these initial assessments\*.

In 2003, two schools in the Potchefstroom district (School B and School C) were included in the assessments. School B provides education services to approximately 45 smaller commercial farms in the nearby region and is at a distance of 22 km from the nearest town. At this school, 124 children (between the ages of 6 and 16 years) were assessed. With the assistance of the headmaster, five areas were chosen where most schoolchildren were living. From these areas, 24 mothers were selected who voluntarily participated in focus group discussions. At this school, also a nutrition education intervention study and a vegetable garden were started†.

\*Results of the feeding intervention study and the vegetable garden project, both of which are currently still being carried out within the FLAGH programme, will be reported elsewhere.

†The vegetable garden is part of the above-mentioned project. Results of the nutrition education intervention will be reported elsewhere.

At School C, 74 children (between the ages of 6 and 16 years) were assessed. This school is attended by children coming from smaller commercial farms\*, with some of the children also living in the nearby town which is at a distance of 5 km. School C served as control school, with the intervention being limited to establishing a vegetable garden‡. All of the studies and interventions were carried out by a multidisciplinary research team from the Faculty of Health Sciences, North-West University, Potchefstroom Campus‡.

### *Socio-economic and demographic status*

In three farming communities attached to School A and in selected farming communities attached to School B, structured questionnaires on socio-economic and socio-demographic status were administered through face-to-face interviews with adults, covering variables such as age, education, income, housing, sanitation and electricity, among others. One experienced Setswana-speaking researcher who was assisted by a Setswana-speaking field assistant carried out the interviews.

### *Nutritional status*

Height and weight of all schoolchildren and of adults from the selected farming communities were measured in light clothing by trained biokineticists. Weight was measured to the nearest 0.1 kg on a portable electronic scale (Precision; A&D Company, Japan). Height was measured with an upright stadiometer to the nearest 0.1 cm.

### *Perceptions regarding alcohol*

Perceptions regarding the effect and use of alcohol were obtained from adults working and/or living on the three commercial farms in the Ventersdorp district where School A is situated, carrying out structured questionnaires with open-ended and closed questions. Students from the Department of Social Work administered the questionnaires, assisted by Setswana-speaking field assistants.

Perceptions regarding alcohol were also picked up in focus group discussions on dietary practices and nutritional knowledge (unpublished data). The discussions were carried out with five groups of schoolchildren at School B, each consisting of four girls and four boys, and with 24 mothers of these children.

Two experienced Setswana-speaking researchers from Nutrition and Consumer Sciences carried out the focus

\*On some of these farms only part-time farming is performed, which means that farm owners generate an additional income through farming on small holdings/irrigation plots, while the main source of income comes from non-farming activities.

‡See footnote †, previous column.

‡As has been described in the introduction, although these studies were carried out by the same larger research group, they had different specific foci, resulting in different sample sizes and different composition of the study sample.

group discussions, each being assisted by a Setswana-speaking field assistant. No focus group discussions were conducted in School C.

### **Data analysis**

Body mass index (BMI) was calculated only for adults living on farms in the Ventersdorp district. Weight-for-age was calculated for all children. Children were considered underweight, stunted or wasted when their respective weight-for-age, height-for-age or weight-for-height Z-score was less than  $-2$ , which means their score is more than two standard deviations below the reference value. As age was recorded in years only, months were calculated by multiplying the age in years with 12 and adding 6. Levels of underweight, stunting and wasting were calculated with Epi Info 2002, using the National Center for Health Statistics/World Health Organization reference data<sup>12</sup>. As reference data on wasting are available only for children under the age of 10 years, only this age group was included in the calculations on wasting. International anthropometric standards were used because no specific standards are available for South African black children<sup>13</sup>. Structured interviews were evaluated by calculating frequencies and means using the Statistical Package for the Social Sciences, version 10 (SPSS, Inc., Chicago, IL, USA). Answers to open-ended questions from structured interviews and results of focus group discussions were evaluated by grouping evolving themes and establishing categories.

### **Ethical approval**

The FLAGH study was approved by the Ethics Committee of North-West University, Potchefstroom Campus (No. 01M04). All participants gave signed informed consent. In the case of children, signed informed consent was obtained from the child's mother or legal guardian.

## **Results**

### **Socio-economic status**

Selected socio-economic characteristics of all assessed farming communities in both districts are presented here. A total of 74 men (19–73 years of age; mean 35 years) and 86 women (16–71 years of age; mean 30 years) were assessed and interviewed. Only 24 of the 86 women were permanently employed, while some women engaged in casual jobs during the harvesting period. The lack of job opportunities especially for women on farms was also accentuated during the focus group discussions (see Table 5 below). At the time of the study, those women who were permanently employed had a mean cash income of R500.00\* per month; the mean income of male

\*The women assessed here were working on a large commercial farm and therefore their average income was considerably higher than the income of women working on smaller farms.

workers on farms in the Ventersdorp district was R544.00 per month. Most farm workers in addition to their income received benefits from farm owners such as free access to accommodation and water, with the conditions of accommodation and also the type of sanitation varying greatly between farms. On some farms, however, farm workers had to pay for accommodation. On most of the farms, farm workers were able to buy subsidised food such as fresh milk, meat, maize meal, eggs, poultry or vegetables from the farm owner, depending on the type of farming. Education levels of farm workers were very low, with the majority of adults having education below or up to grade four. Education facilities for children on farm schools are limited to grade seven. While access to clean water, sanitation, electricity and health services was not investigated in particular in this study\*, the observations indicated that access to these facilities is often very poor and also varies between farms.

### **Nutritional status**

Nutritional status of adult men and women on the three farms attached to School A is illustrated in Table 1. A majority of men had BMI below  $21 \text{ kg m}^{-2}$  (68.4%), while 39.6% of women had BMI below  $21 \text{ kg m}^{-2}$ . The opposite picture appeared in the category of BMI  $> 25 \text{ kg m}^{-2}$ , with 26.9% of women being in this category and only 11.6% of men.

Table 2 illustrates the nutritional status of children at all three schools in both districts. It becomes evident that 43.6% of all children ( $n = 241$ ) were either underweight or stunted, and 6.7% of children under the age of 10 years ( $n = 119$ ) were wasted. None of the children were obese. Differentiating data on nutritional status according to schools, 48.9% of children in School A were either underweight or stunted, 50.0% in School B and 29.7% in School C (see Table 3). Wasting occurred mainly in children from School B (16.7%, seven children out of 42 children under the age of 10 years).

### **Perceptions regarding the use of alcohol**

Perceptions regarding the use of alcohol, which were obtained through structured interviews with female and male adults on farms attached to School A, are summarised in Table 4. Among male respondents, 83% indicated that they use alcohol regularly, as did 64% of female respondents. The majority of respondents indicated that they drink alcohol on weekends (34% on Saturdays; 56% on Sundays), a smaller number of respondents stated that they drink alcohol during the week (10%) or on Fridays after work (11%). The most commonly consumed alcohol was beer (21%), followed by home brews (13%), brandy (12.9%), sorghum beer

\*These important socio-economic indicators are investigated in a follow-up study<sup>14</sup>.

**Table 1** Nutritional status of adults, Ventersdorp district

Body mass index (kg m <sup>-2</sup> )	Men (n = 67)		Women (n = 54)	
	Number	%	Number	%
18	8	11.9	7	12.9
19–21	38	56.7	15	27.7
>21–25	13	19.4	18	33.3
>25–30	7	10.4	11	20.3
>30	1	1.5	3	5.5

**Table 2** Nutritional status of children, both districts, all schools

	Cases of undernutrition (n = 241)	
	Number	%
Underweight	46	19.1
Stunted	59	24.5
Wasted (n = 119)*	8	6.7

\*Only children up to 10 years of age were included in the calculations on wasting, as reference data are only available for this age group.

(12.7%) and wine (10%). Among the perceived benefits of alcohol respondents stated that it is necessary for communication (14%), makes one relax (13%), enhances work performance (10%) and helps to forget about personal problems (9.4%). However, 20.5% of respondents perceived alcohol to be a cause of aggression and fights, and 9% of respondents pointed out the financial implications of alcohol. In a question on self-evaluation, 17.4% of respondents declared alcohol to be a problem, while 83.6% stated that alcohol is no problem.

In focus group discussions on dietary practices and nutrition knowledge which were carried out with school-children and their mothers at School B, participants also elaborated on the use of alcohol (unpublished data). Some women pointed out that men have a preference for buying alcohol instead of food, and that as a consequence of alcohol consumption violence and fighting occurs, especially on weekends. Children unanimously agreed that the alcohol use of their parents compromises their food situation, pointing out that often there is no money for shoes or school fees and they do not have enough food because their parents spend the money on alcohol.

### **Perceptions regarding socio-economic factors and employment conditions**

In individual interviews and focus group discussions with women and men on farms in both districts, perceptions regarding socio-economic factors and employment conditions came to the fore, without researchers specifically asking for this information. These perceptions are summarised in Table 5\*.

\*The themes that were identified were congruent with categories that had been established by Ryke<sup>15</sup>. Therefore, the same categories were used to summarise the findings.

Respondents expressed dissatisfaction with the low level of income and high living costs. There was also a notion in the discussions that participants longed for the past practice of *mabala*, meaning that something is 'for free'. In the past, farm workers did not have to pay for certain services, such as housing and water, also maize meal was provided by farm owners as part of the monthly salary. As was mentioned earlier, women frequently expressed dissatisfaction with limited employment opportunities on farms.

Another reason for concern was the conditions of residence on farms, which is linked to employment. When farm workers retire, they often lose the right to stay on the farm and therefore lose security of residence. The same applies for relatives of farm workers. If a farm worker dies, his widow and children often have to leave the farm, if none of them is employed there. Respondents also expressed concern with regard to access and availability of accommodation elsewhere.

Furthermore, distance to towns and shops and lack of transport were frequently highlighted, which limits farm workers to buying food in the more expensive cafés and smaller shops that are available on or around the farms. This constrains access to and availability of food and negatively impacts on household food security.

Several respondents mentioned that they did not feel free to talk to the farm owner, and that he did not pay attention to what they had to say.

## **Discussion**

One of the most striking problems on farms is the lack of infrastructure and public services, excluding farm workers from ordinary economic activities, access to shops and health services and opportunities with regard to further education. Most farming communities are located far away from towns, with no public transport system in place. The most common and cheapest ways for farm workers is to walk or to get a lift. This is very time-consuming and sometimes unsafe, especially for women. Transport by private taxi operators is partly available. However, it is very expensive and mostly only used for specific purposes, such as attending a clinic.

Farm workers have the lowest literacy rate in South Africa<sup>1</sup> and the immense backlog in education services still persists on farms. Farm schools at present only provide education up to grade seven. To obtain higher education, children have to move to town, given that part of the extended family is living there and able to provide accommodation. There are cases of farm workers who have built a shack in town where their children live on their own from the age of 13 or 14 in

**Table 3** Prevalence of undernutrition according to school

	Cases of undernutrition					
	School A		School B		School C	
	Number	%	Number	%	Number	%
Underweight (total: $n = 241$ )	11 ( $n = 43$ )	25.6	29 ( $n = 124$ )	23.4	6 ( $n = 74$ )	8.1
Stunted (total: $n = 241$ )	10 ( $n = 43$ )	23.3	33 ( $n = 124$ )	26.6	16 ( $n = 74$ )	21.6
Wasted (total: $n = 119$ )*	1 ( $n = 31$ )	3.2	7 ( $n = 42$ )	16.7	0 ( $n = 46$ )	0

\* Only children up to 10 years of age were included in the calculations on wasting, as reference data are only available for this age group.

**Table 4** Perceptions of adults regarding the use of alcohol, Ventersdorp district (men,  $n = 67$ ; women,  $n = 54$ )

Effects of alcohol	Perceptions
'Good'	Alcohol... <ul style="list-style-type: none"> <li>• is a necessity for communication (14%)</li> <li>• makes one sleep better (14%)</li> <li>• improves appetite (14%)</li> <li>• makes one relax (13%)</li> <li>• helps for better work performance (10%)</li> <li>• betters life (10%)</li> <li>• helps one to forget personal problems (9%)</li> <li>• suppresses appetite (5%)</li> </ul>
'Bad'	Alcohol... <ul style="list-style-type: none"> <li>• leads to aggression and fights (21%)</li> <li>• makes one feel sick (14%)</li> <li>• might have financial implications (9%)</li> <li>• confuses one's head (3%)</li> </ul>

**Table 5** Perceived constraints regarding employment conditions and socio-economic factors, farms in Potchefstroom and Venterdorp district (women,  $n = 86$ ; men,  $n = 67$ )

Themes identified*	Perceptions
Income and spending	<ul style="list-style-type: none"> <li>• Inadequate income and high cost of living</li> <li>• Longing for the past practice of <i>mahala</i></li> </ul>
Security of residence	<ul style="list-style-type: none"> <li>• Security of residence linked to employment</li> <li>• Losing the right to accommodation after retirement</li> <li>• Availability and access to accommodation elsewhere a concern</li> </ul>
Employment	<ul style="list-style-type: none"> <li>• Limited work opportunities and underemployment of women</li> <li>• Feeling in a disempowered position towards farm owner, not free to express concerns and problems</li> </ul>
Transport	<ul style="list-style-type: none"> <li>• Distance to towns and shops</li> <li>• Lack of transport</li> <li>• High cost of available transport</li> </ul>

\* Categories adapted from Ryke<sup>15</sup>.

order to obtain higher qualifications. Another issue hampering education on farms is the long distance children often have to walk to the farm schools, which in the case of the schools and farms investigated here

could take up to two hours. As children elaborated in focus group discussions, they often do not receive adequate food, clothing and support at home. This might result in poor performance at school or not attending school at all. The observations from this study provide insight into some of the underlying causes why farm children drop out of formal education more frequently than any other children<sup>16</sup>.

Linking up with poor infrastructure are limited job opportunities on farms, especially for women. The small number of permanently employed women in this assessment is in line with data from a report by the national Department of Labour<sup>16</sup>. This results in women mainly depending on the incomes of their male partners, which will influence the allocation of resources within the household and probably result in limited decision-making power of women<sup>17</sup>.

Data on the nutritional status of children with regard to underweight and stunting are in line with data from the National Food Consumption Survey<sup>3</sup>. The prevalence of wasting was extremely high at School B and is much higher than national figures. However, the small sample size of children under the age of 10 years ( $n = 42$ ) does not allow a comfortable statement. The data furthermore indicate that the nutritional status of children at School C was better than in both other schools. This could be attributed to the fact that School C is the closest to town and also that more mothers are employed, as was stated by teachers and children in informal conversations. In comparison of all three schools, School B has the highest number of underweight, stunted and wasted children. One possible interpretation is that this school serves a large number of smaller farms which sometimes perform only part-time farming, which might result in less farming activities and lower incomes of farm workers. According to interviews with the headmaster of this school, no contact exists with a number of farm owners or with the children's parents, and the school has no record for a number of children and from which of the surrounding farms they come. School A, on the other hand, mainly serves children from two large commercial farms, where better employment conditions, health

services and therefore better general living conditions might be in place.

Perceptions regarding the use of alcohol which were obtained through focus group discussions supported the findings obtained through structured interviews. Alcohol is used regularly by adults. While only a limited number of adults ascribed negative effects to alcohol, most children emphasised that the use of alcohol by their parents causes problems, such as limiting the money available for food, clothes and other commodities. It seems that alcohol is often used by adults to 'compensate' for very limiting and destitute living conditions.

### Conclusions and recommendations

These findings highlight once more that people working and/or living on farms continue to represent a seriously underserved population category and that they are caught in a trap of poverty and destitution, where structural problems cause isolation and hamper development, with their social, health, educational and economic needs being compelling. While the introduction of minimum wages in 2003 might have improved the economic situation of farm workers<sup>18</sup>, in practice this sometimes means that farm owners cut previous benefits such as housing subsidies and food rations. As also came to the fore in interviews, focus group discussions and informal conversations, farm workers often do not feel in the position to negotiate their employment and living conditions with farm owners\*. This places farm workers in a disempowered situation and limits their own capacity to improve their living conditions, reinforcing hopelessness, anxiety and stress. The paternalistic system of the past, in which farm workers relied on the farm owner to provide for basic needs, might also hamper own initiatives and choices. While there has been increasing agency over the past years by non-governmental organisations aiming at promoting the rights of farm workers†, these initiatives have not yet reached the area of farms included in this research.

The findings presented here formed the basis for several follow-up research projects and in-depth investigations

\*Perceptions of farm owners on living conditions of farm workers were not investigated here, but are explored in depth within the earlier mentioned follow-up study which partly builds on the results and observations obtained here<sup>14</sup>.

†Among the non-governmental organisations (NGOs) active on farms are, for example, *RUDNET* (Rural Development Network) on wine farms in the Western Cape (for further information see <http://www.rudnet.org.za/>, accessed 8 November 2005) and *Women on Farms* (see <http://www.eurosur.org/wide/Structure/Shabodien.htm>, accessed 8 November 2005). These NGOs, however, are mainly operating in the Western Cape.

into underlying social causes for nutrition insecurity and livelihoods of farm workers and their families.

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