



# People, Land and Livestock

*Proceedings of a Workshop on the  
Socio-Economic Dimensions  
of Livestock Production in the  
Communal Lands of Zimbabwe*

Edited by  
Ben Cousins



**PEOPLE, LAND AND LIVESTOCK**

**Proceedings of a Workshop on the Socio-economic  
Dimensions of Livestock Production in the Communal Lands of  
Zimbabwe, held at Great Zimbabwe, Masvingo, 12th to 14th  
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**Edited by Ben Cousins**

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A. Maclaurin and Dr C. Jackson acted as rapporteurs and did a fine job of reporting in detail the wide-ranging discussions which took place.

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## WORKSHOP DISCUSSION AND RECOMMENDATIONS

Prepared by B. Cousins, C. Jackson, A. Maclaurin and I. Scoones (eds.)

### 1. LAND AS A NATIONAL POLICY ISSUE

The inequitable distribution of land in Zimbabwe as a constraint to Communal Land (CL) livestock production was a recurrent theme of discussion at the workshop. A number of high level inter-ministerial seminars have taken place over the past eighteen months on the question of Agrarian Reform in Zimbabwe, in response to the commissioned study by Cliffe (1986), and this indicates that this is indeed an issue of critical importance. At the workshop a number of aspects were highlighted:

\* Colonial land distribution policies led to the concentration of the African population in restricted Communal Lands (CLs), largely in low potential areas. This means that land scarcity and high population densities are a dominant contemporary feature. It was suggested that significant and sustainable breakthroughs in CL livestock production and grazing land management would not be feasible without increased access to land for CL farmers.

\* An export-oriented policy since Independence has assumed the possibility of increasing beef offtake from the CLs. Chinemberi in his paper on extension programmes pointed to Agritex's hopes for increasing offtake from 2,5 - 3% to 8%. However the general workshop discussion questioned the feasibility of this, because under land scarcity CL farmers in most areas of the country concentrate on the intermediate

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products of cattle (draught, manure) and beef production is only a subsidiary aim (see the Position Paper).

\* Moyo pointed out in the panel discussion on policy that a focus on commercial beef production results in a concentration of funds and subsidies in the large-scale commercial farming sector. This is reflected in the pattern of CSC lending. This policy was again seen to be a legacy of the dualistic nature of the national economy whereby the commercial sector has sufficient land and resources to contribute to export quotas and urban markets. Because of lack of resources, particularly land, and because of differing objectives, CL producers are unable to benefit from agricultural subsidy and support, which is oriented towards beef production. Current policies thus tend to further reinforce the historically derived dualism of the economy.

\* The problems faced by the government's resettlement policy were outlined by Sithole. The constraints of the Lancaster House constitution and the Land Acquisition Act, the high costs of land purchase, the lack of sufficiently large blocks of land for sale and the administrative constraints of multiple ministerial authority for land acquisition and resettlement have all contributed to the slow pace of resettlement. Some questioned the sustainability of "stop-gap" development measures in the CLs without an expanded and integrated resettlement programme. It was suggested that only with more land could the peasant farming sector effectively reverse the legacy of marginalisation.

\* There was some discussion of the patterns of resettlement appropriate to different areas of the country (see also

Position Paper). In relation to livestock production, the Model D-type resettlement pattern (extension of existing CLs) was seen by some participants to be beneficial for the improvement of intermediate products (notably draught from cattle) and terminal livestock products (especially smallstock meat) in the drier areas of the country. In the higher potential areas a more intensive land use system could be envisaged with tethering or zero grazing a possibility. It was noted that no intensive resettlement model existed. It was suggested that such a model for high potential areas be investigated for technical and economic feasibility.

\* The comparative returns over time of different forms of land use in different regions of the country remains unknown. Estimates of the economic returns (e.g. per ha/LU/person) of commercial beef ranching vs. different resettlement models vs. integrated wildlife utilisation vs. CL farming could form one criterion by which strategic national land use decisions are made. The discussion pointed to other criteria that would have to be taken into account. These included considerations of equity (how should land be distributed within the country?) and of environment (what knock-on impacts are there and how ecologically sustainable are different land uses?).

\* Some participants expressed the view that the only solution to problems of overcrowding in the CLs lies in the growth of economic opportunities outside of agriculture, and particularly in the urban sector of the economy. From this perspective expanded resettlement is unlikely to provide a sustainable solution.

## **Discussion and recommendations**

In summary, workshop discussion was not restricted to issues of livestock development within Communal Lands. Rather, the need to consider these within the wider context of the structure of the agrarian system within the country as a whole was emphasised.

### **RECOMMENDATIONS**

#### **Policy**

(1) Communal Land livestock development must be seen within the context of an expanded resettlement programme. A commitment to increasing the livelihood of CL farmers with respect to livestock production necessitates increases in livestock populations. This may conflict with government's concerns about long-term environmental degradation in the CLs unless more land is made available.

(2) A regionally differentiated policy for livestock and resettlement is required that acknowledges the role of intermediate livestock products and develops the potential of CL livestock outputs other than beef. This needs to be flexible to allow for local level participation in planning. For an integrated approach the clear definition of ministerial/institutional responsibilities is required.

#### **Research**

The economic returns, environmental consequences and equity implications of different land use and resettlement patterns

in different areas of the country need to be addressed by research.

## 2. LAND USE PLANNING WITHIN CAS

As Scoones' presentation in the panel discussion on policy outlined, land use within the CLs is largely determined by the policies of the colonial era, notably centralisation and the Native Land Husbandry Act. These policies were implemented by means of "top down" planning, and the technical rationale on which they were based can be questioned (e.g. the use of commercial beef ranching carrying capacities for setting CL stocking rates). In addition, the land use planning model which evolved during the colonial era was not appropriate in all areas of the country, since a wide range of economic and ecological conditions can be found.

Workshop discussions noted that current land use planning, internal resettlement and villagisation policies are largely based on similar technical assumptions. It was questioned whether these were always appropriate to local circumstances and whether the inherited ethic of centralised planning for the CLs contradicted the current policy emphasis on locally determined development by VIDCOs and WADCOS.

Government's commitment to village and ward level institutional development was seen to be an excellent starting point for evolving local level control over land use decisions. Participation in decision-making was seen to be critical to the encouragement of community responsibility and management of grazing land resources (as described for grazing schemes by



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Chavunduka and Cousins). An important challenge was seen to be the integration of conventional land use planning carried out by Agritex and other agencies into a participatory framework based on local level institutions. The successes and failures of grazing schemes in this respect were discussed (see section 3).

## **RECOMMENDATIONS**

### **Policy**

A uniform policy for CL land use planning is inappropriate. Policy mechanisms for increasing flexibility to suit local conditions and increase participation of village and ward institutions need to be explored.

### **Research**

The technical basis for different land use planning interventions in relation to farmer objectives and CL socio-economic conditions needs investigation. The issue of CL carrying capacity levels is highlighted as a priority.

### **Implementation**

A more participatory approach to land use planning needs to be investigated by agencies such as Agritex and the Ministry of Local Government. This approach would aim to strengthen the planning and management capacities of the new village and ward level institutions (VIDCOs and WADCOS) in the CLs.

### 3. GRAZING LAND MANAGEMENT

#### Grazing schemes and common property resource management

The role of grazing schemes as common pool resource management institutions was discussed at a number of sessions and in relation to papers by Cousins, Chavunduka, Chinemberi and Kundlhande and Mutandi. Cousins argued that grazing schemes offered the possibility of taking CL grazing land out of a virtual "open access" situation to a common property situation with communal management. However warnings were sounded during discussion. The possibility of expropriation of better grazing land by favoured communities with access to donor funds or the schemes providing the mechanism for larger stock-owners or absentee owners to accumulate cattle were two concerns aired.

In his paper Cousins noted that:

Grazing schemes are at present a focus for an emerging redefinition of community identity in the Communal Lands; some communities are defining their boundaries in relation to the physical boundaries of their grazing land and developing sets of rule for the management of shared resources....

Successful schemes apparently may be mobilising around resource management groupings that have operated together in the past, such as "shallow lineage groups" (cf. Position Paper), but integrated into modern VIDCO/WADCO structures. Some schemes however have resulted in intense factional conflicts. Cousins reports that 77% of schemes have external conflicts (i.e. boundary disputes and the like), while internal conflicts are particularly prevalent during the planning stages and are less evident in schemes established some time ago.

## Discussion and recommendations

Most operating schemes are focused on relatively small groups of resource users. In Cousins' study more than half of the surveyed schemes represent areas smaller than a VIDCO, while 40% are based on the VIDCO. A central question raised was how to identify communities and appropriate institutions for common property resource management. The notion of a "community" is complex; the Position Paper observes that:

Individual homes, homestead clusters, spatially defined village sections, political villages and wider communities all therefore have overlapping rights of different strengths to any one natural resource in a specific place.

The resolution of conflicts requires:

the identification of suitable management units, the identification of the appropriate scale of organisation to be responsible for management, the resolution of conflicts over overlapping rights and the involvement of both rich and poor.

The nature of conflicts over grazing scheme implementation was discussed at a number of sessions. External conflicts centre on boundary disputes arising from the pattern of overlapping rights to common pool resources. Kundhlande and Mutandi, referring to experience in Gutu, point out:

Grazing is not confined to one's village... those communities without grazing have resisted the establishment of grazing management schemes in adjacent areas they depend on for grazing...

One of the major incentives for the establishment of grazing schemes, along with reduced herding labour, is the desire to secure rights over a well-endowed communal resource and gain the means to exclude others. The discussion considered the

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implications of the government's intention to establish schemes in all areas and wondered whether communities without an already well-endowed resource base would be able to implement a successful grazing management scheme under conditions of extreme land scarcity. This again brought the discussion back to the land question and the need to integrate CL development within a broader policy of land redistribution (see section 1).

The problem of VIDCO boundaries not coinciding with actual resource use emerged strongly in discussion, with several examples being given from the CARD programme in Gutu. It was suggested that a realignment of administrative boundaries may be necessary if common property resource management is to be encouraged at VIDCO and WADCO level.

Internal conflicts are derived from a number of sources, as examples cited by participants in discussion made clear. Objections to land reorganisation and enforced resettlement in "lines", the suspicion that grazing schemes will result in destocking "by the back door", the loss of livelihood of people previously employed as herders and resentment by non-stock owners who object to having to contribute equally to a project from which they perceive there to be unequal benefits, were all factors raised in discussion. Cousins found that the issue of unequal benefits was not a major objection in many schemes. He comments that:

...respondents emphasised the securing of rights to common pool resources... and the existence of reciprocal arrangements which tied owners and non-owners together.

The value of communal grazing land for products other than livestock fodder (e.g. wood) is important to recognise and may

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also be a factor in encouraging non-stock owners to participate in grazing land management projects (cf. Position Paper).

Experience of grazing schemes in Zimbabwe shows that some groups of resource users have managed to resolve such conflicts. Cousins reports a subjective assessment of "a high level of commitment" to a grazing scheme which is characterised by a notion of "community membership", an implicit social boundary and a strong sense of resource proprietorship. It is clear however that there are no well-defined rules for the identification of resource management "communities" and no clear cut model for grazing scheme interventions.

The importance of learning from current experience of grazing scheme implementation through socio-economic monitoring of different approaches to community mobilisation, resolution of conflicts, etc. was suggested as an important complement to ongoing natural resource monitoring. Again workshop discussion emphasised the necessity for truly participatory approaches to grazing land management whereby a community has a central role in defining the plans for a grazing scheme and is given time to resolve internal and external conflicts. It was noted that in certain instances such participation is lacking due to such factors as donor deadlines and Agritex's dominant involvement in planning.

The role of local farmer knowledge in planning grazing management in CLs was emphasised by Scoones:

Understanding farmers' strategies allows a framework of posing technical, scientific questions in research. It also provides the basis for evolving development strategies that are not imposed as alien "packages" that contradict with existing practices.

## Discussion and recommendations

In this context the use of farmer knowledge in defining different land use categories and the importance of understanding farmer grazing management strategies particularly in relation to the use of "key resources" for livestock fodder (vleis, drainage lines, browse etc.) was discussed. While some of the ecologists present had reservations about aspects of the "key resource" concept, it was generally agreed that local understanding of environmental conditions could be brought more fully into the planning of communal area resource management (see also section 8 on research and extension approaches).

## RECOMMENDATIONS

### Policy

The implications for resource poor communities of land enclosure in grazing schemes needs to be addressed, as does the linkages between this programme and the wider resettlement policy. The definition of appropriate resource related boundaries that can evolve as management units needs to be resolved in relation to VIDCO/WADCO boundaries.

### Research

(1) Socio-economic monitoring of grazing schemes is required to highlight approaches to conflict resolutions, issues of institutional control and the consequences of differentiation. It was suggested that a regular monitoring programme be established focused on "indicator districts".

## Discussion and recommendations

(2) Research into the basis of farmer knowledge and the implications for grazing scheme design needs to be pursued.

## Implementation

Methods for participatory planning and implementation of grazing schemes should be explored, whereby government departments act in a service role to local initiatives. The demarcation of VIDCO/WADCO boundaries in relation to "actual" community boundaries (based on ecological and socio-economic factors) may arise as a key issue for further initiatives in common property resource management.

### Technical considerations: different grazing systems

Cousins' survey found some grazing schemes were not operating the recommended short duration grazing system and had opted instead for a pattern of reserved grazing or maintained a form of continuous grazing. As Kundhlande and Mutandi noted, the existence of three portions of grazing resource - upland grazing, cultivated land and waterways/vleis - that are used at different intensities at certain times of year means that there is some form of rotational system already in existence. Scoones' paper emphasised the particular importance of vleis, drainage lines and browse for late dry season grazing. In addition, contour ridge grazing and stover were found to be very important in the dry season. Scoones commented in his paper:

The patchiness of the environment and the patterns of livestock use need to be explicitly acknowledged in land-use planning exercises. This is not necessarily done in the planning of grazing schemes.

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He argued that "key resources" should be the central focus for the planning and design of any scheme, whereby dry season fodder reserves could be managed.

There was some debate as to whether rotational systems result in higher levels of livestock production than continuous grazing. Some participants stated that extensive reviews of the literature have shown no proven benefit from a rotational system. Chinemberi noted that the Agritex veld trend monitoring programme is carrying out range assessments three times a year in 7 sites across Natural Regions II to V to try and assess whether the implementation of grazing schemes was having a beneficial effect on range condition. It was noted that it was important to design monitoring programmes that distinguished between the effects of reduced local stocking (due to the exclusion of neighbours' cattle), rainfall regime and type of grazing system.

## Environmental implications

Cousins noted that two thirds of surveyed grazing schemes were stocked at more than twice the recommended stocking rate for the natural region. This is typical of most CL grazing land. Scoones argued the historical derivation of carrying capacity levels meant that they were not appropriate for CL situations and that CL livestock are sustained at far higher stocking levels due to adaptive utilisation of key resource areas.

Discussions centred on the environmental costs of high stocking rates. It was argued by some participants that heavy utilisation of topland grazing areas by livestock could result



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in irreversible productivity losses in these areas, particularly through soil loss. It was speculated that the concentration of livestock on key resource areas could be in part due to the degradation of top-land grazing. However it was noted that little is known about the net movements of soil or nutrients within CL land use systems and the associated impact of grazing. It was suggested that catchment level studies of soil erosion processes be carried out to try and assess the long term ecological implications of heavy use.

The question of the economic dimension of environmental degradation was also raised and it was argued that it was vital that measures of degradation take into account the socio-economic objectives of the production system (cf Position Paper). In addition, the costs of any remedial conservation measures would have to be assessed in terms of losses to immediate productivity and livelihood (e.g. through stock reduction or exclusion of grazing areas etc.) against gains in long-term production sustainability.

Mutandi and Kundhlande raised the issue of "bush encroachment" as a problem in grazing areas in Gutu. It was felt that the costs of "bush" in terms of reduced grass cover had to be weighed against the benefits of woody shrubs and trees for other uses such as browse and firewood (especially as a "deforestation" problem was also noted for the same area). The need for an integrated and holistic view of the resource bases was stressed. In such a view the multiple functions of trees would be taken account of, in contrast to a restrictive unidisciplinary view where the range scientist regards trees as "bad" and the forester sees them as "good".

## **Discussion and recommendations**

Similarly, the interaction of elements of the farming system was seen to be often overlooked. In this respect the importance of crop-livestock interactions and the often forgotten role of stover was emphasised in discussion. In addition, the interactive consequences of cattle and goats in grazing schemes had been given scant consideration until the start of the long-term Matopos studies this year. The importance of involving farmers in resource management decisions was reaffirmed in this context, as it is they who perceive interactions in an holistic manner.

## **RECOMMENDATIONS**

### **Research**

(1) The suitability of different types of grazing systems (rotational, reserved grazing, "key resource" management) needs to be tested in Communal Land situations in relation to both technical and socio-economic variables.

(2) The ecological consequences of high use grazing systems should be investigated by catchment-level soil/nutrient loss studies.

(3) Appropriate measures of degradation need to be defined that take account of the economic dimension and the objectives of the production system.

### **Implementation**

Extension advice must take into account the interrelationships between components of the farming system and the multipurpose

## **Discussion and recommendations**

**value of different elements. Disciplinary or commodity biases should be avoided.**

### **The economics of grazing schemes**

Chinemberi pointed out that the current costs of fencing (\$1300/km) left the financing of schemes in the balance with uncertainty about future donor support. The discussion noted that with the major uncertainty surrounding the production benefits of grazing schemes and the cost for fencing a ward grazing scheme in the order of \$300 000, grazing schemes represented a risky investment in development. It was suggested that some rigorous economic assessments of existing schemes are needed in order to assess the viability of fenced, multi-paddock schemes and gauge whether this is an appropriate avenue for development monies.

## **RECOMMENDATIONS**

### **Policy**

**The costs of grazing schemes must be considered in relation to their estimated benefits and the returns on other development investment in the CAs.**

### **Research**

**Rigorous cost-benefit analyses of grazing schemes are required to assess their economic sustainability.**

#### 4. LIVESTOCK FUNCTIONS AND ECONOMICS

Papers by Jackson, Chinemberi and van Eckhardt/Mombeshora highlighted the variety of economic functions of livestock. These include both outputs of terminal products (meat, milk, skins) and intermediate products (draft, transport, manure). Van Eckhardt and Mombeshora also discussed the important role of livestock in the marriage contract. Chinemberi referred to the National Livestock Development Policy draft (1988) which has states as guiding principles the need:

- to take account of the multiplicity of livestock functions
- to maintain the security function of livestock
- to reconcile the security function with the task of improving productivity, in terms of farm outputs like meat and milk as well as farm inputs like draft and manure.

As the Position Paper argues, policy to date has failed to take into account this multiplicity of livestock functions and has been focussed largely on beef production. Scoones' historical review highlighted the failure of a series of attempts during the colonial period to introduce "superior" bulls and upgrade indigenous stock for beef production. The workshop discussion focussed on the question of whether this imbalance was being redressed. While acknowledging that current extension policies are generally concentrated on upgrading nutritional status for all functions, a number of major thrusts are largely beef oriented, for instance cattle finishing.

The equity implications of current extension strategies were also considered. With only a small percentage of CL farmers being potential beef producers (i.e. those with more than 8 -

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9 head) the bias is towards the relatively wealthy with other potential target groups left out. Other fodder improvement interventions such as legume fodder banks tend to be oriented towards cattle owners. The small stock producer is one category that does not appear to receive much extension support. In discussion it was stressed that different individuals within and between households will have different objectives with respect to livestock production. For instance, women regard goats as important sources of extra income, whereas men tend to regard cattle as more important in relation to their obligations to the household. It was stressed that extension strategies needed to focus on each of these different categories of livestock producer, taking into account their differing objectives.

It was also noted by Chinembiri and in discussion that the package of financial/credit incentives for CL livestock production were again heavily biased towards beef producers and that the terms required, for instance by the CSC Finance Scheme, were impossible to meet for most CL farmers.

## **RECOMMENDATIONS**

### **Policy**

**Agricultural support, credit and marketing policies should be reoriented to encourage livestock enterprises that are dominant or that have potential in the Communal Lands.**

## Implementation

Greater attention should be given to livestock interventions not oriented to beef or to cattle alone, and whose benefits are spread across a wider spread of the rural population. There is potential for exploring extension approaches based on technologies and management strategies suited for the resource poor (especially women).

### Regional variations in agro-pastoral systems

The relative importance of different livestock functions was discussed in papers by Jackson, van Eckhardt/Mombeshora and in the Position Paper. Jackson noted that:

The relative values of intermediate products from livestock within CAs of Zimbabwe vary as a consequence of a wide range of factors - agroecological region, herd composition, farmer objectives, seasonally specific situations etc...

Van Eckhardt and Mombeshora illustrated the theme of regional variations in livestock functions by presenting a wide range of data from different studies in different areas of the country. From a comparison of herd structures, they suggest that cattle in the higher potential zones are especially important for draft, while those in the drier areas may be used for a wider range of functions, including meat output. This is especially so in Matabeleland. Different stock ownership patterns show that smallstock and donkeys are more important in the drier areas. Pig ownership is seen to be more patchy with particular areas showing a keen concentration on pig husbandry.

## **Discussion and recommendations**

The theme of regional differentiation was taken up in the discussion. Some participants suggested that a national classification of different farming and pastoral systems be developed, to include a focus on the regional differences in livestock functions in the system. It was concluded that the Natural Region classification was too broadly based for an effective differentiation of different farming systems in Zimbabwe. It was suggested that regionally specific livestock policies and extension strategies were needed. Some thought that the simple differentiation between stock and non-stock owners was inadequate for defining recommendation domains within regions, because of the complex web of interactions between the two (see section 5). Others offered examples where livestock functions differed significantly over very short distances (e.g. in relation to a concentration on cotton production), the implication being that any broad categorisation or zoning would have to be supplemented by locally adapted extension approaches so as to be responsive to local needs.

## **RECOMMENDATIONS**

### **Policy**

**A regional differentiation of livestock policy and extension strategy is needed that takes account of differences in livestock functions.**

### **Implementation**

**Implementation and extension programmes must be responsive to local variations in livestock functions.**

## Discussion and recommendations

### The valuation of livestock functions

A number of attempts to value livestock functions in economic terms were reported in the Position Paper and by Jackson. Discussion centred on the objectives for such valuations. A number of uses were suggested, each with different end-users:

- \* Strategic comparisons between different potential land uses for national level planning (e.g. between ranching, CL production, resettlement etc.)

- \* Comparisons between the role of livestock in different farming/pastoral systems in the country (i.e. the relative importance of draft, manure, milk etc.) to guide regional research/extension efforts.

- \* Estimates of the cost of substitution of different livestock functions (e.g. by means of tractorisation or fertiliser supply) and so the valuation of multi-purpose animals for development policy makers.

- \* The ranking of farmers' priorities in relation to livestock functions to encourage local extension workers' efforts to be responsive to local situations and different "types" of livestock holders (in relation to wealth/gender etc.)

A number of quantitative and qualitative methods for valuation were outlined in the workshop. These include:

- \* Replacement cost methods - where the local cost of substituting the function is assessed and multiplied by the estimated output (per animal/unit area over a period of time).



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\* Compensation valuation - where the farmer is asked what s/he would accept as payment to forego use of the output (or the converse: what a non-user would be prepared to pay to gain access).

\* Hypothetical models - where output rates are assumed for different model systems and costs attached.

\* Preference ranking - where the farmer is asked to rank the importance of different functions of livestock. This will vary between different producers in any area (stock owners/non-owners, men/women).

Sutherland in his paper pointed out the importance of using a method suited to the end-user. Thus an extensionist interacting with farmers might use a ranking technique to investigate local preference, but research aimed at strategic policy planning would probably need a more quantitative framework.

In studies carried out in Zimbabwe replacement cost evaluation has been the approach used most frequently, although ARDA (1987) (reported in the Position Paper and Jackson) used a set of hypothetical farming system models. However as Sutherland pointed out:

In evaluating the relative importance of different outputs it is important to supplement economic analysis by recording the farmer's own assessment of the importance of different outputs.

This is because a simple replacement cost approach may value milk output very highly (because of a high market price) relative to draft (which is used largely in the ploughing

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season for a few days). However it is likely that farmers rank draft access higher than milk as it is so critical to their production base, and milk may be regarded as a welcome "luxury".

Jackson argued that for quantitative economic valuations to have any comparative value it is essential that:

...all studies concerned with valuing intermediate products should fully and explicitly detail their assumptions and methods...

He continued by saying that unless this is done it is impossible to know:

...to what extent we are measuring differing livestock systems and to what extent we are observing differences in assumptions.

In addition, in discussion participants considered possible refinements to existing replacement cost assessments. It was concluded that a time dimension would have to be incorporated and seasonal and local ecological (e.g. the influence of soil type on the value of manure) differences included.

## RECOMMENDATIONS

### Research

Further research is required into regional differences in livestock values using consistent methods and assumptions.

## Discussion and recommendations

### 5. OWNERSHIP AND ACCESS

#### Livestock ownership

Considerable attention was given in both the papers and the discussion to the distribution of benefits from livestock, and the question of whether or not ownership is an adequate indicator of these benefits.

The Position Paper outlined a number of problems with the available data on livestock ownership:

- \* the multiple ways in which people possess, manage and use livestock have been conflated into an ethnocentric concept of "ownership", or at best "holding".

- \* there are strong incentives for concealment of actual cattle numbers given the experience of forced destocking in the past and the central role of livestock in local disputes

- \* it is difficult to compare data from surveys which have used differing and often unspecified definitions, and worded their questions in different ways. The definition of "household" is particularly elusive.

- \* important issues have been obscured by the use of the household as the unit of data collection e.g. ownership and access by women (possibly the largest single group of "non-owners" cannot then be analysed.

In discussion it was pointed out that the "owner" of an animal cannot always freely make decisions about its management. Where

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more than one person is involved actual practice has more to do with the relative bargaining power of those concerned than with norms and formal rules.

As a result of all these problems some participants felt that until we have a better understanding of the rights and obligations of livestock owners, livestock holders and livestock users, large-scale single round surveys are an attempt to measure the unmeasurable. The confusion arising from existing information was illustrated by references to the results of various surveys of livestock ownership.

Thus Agritex surveys in 1986, 1987 and 1988 reported in Chipika's paper found only 11 to 23 percent were non-owners (cattle only?), and the FSRU surveys in Mangwende (1984), Makoni (1986?) and Kandeya (1987) found 19 to 23 percent of respondents to be non-owners (van Eckhart and Mombeshora's paper). Yet data from the CSO National Household Capability Surveys of 1983-4 reported by Jackson show that 39 to 55 percent own no cattle. It is disconcerting to find widely divergent figures for the same areas and the same or adjacent years - as in the case of Chivi, reported in van Eckhart and Mombeshora's paper, and Nswazi (36.7 percent non-owners in 1986, as reported by GFA, compared to 3.7 percent in Chipika's paper).

Workshop participants commented that either ownership is extremely variable within Communal Lands, or the surveys were measuring different things and possibly using faulty sampling methods, or there were so many sources of measurement error that the data are effectively useless. Perhaps all of these are true to an extent.

## Discussion and recommendations

The question of whether there is a trend towards increasing or decreasing stocklessness is hard to settle on such an uncertain data base, and is complicated by the run of drought years. In spite of the many problems with the concept of ownership most participants felt that this is important information which needs to be regularly collected. This should be done on the basis of improved and standardised definitions derived from in-depth research of an anthropological nature. The need for time series data to establish trends and transcend the "snapshot" character of existing survey data was also a point of agreement.

The issue of absentee livestock owners was discussed, and participants suggested that this could be either beneficial to the local population (as a source of additional draught power) or harmful, if grazing resources are critically short.

### Distribution of livestock benefits

The question of inequality was set in a general conceptual framework in the paper by Cousins, and examined empirically in relation to livestock by Chipika and Jackson. Cousins asserted that since the description of inequality does not constitute an explanation of inequality, "...a theory of differentiation and class formation is required".

Cousins outlined the peasant/petty commodity producer debate and came to the conclusion that "peasants" are best understood as petty commodity producers, differentiated in their forms of reproduction. Poor peasants are unable to reproduce themselves from agricultural production alone and have to sell their

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labour either locally or further afield; middle peasants are able to reproduce themselves without recourse to selling or buying labour; and rich peasants invest capital in agriculture and produce a surplus for sale.

He did not pursue the place of livestock within such a process of differentiation, and participants commented that the theoretical discussion in the paper was not well integrated with the reporting of grazing scheme survey results. In contrast, Chipika's paper gave a straightforward description of the highly skewed distribution of livestock ownership. This provoked a defence of inequality as "natural" by some participants. Expressed here was the view that the aged and infirm do not need livestock, that we should not expect equal access to cattle, and that it is wrong to penalise those who have successfully broken away from poverty. It was also suggested that there is not the grazing available to increase livestock numbers through encouraging the stockless to acquire animals.

Further discussion led to the suggestion that a solution might lie not in "taking from the rich and giving to the poor", but in mechanisms such as grazing fees for large herd owners or requiring such people to loan out a certain proportion of their stock.

Jackson's paper and that of Chipika paid particular attention to the concentration of livestock in the hands of a small proportion of the rural population. CSO figures and the ILO survey reported by Jackson indicate that 44-54 percent of cattle are held by the top 10 percent of the population, and that another 15-20 percent of marginal stock owners hold only

## Discussion and recommendations

1, 2 or 3 cattle. Even when age and family size is allowed for Jackson discovered substantial inequality within cohorts. "Casual observation that the older/prime generation appear to have more animals can easily neglect the fact that they have more dependents".

However, participants pointed out that dependants are not only located within the household as usually defined by survey researchers. The concept of the household can obscure inter-household relations and thus mechanisms which redistribute livestock benefits.

Two questions arise from this: firstly, how wide are the networks which spread the benefits of livestock beyond "owners", and secondly, what are the conditions under which the stockless or stock-poor gain such access? Both the Position Paper and that of Muchena throw light on these issues. Scoones and Wilson emphasise the importance of the "shallow patrilineage group" and the reciprocal relationships it results in. However, in workshop discussion some participants referred to survey results which show a low incidence of loaning out of cattle. Again the matter of appropriate methods arises - is a survey capable of showing such relationships?

It became clear that a skewed distribution of livestock cannot be taken as a simple index of economic differentiation, because this is to fetishise livestock. Rather, we need to look at how stocklessness or accumulation of stock alters the relationships between people.

Muchena's paper provided insights into the various forms of livestock exchange based on the need of all farmers for draught

## Discussion and recommendations

power. She found that in Buhera 37 percent of households do not have sufficient draught and rely on borrowing or hiring. Of these loaning free of charge accounted for the largest area ploughed, followed by exchanging labour for draught. Of lesser importance was sharing (e.g. two stock-poor households joining forces) and hiring for cash. Furthermore, most of these exchanges were between relatives. This confirms the widespread significance of livestock exchange and its efficacy - only 1.5 percent of households engaged in hand cultivation. As noted in discussion, however, the nature of exchange "contracts" may well maintain inequality while spreading access to draught power. For example, the cost to the household without cattle which pays for draught with labour could be the reduction in output as a result of having less labour available for own production.

Participants emphasised that until we know more about the real costs of entering into livestock exchange relationships, or the handicap of not having manure, we cannot establish the full implications of the skewed distribution of livestock holdings. The papers all justified their concern with livestock distribution by referring to the well known positive association between livestock ownership and area cultivated, yield and level of crop marketing. Given the widespread access to cattle for ploughing, and the fact that cattle ownership is correlated with general indices of wealth such that these households also have more labour resources and cash for fertilizer purchases, we need to ask questions about causality. Is livestock ownership a cause or an effect of prosperity? Workshop discussion touched on this question, and one participant described it as a "chicken and egg situation", while Chipika strongly asserted that the truth of the causal



## **Discussion and recommendations**

connection had been established by regression analysis. Other participants were of the opinion that the only way out of the dilemma was to constantly relate empirical findings to theory.

### **RECOMMENDATIONS**

#### **Policy**

More attention needs to be given to equity objectives and policy options such as grazing fees for large herds or formalising stock sharing arrangements should be considered.

#### **Research**

(1) Critical issues in need of further research are the following:

- \* trends over time in ownership patterns
- \* the consequences of stocklessness
- \* the extent to which livestock ownership is a cause or effect of prosperity
- \* the distinctive features of women's rights to stock and the kind of development programmes that would best serve their needs
- \* the consequences of absentee stock ownership

(2) The common use of cattle ownership/non-ownership as distinguishing features of target groups may obscure as much as it reveals, and Farming Systems Research needs to pay more

attention to inter-household linkages and other features of a socio-economic nature.

#### Implementation

(1) Monitoring and evaluation of livestock programmes must examine gains and losses not only of owners and participators, but also of users and non-participators.

(2) Sharing arrangements may offer an opportunity for extending and reinforcing access to livestock for the poor.

(3) Non cattle-owning households may face severe labour shortages if they are obliged to pay for draught power with labour, and this has implications for crop recommendations, which are frequently based on an intensification of labour inputs.

#### 6. SMALL LIVESTOCK

Important features distinguishing small livestock from cattle emerged from the Position Paper and those by Harrison and van Eckart and Mombeshora, as well as from general discussion:

\* small stock, and in particular goats, have an enterprise function which is an opportunity for development

\* women form a significant proportion of goat owners and improvements in goat production could have an impact on the issue of gender equity

## **Discussion and recommendations**

\* goats are suited to the drier regions because of their tolerance of drought and the rapidity of reproduction, and these factors confer on them an important food security role.

\* small stock are more "divisible" than cattle and can thus be bought and sold more readily.

Discussion dealt with marketing aspects (see Section 7) as well as problems of kid mortality and disease which are as yet poorly understood, although stress was said to be an important factor. Attitudes of planners to goats was said to be still negative (a vestige of colonial thinking in which goats were seen as vermin and responsible for desertification), and a plea was made for their incorporation into grazing schemes. This presents practical problems, however, since goats are able to go through most affordable types of fencing, and few solutions are at present to hand.

## **RECOMMENDATIONS**

### **Policy**

A clarification of official policy with regard to the supposed damaging impact of goats on the environment would be helpful in overcoming negative attitudes to small livestock which still prevail in some quarters.

## Discussion and recommendations

### Research

More information is needed on farmer knowledge of goat husbandry and on the means by which women acquire goats.

### Implementation

(1) Livestock development programmes need to widen their terms of reference to include small livestock. Particular aspects in need of attention are grazing schemes, disease control programmes, and the provision of improved marketing infrastructure.

(2) Attempts to develop small livestock production as an income-generating enterprise need to take care that women do not become excluded or marginalised, as so often happens when an activity becomes commoditised.

## 7. PRICES AND MARKETING

The Position Paper set out a number of points relating to marketing and pricing policies. Firstly, the negative supply response of CL farmers to increases in the producer price for beef is both rational and likely to persist because as prices rise it becomes less and less possible to replace a beast that has been sold. Until the supply of intermediate products is fully adequate (which will be highly problematic given population growth and regular droughts) offtake will remain low. Thus higher beef prices will not increase the supply of meat from the CL herd.

## Discussion and recommendations

Secondly, high beef prices make it more difficult for farmers to restock (eg after drought) and so acquire the valuable inputs to the cropping system that livestock represent. High beef prices mainly benefit commercial farmers and have the effect of increasing the costs of CL crop production. There is an inevitable trade-off between the production of surpluses of crops and beef from the Communal Lands.

In the panel discussion on policy Moyo pointed out that the pricing aspects of livestock policy are given priority by government because of the generalised export orientation of national economic policies, and because of pressure from urban consumers.

There was little further discussion of pricing issues, but some participants suggested that in view of the negative effects of high beef prices subsidies should be abandoned and the funds channeled to more appropriate livestock interventions. The potential for increased marketing of goats was also discussed. There appears to be a real opportunity here for boosting cash incomes of the CLs as well as earning foreign exchange from exports. Major problems at the moment are insufficient provision for this by the CSC, high transport costs and legal restrictions. Some local markets are saturated but dynamic parallel markets in other areas exist and should perhaps not be interfered with. Prices and supply appear to be very variable, by location as well as by season.

RECOMMENDATIONS

Policy

(1) The export potential of goat meat needs to be seriously considered and international markets should be investigated. This could be pursued at the same time as the objective of increasing beef supplies from the Communal Lands is abandoned in favour of more appropriate policies (see section 4).

(2) A major issue to be debated is the extent to which goat marketing should be state controlled. There may be opportunities for the active involvement of farmers in goat trading networks as well as in production activities.

Research

(1) An important research question to be pursued is that of the potentially positive impact of lower cattle prices on crop output, and the possible means of achieving this. For example, would the withdrawal of CSC from the Communal Lands increase local supply, drive down prices, and retain stock within the locality to a greater degree than at present, or would the effects be undesirable?

(2) Research is needed on the functioning of goat markets (seasonal and locational price variations, transport and other requirements), as well as on technical interventions such as disease control, improved management etc which are necessary adjuncts to attempts to increase marketed output.

## Discussion and recommendations

### 8. RESEARCH AND EXTENSION APPROACHES

#### Research

The content of research recommendations have been discussed in each of the sections above. This section deals with methods of data collection and analysis, which were extensively discussed at the workshop.

The Position Paper made the point that in Zimbabwe, as elsewhere, the household is not an undifferentiated decision-making unit and does not necessarily define the major production relationships or consumption groupings. Sutherland in his paper also asserted that "... with livestock, and particularly with cattle, the household is often not appropriate (as a unit of analysis)".

The implication of these views were said to be that:

- \* care must be taken to specify clearly the units of analysis used in research in order to avoid invalid comparisons (eg of household herd size)

- \* since the household is not a system with watertight boundaries, researchers must pay attention to interactions between and within households to understand how access to resources actually occurs.

Sutherland's paper, based on lessons learned in Zambia, pointed out how neglected livestock had been in socio-economic research. The paper reviewed the kinds of interventions that require socio-economic data (grazing schemes, pasture and water

## Discussion and recommendations

supply improvement projects, disease control and mechanisation programmes) and the kinds of data that are usually collected in such studies.

His account of methods appropriate to particular data needs suggested that:

- \* land tenure is best dealt with by classical anthropological methods and experienced researchers, in order to understand actual practices rather than simply formal rules

- \* land use may be studied by means of aerial photography and informal ground surveys

- \* livestock ownership is best left to in-depth methods, but simple wealth-ranking methods or the use of official statistics such as dip records can be quick and sufficient for some purposes

- \* livestock productivity studies are a demanding data collection and analysis exercise which can be done in a number of ways: through animal life histories, detailed herd monitoring over a number of years, or the analysis of results from simulated farmer management of research station herds

- \* livestock management data is not suited to formal surveys (unless knowledge on the subject is already considerable), and should be researched by means of informal approaches



## Discussion and recommendations

\* marketing information is often best obtained from key informants, as is data on disease which farmers are likely to have considerable knowledge of.

The paper concluded that formal surveys are generally too expensive and slow, in comparison to informal and anthropological approaches, as well as being often unsuited to the nature of livestock data. Research in general may appear expensive but the cost of failed policies and projects is much greater.

In workshop discussion it was agreed that the appropriate research method to use depends on the reliability required of the data, the resources available, the nature of the data, and the needs of the end-user. There is place for a wide range of methods in livestock research, but the emphasis should shift from large-scale surveys to in-depth studies and the use of more rapid methods. These various approaches should be seen as complementary rather than as alternatives; thus concepts identified in anthropological work could be used as indicators in formal surveys. Participants felt that the limitations of recall based methods need to be recognised, and alternatives pursued when necessary (eg herd following when there is a need to describe animal movements).

As a general principle we need more participatory research, based on farmer knowledge and linking research with local planning and extension. There should be wider use of group interviews for certain types of information (eg farmer knowledge), as well as for establishing a two way exchange of information. An appeal was made for the collection of time series data, and the importance of approaches which recognise

## Discussion and recommendations

the dynamics of livestock over time, particularly in drought prone areas, was affirmed.

Discussion of forms of data analysis centred on the need for simplicity, for careful consideration of causes, and for caution in the interpretation of data. Interesting but inconclusive discussions of farming systems perspectives on livestock took place, focussed in particular on the definition of recommendation domains, and the relationship between these and Natural Region classifications (see section 4). The importance of multi-disciplinary research was affirmed, and a call was made for improved exchange and dissemination of research findings.

## RECOMMENDATIONS

- (1) Researchers are urged to combine informal and qualitative methods with the formal and quantitative, and to consider carefully how the data will be used when deciding on methods.
- (2) Participatory research approaches which allow for the incorporation of farmer knowledge and which form links with implementation activities at a local level need to be explored.
- (3) Multi-disciplinary research into Communal Land livestock is urgently needed.

## Discussion and recommendations

### Extension

This section reports the discussion of the "how" of livestock extension (ie approaches and methods) rather than content, which has been dealt with in preceding sections.

There was considerable debate on the issue of participation in extension. Some of the papers had argued that farmer knowledge needs to be actively incorporated in livestock programmes (Position Paper, Scoones), and that active involvement is a precondition for the success of development programmes (Sutherland, Cousins). One of the main objectives of the Lutheran World Federation's cattle improvement schemes is to "inculcate a spirit of self reliance among our target groups". A consensus emerged during the workshop that livestock extension needs to be characterised by dialogue and exchange of knowledge rather than the traditional approach of "trainers" and "trainees".

There was some discussion of the implications of participatory approaches for the training of extension workers and for the management of extension. The use of production targets or the measurement of job performance by output criteria would be inappropriate in an approach which aimed to allow communities to set their own goals and to make their own mistakes as part of the process of learning. Participation would also necessitate a certain decentralisation of planning (see also section 2).

## RECOMMENDATIONS

### Policy

Participatory approaches to extension need to be debated at a national level, and the implications for training and management of extension staff thought through in detail.

### Research

Alternative models of extension presently being used within the Communal Lands should be evaluated for their potential contribution to a fully participatory approach. Guidelines both for institutional change and for extension worker practice need to be developed. Consideration should be given to the role of VIDCOs, and to relationships with staff of the Department of Veterinary Services and with the Community Workers who will soon be represented at village level.

### Implementation

Non government agencies often have more flexibility in adopting new approaches, and valuable lessons could be learned if they begin to experiment with participatory extension methods. Their experiences should be communicated to national extension programmes.

## APPENDIX 1

### Workshop Objectives

1. To stimulate discussion and debate on the socio-economic dimensions of livestock in the Communal Lands
2. To clarify critical issues both substantive and methodological in nature (eg the calculation of livestock income)
3. To assist researchers to refine their conceptual frameworks and methodologies
4. To make recommendations on critical issues of relevance to researchers and implementing agencies



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