POVERTY, HOUSEHOLD FOO PRODUCTION: EVIDENCE FR

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This article presents the results of a survey that exp economic status among rural households in the for communally-owned developing areas in South Africa household demographics and farming in the study area food-surplus from food-deficit producers. The results ill socio-economic status among rural households in Sout crucial role in determining the availability of sufficie important policy implications for reducing food insecuri

INTRODUCTION

The changing ideas and definitions concerning foo security have been summarised by Falcon *et al* (1987) a follows: "... experts no longer perceive the hunge problem as one of starvation or protein deficiency, bu rather one of chronic undernutrition, affecting a range o vulnerable groups whose common bond is thei poverty". This emphasis on the links between hunge and poverty is the most important change in thinkin about world food policy since the World Foo Conference (Gittinger *et al*, 1987). These issues are no receiving renewed attention with the forthcoming secon World Food Conference.

There is growing empirical and policy support for tw fundamental premises about the linkages between foo availability, poverty and access to food (Eicher, 1988) These premises can be described as the two sides of th hunger equation, namely the supply of and demand fo food. The first premise is that increasing foo production, storage and trade can assure foo availability. This suggests that appropriate governmen policies should aim to address identified constraints t increasing food production and marketing. Howeve this strategy will not necessarily ensure that all peopl have enough to eat, thus, reducing hunger. This leads t the second premise, which is that because poverty is central cause of hunger and malnutrition, special effort are needed to help increase the access and entitlement t food.

This article presents the results of a household surve that was carried out in the Izingolweni, Nkandla an Hlabisa magisterial districts in the former-homeland o KwaZulu in South Africa. A total of 198 household were interviewed of which 173 questionnaires wer usable. The survey was conducted during the first tw weeks of March 1993.

The objective of this paper is to explore and highligh the relationship between agricultural production an socio-economic status among rural households in Sout Africa. To achieve this, the paper provides a brie overview of the household demographics obtained fro the survey--household income levels and asse ownership, together with a description of farmin enterprises--labour, agricultural land, inputs, credit, an crop and livestock production. This is followed by a analysis of the factors that distinguish between food surplus and food-deficit producers. The paper concludes with some observations and recommendations fo

Table 1 : Household Income Sources and Averag

INCOME SOURCE	Proporti earning an
Informal jobs	
Formal employment	
Pension	
Crop income	
Livestock income	
Daily trading	

economic status (Table 2). The ultra poor (inc <R1 000 per annum) derive most of their income pensions, while for the more affluent (income >R3 per annum), formal jobs are the most important so For middle-income earners, agriculture plays a consistent role with a relatively constant contributi income over the spectrum of around 15 percent, b contributes significantly less for both the ultra p suggesting constrained access to resources--and the affluent, who have many alternative sources of incor

An important aspect of this statistical analysis is there are no significant differences ($p<0.05$) betwee results obtained for each of the three surveyed a namely Ezingolweni, Nkandla and Hlabisa, suggest commonality in demographics and household in and asset levels, including sources of income or spe assets.

FARMING CHARACTERISTICS

Agricultural Land

Almost half of the respondents indicated that the they currently occupy was given to them by a while 17 percent inherited land from their family, percent occupy land given to them by an *induna*. majority of respondents occupy land that falls w tribal structures, although eleven percent indicated they had bought the land from a chief. Respon generally use all their land, but 19 percen respondents said that they do not fully utilise their l

Sixty percent (60 percent) of respondents indicated they need more land and that they do not have en land to grow agricultural produce to feed household. The shortage of land was listed by 46 pe of the respondents as the major factor preventing from increasing their food production. Another reason (30 percent) was that family members d provide enough money for the agricultural enterpri the household. If households were able to get more the majority of respondents indicated that they either plant vegetables (24 percent) or maize percent). Ten percent of respondents, however, indi that they do not need additional land.

The existence of a rental market for land was investigated. Nine percent of the households rent from neighbours, and 11 percent of the household land to neighbours. Share-cropping arrangements a exception rather than the rule as only 3 respondent percent) indicated that they are involved in arrangements. Nevertheless, taken together these r indicate that there is a limited land rental marke could be developed, given a favourable policy institutional environment.

Table 2: Annual Household Income Distribution, by

Income source	R≤1 500	R1 501-3 000
Crops	6.4	16.3
Pension	89.0	63.7
Informal jobs	2.6	13.7
Formal jobs	3.7	6.3

Table 3: Type, Location and Size of Arable Land, 19

Type of land	Respondents with access	Distan
		Next to
Community gardens	41.6	19
Crop fields	79.4	47

* Mean sizes are:
Community gardens: Large = 0.31 ha; Medium =
Crop fields: Large = 2.56 ha; Medium =

Labour. In general the head of the household and/or the spouse take charge of household agricultural activities, spending around 25 hours per week during the summer and 14 hours per week in the winter on agricultural activities. Most respondents (63.6 percent) employ no labour from outside the household. Those households that do hire in labour employ between 1-5 labourers, with some employing as many as 12 labourers. The wages paid to these labourers are around R4-R5 per day. These labourers generally earn only the wage but about one-quarter of the respondents that do employ labourers indicated that they also provide in-kind payments, e.g., potatoes, maize, or meals.

Apart from agriculture, unemployed household members are involved in few other income-earning activities. Some sell sorghum beer, soft goods, chickens and wood. These activities are not, however, important sources of income, though it does illustrate possible scope for expanding informal rural enterprises.

Credit. Only 17 percent of respondents utilise credit, which comes from a variety of sources (Table 4). Most respondents (65 percent) were not interested in ever taking out loans. Those who did indicated that they did not anticipate using the credit for agricultural or other productive purposes, instead using the loan either to "earn more money" and/or to "build a new house". Few respondents, however, seemed to have any idea of how they would repay such "unproductive" loans.

Agricultural Production

Crops. Crop production is largely to satisfy subsistence needs, with only a small proportion of households

Table 5: Crops Produced by Respondents, 1992

Crop	Respondents who grow crops (Percent)	Averag Yi (k
Maize	92.5	
Dry Beans	57.2	
Pumpkins	45.1	
White potatoes	54.9	
Cabbages	38.2	

Table 6: Livestock Ownership, Sales and Purchas

Item
Average number owned
Respondents with livestock (percent)
Respondents buying/selling (percent)

The dry conditions in KwaZulu during 1991, 1992 1993 probably contributed to these perceptions.

FACTORS ASSOCIATED WITH SURPL PRODUCTION

The previous section revealed a number of impor findings with respect to agricultural production income. Only a small proportion of agricultural outpu marketed in the three areas surveyed. Most outpu retained to satisfy household food requireme Although most respondents indicated that they access to land, almost one-fifth said they were unabl utilise the resource fully. Few respondents were abl utilise credit channels, thus, the usage of agrochemi is low and little extra labour is hired in.

Overall the agricultural production system characterised by subsistence, and its furt development is constrained by limited access important support services. Nevertheless, s households are able to produce a surplus. For purposes of this paper, we distinguish between groups of producers: those households that produce m than subsistence needs (12-14 bags of maize) and e an income from maize production are classified surplus producers or emerging farmers, and those are only able to meet their basic household f requirements are classified as subsistence farmers.

Discriminant analysis was used to determine wh factors are associated with surplus production. It postulated that emerging farmers can be considered of the rural élite and would therefore own more ca (CATTLE), have greater liquidity (LIQUID) resul from remittances and pensions, have more contact v extension staff (EXTENSION), control larger fa (LAND) and more irrigated land (IRRIGATION). T would also tend to rent in or have access to more l (RENT) than subsistence farmers. In addition, it anticipated that the incidence of households own farm machinery and implements (MACHINERY) wo be higher among emerging farmers, where this wo also tend to give emerging farmers greater access credit (CREDIT).

The calculated results show that, as expected,

Table 7: Discriminant Function Analysis Based o

Discriminant variable	Standard discriminan
	Standardised Coefficient
CREDIT (R)	0.418
LIQUID (R)	0.326
LAND (ha)	0.294
IRRIGATION (ha)	0.188
Number of cases	

* Subsistence farmers are defined as those pr income from sales of maize. Emerging farm

Table 8: Discriminant Function Analysis Based on Ex

Explanatory variable	Discriminant fi
	Standardised coefficient
CREDIT (R)	0.483
LAND (ha)	0.414
LIQUID (R)	0.338
EXTENSION (Visits)	0.208
RENT (percent)	0.149
Number of cases	

* Subsistence farmers are defined as those havi
are classified as those spending more than R40

rental and extension are less important, their combined effect is greater than that of liquidity. Irrigation and machinery are not significant at the ten percent level of probability, but as expected show higher means for emerging farmers.

DISCUSSION

The results obtained above indicate that both supply and demand factors are important in determining rural household food security. This suggests that policies aimed at improving food security will need to address both supply-side and demand-side factors. A variety of characteristics of the food security problem and institutional capabilities need to be considered when making policy choices (Von Braun *et al*, 1992). These include macroeconomic policies, storage policies, production policies and programmes, income and employment generation policies and programmes, targeted distribution and food subsidies and emergency relief programmes. Although all these are important and relevant in the South African situation as depicted by the survey results in KwaZulu, specific emphasis needs to be placed on production policies and programmes, as well as income and employment generation policies and programmes.

Direct support to farmers plays a particularly important role, as is illustrated by the Farmer-Support Programme (FSP) of the Development Bank of Southern Africa. Results of the FSP (Van Zyl *et al*, 1991; Lyne and Ortmann, 1991; Kirsten *et al*, 1993) indicate that the programme contributed to increased household production and household income. The programme enabled households to produce sufficient staples, releasing resources that could be used to purchase other foodstuffs and/or durables. This in many cases resulted in a better balanced diet of households and a higher quality of life. A further expansion of this type of programme to reach more rural households should be one of the aspects to be considered in a food security policy for South Africa.

The results of this study illustrate the relationship between poverty, household food security and agricultural production. Rural households have few income-generating opportunities apart from the marketing of agricultural output that is surplus to household food requirements. Therefore key policies should aim: (i) to support farmers to increase production through productivity-enhancing investments; and (ii) to encourage the formation and deepening of a land market to enable more efficient producers to acquire more land and boost production.

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