
HOUSEHOLD AND NATIONAL FOOD SECURITY IN SOUTHERN AFRICA



Edited by

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FOREWORD

In 1985 the University of Zimbabwe and Michigan State University initiated a Food Security Research Network for Southern Africa. The objectives of the network are to conduct research that informs policymakers about food security issues and to help strengthen the regional capacity for food policy analysis. The underlying premise of the network is that building excellence in research capacity for national policy analysis comes through experience. In practice, this requires a long-term commitment to analytical capacity building, consistency in funding, and constant interaction between researchers and policymakers.

The network has sponsored four annual conferences for network researchers, policymakers, SADCC officials, and representative of international and donor agencies. The aim of the conference is to share research findings, identify new research themes, and provide an opportunity for policy dialogue between regional researchers, policymakers, and government officials.

The 1988 conference brought together 110 participants who deliberated on 28 papers. In the Official Opening, Vice-Chancellor W.J. Kamba of the University of Zimbabwe highlighted the importance of including health related-issues as a component of food security; and Zimbabwe's Senior Minister of Finance, Economic Planning, and Development B.T.G. Chidzero outlined policy reform priorities for Southern Africa. Subsequent sessions focused on *SADCC's Food Security Programme, the Impact of Market Reform on Food Security, Food Security Policy Options, New Technology to Improve Food Security, Family Food Security Options in Low-Rainfall Areas, Expanding Agricultural Trade in the SADCC Region, Nutrition and Food Security, the Contribution of Small-Scale Rural Enterprises to Employment Generation and Food Security, and the Impact of Irrigation on Food Security.*

A highlight of the 1988 conference was the participation of five nutritionists from Zambia, Zimbabwe, Sweden, and the United States. The presence of the nutritionists stimulated formal and informal discussions on the food access side of the food security equation and drew attention to the need to initiate more research in this area.

A second highlight of the 1988 conference was the attention given to reducing barriers to expanded intraregional trade in the SADCC region. Results presented suggest that there appear to be substantial price and nonprice barriers to expanded trade. Nevertheless, there exist significant opportunities for expanding intraregional trade that can be realized through appropriate government initiatives.

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HOUSEHOLD STRATEGIES FOR COPING WITH FOOD INSECURITY IN LOW-RAINFALL AREAS OF ZIMBABWE

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INTRODUCTION

Since the late 1960s, the countries of Sub-Saharan Africa have been struggling against severe food shortages and the crisis appears to be worsening rather than improving. A number of factors account for the continent's growing inability to feed its rapidly expanding population. We have previously argued that one aspect of the food crisis that has received relatively little attention from policymakers is the role and status of local village-based strategies for coping with food deficits (Zinyama *et al.*, 1987). It is at the level of the village that most food is produced and at which the majority of the African population seek security and protection against food shortages. When there is a food deficit, it tends to begin in villages and households that are most vulnerable and it frequently spreads over a wider geographical area. National and international concern is seldom raised until widespread hunger exists, by which time the villages and households initially affected may be in dire straits. It is now recognised that between the emergence of the problem and the arrival of external assistance, villages and farmers will employ a variety of strategies to mitigate the food shortage. In many cases, the strategies are sufficient to prevent famine and death and to reduce the need for external assistance. But in other cases, these village-based strategies are eventually overwhelmed by the magnitude of the crisis such that hunger, starvation and even death ensue.

The literature on strategies for coping with food insecurity in rural Africa in general, and in the SADCC countries in particular, was reviewed in our earlier paper (Zinyama *et al.*, 1987). The aim of this paper is to extend our understanding of Zimbabwean household responses to food insecurity by examining the coping strategies of a small sample of rural families in low-rainfall areas which are prone to regular food shortages, with particular emphasis on the main gender and inter-village differences in strategies. The paper is divided into three sections: the first section summarises some of the principal theoretical and conceptual issues in household coping strategies; the second outlines the methodology of the research; and the third discusses some of the preliminary results of the research from data collected in two villages in the southeast and one village in the northwest of Zimbabwe.

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COPING STRATEGIES: SOME CONCEPTUAL ISSUES

There is general agreement that strategies for coping with recurrent food shortage are an integral part of the total rural socioeconomic system. Coping strategies include activities which may appear insignificant and not identifiable from the overall rural food production system in years of plenty; but assume increasingly greater importance in times of food deficits. These strategies represent adjustments which societies develop, either within their socioeconomic systems or in their interaction with the local environment in order to reduce both the risk and consequences of food shortages--many of which are associated with environmental hazards--such as drought and crop damage by pests. Studies from different parts of the continent have shown that the use of village-level coping strategies is widespread; that the strategies differ from one society to another; and that they are adopted in an identifiable sequence in which the most palatable are taken first and those representing major disruptions of societal norms are taken last (Campbell, 1986; Watts, 1983). Further, it is possible to classify the diversity of coping behaviour into economic, social, and environmental strategies.

Economic strategies

Economic strategies for coping with food insecurity include the diversification of activities in terms of crops grown, animals owned, and both on-farm and off-farm supplements to household income. By diversifying the household's activities, the risk of food insecurity is reduced, as a downturn in one activity can be offset against another. Diversification also allows for some flexibility in the allocation of household resources such as labour. Other economic strategies are based on the liquidation, either for own-consumption or through selling, of household savings and other assets such as livestock, goods or stored grain. Changing economic conditions and the incorporation of villages into the wider national and international economy have extended the geographical area of operation of these economic strategies to include interregional trade, labour migration to urban areas as well as cash cropping. The money earned from these activities is then used to purchase food in times of deficits.

Social strategies

Social strategies for mitigating food shortages are based on reciprocal arrangements and social relationships among families and communities. These may include sharing labour, loaning food or cash, sending children to live with better-off relatives, etc. It is important to emphasise that these social coping strategies are reciprocal.

Environmental strategies

Environmental strategies are based on the careful and selective use of the local physical resource base in times of food deficits. Hill slopes and river valleys provide different local environments which make it possible for households to diversify their cropping strategies and therefore reduce the risk of food shortage. Grazing areas and woodlands provide seasonal fruits, berries, roots, and wildlife which, in times of food insecurity, may become increasingly important sources for survival.

Factors affecting choice of strategy

Most studies on coping strategies have stressed the sequences in their adoption by households. But few have examined in detail the differences in the use of these coping strategies among different social groups both within and between villages, *i.e.* poor versus wealthy families, young versus old, or men versus women. The limited available evidence suggests that there may be important gender, age, and economic class differences in the recourse to, and types of, coping strategies adopted. Poorer families are likely to enter and move along the sequence of strategies--from the more palatable to the least palatable and most irreversible--earlier than wealthier households; women may bear the initial responsibility of guiding the family through the crisis, whereas the men become involved only if the shortage persists and intensifies. Thus, the types of strategies and their adoption within a country will vary according to local sociocultural, geographical, environmental, and political circumstances, while within the same community they will also vary according to such variables as economic status, gender, and age.

THE STUDY AREAS AND RESEARCH METHODOLOGY

Four areas within agroecological Regions IV and V were selected for comparative study, but so far detailed field surveys have been completed in only two of them. The study areas include both communal lands and resettlement areas. The two areas where the field surveys have been completed are the Dewure Resettlement Scheme east of Bikita Communal Land in the southeast and Gokwe Communal Land in the northwest of the country. The other two areas where field surveys are still to be completed are at Mudzi and Buhera Communal Lands in the northeast and southeast, respectively.

Dewure Resettlement area

This area used to be part of the Devuli Ranch, an extensive tract of land between Bikita Communal Land and the Save River. The western portion of the ranch adjacent to Bikita Communal Land was acquired by government for resettlement and the first group of settlers moved onto the scheme in 1982. The inhabitants are settled in 31 villages under Model A, which comprises individual arable holdings and communal grazing with nucleated village settlement. At the time of the field survey in January 1988, there were 944 households on the scheme, with an average of 30 families per village. Two of the villages, Village 3 just south of the border with Buhera near the Dewure River and Village 14, some 15 km south of the main Birchenough Bridge-Masvingo road, were randomly selected for the survey.

Gokwe Communal Lands

In this site, a part of Chitemo VIDCO (the lowest local government unit) near Chireya Mission in Chireya I Ward, was selected for study. The ward is situated in the extreme north of Gokwe near the border with Omay Communal Land. It is 150 km north of the district service centre at Gokwe.

Selection criteria

These survey areas, including Buhera and Mudzi, were chosen for the following reasons:

- o They are located in areas of low rainfall.
- o They are known to experience periodic food shortages.
- o The resettlement area was included in order to examine whether newly resettled people have different coping strategies, compared with those in long-established communities within the communal areas.

Site characteristics

Although the study areas are located in low-rainfall areas, they differ in terms of certain cultural, economic, and physical characteristics. Chireya and Dewure Village 14 are situated in agroecological Region IV. This region is ideally suited for semi extensive farming, based on livestock production supported by the cultivation of drought-resistant crops. The rainfall is low (450-650mm per year) and periodic seasonal droughts and severe mid-season dry spells in excess of 20 days are common. Dewure Village 3, located in the valley of the Dewure River above its confluence with the Save, lies in agroecological Region V, which is ideally suited only for extensive livestock and/or game ranching, except where crop irrigation is practised. Because of the climatic constraint imposed by low and unreliable rainfall, crop failure induced by moisture stress is fairly common in the three villages, even in relatively normal years. Households in these areas are therefore at risk of food shortages on an annual basis. The soil characteristics in the three areas also contribute towards low crop yields. Village 14 has fersiallitic soils which belong to the kaolinitic group. These soils have low water-holding and cation exchange capacity, which renders them inherently infertile. Village 3 contains lithosols which are generally shallow and stony. On the other hand, Chireya has sodic soils. These have high levels of exchangeable sodium which is detrimental to plant growth.

The population of Chireya is quite heterogeneous, comprising both long-standing inhabitants as well as recent immigrants, some of whom came from as far as Masvingo and Matabeleland Provinces. In recent years, settlement in the area has increased following the northward retreat of the tsetse-fly belt. In Dewure, most of the adult inhabitants in the two survey villages were born on Devuli Ranch. They or their parents used to work on the ranch until 1964 when, according to local village leaders, their families were evicted following a dispute with the ranch owners. Some of them went to live in Buhera, while others went to Bikita. When selection for settlement was being carried out soon after independence, preference was given to former residents of the area. Thus, most of the residents of Village 3 came from Buhera to the north, while those in Village 14 came from Bikita to the west.

Sample characteristics

The field surveys on the three villages were conducted during January-February 1988. This involved the administration of a structured questionnaire schedule. All the households in each village were to be interviewed. In each case, the head of the household and the spouse were to be interviewed, unless one of them was absent

from home. (In a few cases where the husband was not present or was dead, an adult son was interviewed together with the mother--provided he was still a member of that household.) The household was defined as a group of persons, usually bound by kinship ties, who normally reside together and share meals from a common kitchen. A single household normally consists of two or, in some cases, three generations comprising a husband (who may reside and work elsewhere away from home) and his wife, their unmarried children (including those who may be non-resident), and sometimes one or more of their aged parents as well as one or more of their grandchildren. A total of 44 households in Chireya were surveyed, 24 in Dewure Village 3 and 26 in Village 14 (Table 1). The total populations in the samples were 379 in Chireya, 216 in Dewure Village 3, and 274 in Village 14, giving average household sizes of 8, 6, 9 and 10.5, respectively.

Data collection approach

The questionnaire was divided into two parts. The first section sought information about the household, including its demographic structure and size, amount of arable land owned and land utilisation, ownership of agricultural resources, participation in wage labour and in local organisation, and the general socioeconomic status of the family. This first module was administered one each per household, the respondents being either the husband or wife alone or, preferably with both spouses present. Thereafter, the spouses were separated in order to answer the second, or main, part of the questionnaire. This dealt with the individual respondent's experience with regard to food insecurity and the coping strategies which they had adopted to mitigate the recent shortages. Every precaution was taken to ensure that there was no collaboration between spouses in responding to questions in the second part of the questionnaire. The numbers of male and female respondents in each of the three villages are given in Table 1. Overall, 45.6% of the respondents were male and 54.4% female, a distribution that allows for comparative analysis of coping strategies by gender.

Table 1. Size distribution of respondents by sex and village, Zimbabwe, 1988.

Village	No. of households	No. of respondents			% of total
		males	females	total	
Chireya	44	36	39	75	46.9
Dewure V.14	26	20	24	44	27.5
Dewure V.3	24	17	24	41	25.6
TOTAL	94	73	87	160	100.0

Source: Field survey

HOUSEHOLD COPING STRATEGIES WITHIN THE SURVEY AREAS

In recent years, Zimbabwe has experienced erratic climatic conditions with frequently recurring severe droughts. The unfavourable climatic conditions would have a direct impact on food supplies within the communal areas where households depend primarily on rainfed production to see them from one harvest to the next. While Zimbabwe's policies, aimed at promoting peasant agricultural production since 1980, have received worldwide acclaim, what has received much less publicity is the emerging inequitable social and spatial distribution of benefits from these policies. A large proportion of the increased national output and sales to the statutory marketing boards (e.g., 66.6% of the small-scale sector's total maize deliveries between 1980 and 1986, rising to over 95% in drought years) come from only a little over one-quarter of the sector's farmers who are located in the medium rainfall areas of Mashonaland and Central, East and West Provinces (Stanning, 1987; Zinyama, 1988). These spatial differences clearly show that households in much of the country face low and fluctuating agricultural incomes and periodic food insecurity.

Incidence of food shortages

The precarious food supply position facing many communal area households in low rainfall areas is indicated in Table 2.

Nearly 90% of the respondents in the three sample villages had experienced regular food shortages in recent years, with 45.6% reporting that this occurred annually. Only less than 10% had not faced the problem of food shortage. A larger proportion of respondents in Chireya faced shortages annually than in the other two villages in Dewure. This may partially be due to the fact that the latter, being part of a resettlement scheme, tend to receive greater allocations of staff and resources from government departments (particularly AGRITEX and Department of Rural Development) such that impending food shortages will be reported and relief

Table 2. Frequency of food shortage experienced in recent years, by village, Zimbabwe.

Frequency	Number and % of respondents							
	Chireya		Village 14		Village 3		Total	
	No.	%	No.	%	No.	%	No.	%
Annually	42	56.0	14	31.8	17	41.5	73	45.6
Frequently/occasionally.	23	30.6	24	54.6	23	56.1	70	43.7
Seldom	8	10.7	6	13.6	1	2.4	15	9.4
Not specified	2	2.7	0	0.0	0	0.0	2	1.3
Total	75	100.0	44	100.0	41	100.0	160	100.0

Source: Field survey

programmes implemented more quickly than in the case of communal areas. Thus, 86.4% of the respondents in Dewure Village 14 and 92.7% of those in Village 3 reported that they had received assistance from the government during recent food shortages, compared with 66.7% of those in Chireya³. Another contributing factor for spatial differences in the provision of government assistance in times of food insecurity may be the geographical remoteness and relative inaccessibility of Chireya, even from the district administrative offices at Gokwe service centre.

Gender differences in perception of food shortages

An important aspect in studies of rural household coping strategies aimed at establishing village-level early-warning systems against impending food shortages is the identification of possible differences in behaviour patterns between males and females. Because wives are directly involved in food preparation on a daily basis and usually have day-to-day control of the family's food stores, they are likely to become more sensitive to any impending shortages earlier than their husbands. Often, the shortage may even pass (following a good harvest) without the husband being fully aware of it. These gender differences in the degree of awareness and perceived frequency of food shortages in the three sample villages are indicated in Table 3. A little over one-half the female respondents in the three villages reported that they faced food shortages annually, compared with 37% of the male respondents. On the other hand, 16.4% of the male respondents reported that they seldom experienced food shortages, against only 3.5% of the females.

Coping strategies employed

If most of the households in the three areas have experienced regular food insecurity due to the recurrent droughts of recent years, this raises the question as to what

Table 3. Frequency of food shortage by sex of respondents, Zimbabwe.

Frequency	Males		Females	
	No.	%	No.	%
Annually	27	37.0	46	52.9
Frequently/occasionally	33	45.2	37	42.5
Seldom	12	16.4	3	3.5
Not specified	1	1.4	1	1.1
Total	73	100.0	87	100.0

Source: Field survey.

³However, the distribution of government food aid at the time of the field survey was irregular in Dewure Village 3, unlike in Village 14 where food was being received on a more regular basis and some of the inhabitants were engaged on "food for work" projects.

coping strategies they use in order to ensure against the effects of these shortages. The respondents were asked a series of questions to establish how, both as individuals and as family heads, they had coped with recent as well as any past food shortages. Their responses to the question which asked what they personally usually do to offset the effects of food shortages are summarised in Table 4.

The responses show that a wide range of social, economic, and environmental strategies are used by rural households to mitigate food insecurity. The most frequently cited strategies by both males and females in the three villages were the purchase of grain and maize-meal, obtaining cash or food through local short-term contract work for other people (Shona: *maricho*), and selling livestock, particularly small stock such as goats. The large proportion of respondents that were dependent on purchased maize-meal underscores the significant role of small-scale rural traders or general dealers in the distribution of food during times of food insecurity. In many of these households, the money for purchasing maize-meal was obtained principally from doing contract work locally, and from sales of livestock and crafts.

Table 4. Strategies that respondents personally usually adopt to offset effects of food shortages (respondent stated up to 4), Zimbabwe.

Strategy	% of respondents in each group							
	Chireya		Vill. 14		Vill. 3		Total	
	M	F	M	F	M	F	M	F
Buy grain	58	46	42	18	59	28	54	34
Buy maize-meal from shops	42	23	47	32	71	36	50	29
Sell labour locally (<i>maricho</i>)	28	33	16	46	18	32	22	36
Sell crafts	56	13	16	9	6	8	33	10
Sell livestock	19	15	32	36	6	12	19	20
Gather wild food	6	21	11	14	12	36	8	23
Sell garden vegetables	14	18	0	0	0	0	7	8
Borrow food from relatives	3	0	11	14	12	16	7	8
Food gift from relatives	3	0	11	14	6	12	6	7
Cultivate early crops in vleis	8	10	5	9	0	0	6	7
Use stored food	8	5	11	0	6	4	8	3
Brew beer for sale	0	0	0	14	6	21	1	9
Borrow food from friends	0	0	11	5	0	12	3	5
Borrow money from relatives	0	0	0	9	18	4	4	3
Seek off-farm work	0	3	0	5	12	4	3	3
Begging	3	3	0	0	0	8	1	3
Food gift from friends	0	0	5	0	6	4	3	1
Sell fuelwood/thatching grass	0	0	0	0	0	12	0	3
Sell prepared food	0	3	0	5	0	0	0	2
Hunting	0	0	11	0	0	0	3	0
Ask for government help	0	0	5	0	6	0	3	0
Sell cotton	3	0	0	0	0	0	1	0
Sell tobacco/snuff	0	0	0	5	0	0	0	1
Not specified	3	3	0	0	0	0	1	1

Source: Field survey.

may have broken down and new ones have not yet fully evolved. In the meantime, such people would require greater external assistance to cope with the food shortage.

Food transfers between households

Field observations, as well as discussion with the respondents, showed that food shortages during the past few years have been more severe and protracted in Dewure Village 3 than in the other two villages. Preliminary comparative analysis of data on the extent of food transfers between households, either through food loans or as gifts, suggests that these reciprocal arrangements tend to weaken as food insecurity becomes worse and protracted. In each village, most of the residents are bound by kinship ties and, in the case of the two Dewure villages, the settlers came from the same localities in either Buhera or Bikita. It would therefore be expected that these relationships would form the basis for reciprocal transfers of food to assist households in need. However, only 29.3% of the respondents in Village 3 (the worst affected), compared with 40.9% in Village 14 and 38.7% in Chireya, said that they had given food (either as a loan or as a gift) to other households faced with food insecurity. The disintegration of these social arrangements is because the basis of reciprocity--that some members still had food while others had run out--would have been eroded as everyone eventually became severely affected by the shortage of food.

Use of the bush as a food source

Studies on coping strategies elsewhere in rural Africa have found that during times of food shortage there is an increase in household use of the bush as a source of food through hunting and collecting wild fruits, berries, and roots. However, as mentioned earlier, very little hunting was reported in the two areas. But the gathering of wild fruits, roots, and grasses was more common. The respondents were asked if they collected any wild foods during the recent shortages and, if they did, whether their dependence on them had changed from the patterns of normal seasons. In Chireya and Dewure Village 14, between one-half and two-thirds of the respondents (both males and females) said they had not collected these famine foods. In Dewure Village 3, however, three-quarters of the respondents said that they had done so. When asked further if their use of wild foods had changed, less than one-third of the respondents reported an increase (Table 5).

This limited dependence on wild foods may be a reflection of a number of factors including: first, the fact that these foods are frequently eaten as a matter of course, even in good seasons such that any changes in consumption patterns may not be observed readily (this is implied in the high proportion reporting no change in Dewure Village 3, the village with the highest dependence on famine foods); second, the local availability of more effective alternative coping strategies which households can adopt before resorting to wild foods; third, the possibility for relief provided by external food distribution agencies such as the government's food-for-work scheme; and fourth, the depletion of wild foods through bush clearing for settlement, cultivation, and fuelwood such that the bush no longer has its former significance as a source of food in times of hardship.

Table 5. Changes in household dependence on famine foods from the wild during recent food shortages, Zimbabwe.

Change	Number and % of respondents					
	Chireya		Village 14		Village 3	
	No.	%	No.	%	No.	%
Increased	25.0	28.2	15.0	33.3	17.6	29.2
Decreased	2.8	2.6	5.0	0.0	17.6	4.2
No change	13.9	17.9	20.0	0.0	14.2	45.8
Unspecified/not applicable	58.3	51.3	60.0	66.7	23.5	20.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Field survey

The main wild foods that were reported to assume greater significance in times of food shortage in Chireya were *tsangu* (a wild grass which produces small grains similar to finger millet) and *svozve* (a fruit). Twenty-nine percent and 24% of the respondents said they had been using *tsangu* and *svozve*, respectively, to supplement their household food supplies during the recent shortages. *Tsangu*-seed is winnowed, ground into a flour, and cooked into sadza in a similar manner as ordinary mealie-meal. In Dewure, the manner in which certain fruits are consumed changes between good and bad years. In good years the fruits of the *Rhamnus zeyheri* (*munyii* or red ebony) and *Sclerocarya caffra* (*mukwakwa* or *marula*) trees are eaten fresh. During food shortages, the marula fruits are processed, dried, and stored for later use. The fruits of the *Rhamnus* are sun-dried before storage. These are then eaten during the day while the traditional main meal of sadza made from grain meal is restricted to the evenings--thereby extending the household's declining food reserves.

The baobab fruit is pounded, sieved, and the flour is also cooked into a form of sadza in place of ordinary mealie-meal. In the two villages in Dewure, 46.3% of the respondents in Village 3 and 15.9% in Village 14 said they had been collecting the fruits of the *Rhamnus* tree to varying degrees. The respective figures on the use of the baobab fruit are 39% in Village 3 and 11.4% in Village 14. These figures are consistent with the observations made earlier that food insecurity was more severe in Village 3 than in Village 14.

Migration in search of food or employment

In addition to trying to overcome the problems of food insecurity using resources available within their local area, one or more household members may migrate to other areas in search of employment or food. A conceptual problem arises here in that it is often not possible to distinguish between normal rural-urban migration which occurs regardless of the household's food supply situation, from migration specifically brought about by food insecurity. Often, food insecurity may actually serve to hasten the decision to migrate in search of employment. Migration aimed

specifically to mitigate food insecurity tends to be short-term, unlike the other type which may be life-long. Moreover, it tends to be more confined to the males alone, while the wives and children remain behind at home.

In the three villages, over 90% of the female respondents reported that they had not left their homes during the period of food shortage. Likewise, a large proportion of the male respondents--58.3% in Chireya, 58.8% in Dewure Village 3 and 80% in Village 14--had not left during the same period. The low levels of outmigration in the two villages in Dewure are largely attributable to the government's stipulated conditions for resettlement (only recently relaxed) that the settler had to permanently reside on the scheme. In Chireya, remoteness and inaccessibility may account for the low level of migration--the single gravel road serving the area was upgraded only recently, but it can still become impassable in places during the wet season. Among the male respondents who had left Chireya at some point, their principal destinations were Gokwe centre to look for employment or to sell or barter their goods, or to adjacent communal areas where they had visited better-off relatives. The few male respondents who left the two Dewure villages mostly went to seek employment on adjacent commercial agricultural estates, at Devuli Ranch or ARDA's Middle Sabi Estate. The remainder either visited relatives in adjacent communal areas of Buhera and Bikita or went to urban areas.

CONCLUSION

This paper has presented some preliminary results of ongoing research into local village-based household strategies for coping with food insecurity in low-rainfall areas of Zimbabwe. The authors are quite aware that there are a number of important issues which they have not addressed, including perhaps one of the most crucial in improving rural food insecurity, the question of rural-urban linkages and food transfers from urban to rural areas during periods of food shortages. However, our aim in this paper was to focus discussion only on the identification of the strategies that households adopt within the context of their local environment.

Another issue which has not been examined is the sequence, if any, in the adoption of these coping strategies. This is particularly important for formulating and successfully implementing a of village-based early-warning systems to identify impending food shortages. However, the examination of the range and characteristics of coping strategies adopted by rural households--the theme of this paper--must precede the identification of any sequential adoption patterns. We see the latter as the next stage in our ongoing research.

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