

endophytes in South African pastures and their future success is very limited.

It was decided to establish a so-called Endophyte in Pastures Forum with a steering committee under the chair of Bryan Mappedoram of the ARC Livestock Business Division (Range and Forage Unit) to look at research priorities and to get as many role players as possible involved. Presently there are already farmers in South Africa who are sowing perennial ryegrass seed with endophytes. Questions such as whether they are the novel or standard strains, whether they are actually still present in the seed after transport from Australasia, whether they will ultimately control the insect pests in South African pastures and improve pasture production and whether they could result in reduced animal production compared to a no-endophyte pasture, need to be addressed urgently for the sake of the pasture dairy industry in South Africa.

Invited speakers at the Symposium:

Prof WJ Swart, Centre for Plant Health Management, Department of Plant Sciences: Plant Pathology, University of the Free State.
A Mycological and Ecological Perspective of Endophytic fungi in Agronomic Grasses.

Prof SvdM Louw, Centre for Plant Health Management and Department of Zoology and Entomology, University of the Free State.
The Pasture Endophyte Herbivore System: role of insects in a complex multifaceted interaction.

Mr J Coetzer, Agricol Seed (Pty) Ltd.
Ryegrass Endophyte The Past, the Present and the Possible Future in South Africa.

Mr A Beckerling, Profert Eastern Cape.
Pests in the Tsitsikamma

Mr DCW Goodenough & BD Mappedoram, ARC Livestock Business Division, Cedara Centre, Range and Forage Unit.
Endophytes in tall fescue: a review.

Livestock development in communal rangelands: What can be done to improve the success of interventions?

By

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Synthesis of a session held at the 40th GSSA Congress, Port Shepstone, July 2005.

Over the last decade or so, there has been increasing focus among researchers, extension services, NGOs and government departments on livestock development and resource management in communal rangelands of South Africa. At the same time, a considerable amount of research in a variety of disciplines has been done in South African communal rangelands since the early 1990s. Studies in South African communal rangelands (e.g. Bembridge 1984, Mokgope 2000, Ainslie 2002 (ed.) and studies therein and Vetter 2003 in the Eastern Cape; Tapson 1990 and Letty *et al* 2002 in KwaZulu-Natal, Debeaudoin 2001, Hendricks 2004 and Hendricks *et al* 2005 in Namaqualand) have found a number of common features which, in the case of the studies by Mokgope (2000) and Letty *et al.* (2002), includes land reform projects. There is also a growing body of experience in development projects of various kinds, which has been less well documented.

Despite this gradual accumulation of data and a growing understanding of the ecological, economic and social aspects of communal rangelands, most development and resource management interventions are still based on commercial models of improving veld condition and animal productivity. The lack of success of many of these interventions and the low rate of adoption of new technologies and management practices by the communities suggests that there is a need to review our

understanding of the way communal rangelands work and to think more carefully about the reasons why current interventions very often fail.

At the GSSA Congress, we grappled with these issues around interventions in communal rangelands during a paper session with six presentations followed by a two-hour workshop. Here I summarise some of the issues raised and the debates around these. Hopefully this will stimulate further engagement by members of the Grassland Society with policy and interventions concerning communal areas.

What is the aim of interventions, and what would a successful intervention achieve?

It is a commonly held perception that livestock in communal areas make an insignificant contribution to both rural livelihoods and the national economy. This has led some people to argue that interventions aimed at livestock in communal areas are misguided and even a waste of resources. Why bother? It is true that livestock are seldom a major source of income of a household but they are nevertheless a key element in rural livelihoods and their role is likely to increase as unemployment rates rise. Livestock perform an essential “safety net” function in rural areas, which keeps many people from becoming destitute. Benefits from livestock are shared by people who own no livestock, e.g. in the form of meals and employment. The sum total of benefits derived from livestock in communal areas is substantial, but this is usually underestimated as these benefits are divided by a huge number of people. Shackleton *et al* (2001) present figures on the contributions of livestock, cropping and natural resource harvesting in South African communal areas, and their data highlight the considerable contribution these activities make to rural livelihoods. There is also a considerable amount of unacknowledged and unrecorded commercial activity, particularly sales of

livestock, within the communal areas.

There are different motivations for interventions. Historically, many interventions have been driven by the perceived need for better resource stewardship and protection of natural resources from irreversible degradation. In recent years, many people have questioned the assumption that communal livestock farming necessarily leads to abuse of the resource. The evidence suggests that many areas (such as the coastal grasslands) are fairly resilient to heavy continuous grazing, while others (such as the higher altitude grasslands) have suffered substantial transformation, and it is thus important to determine whether improved resource management is a priority in an area. In many cases degradation has not been simply the result of communal grazing *per se*, but of a combination of high human densities and their various impacts, heavy stocking rates being maintained through additional feed or purchases of livestock, and ploughing of marginal land which leads to spectacular soil erosion which is often wrongly attributed to overgrazing. In such cases, simply reducing grazing pressure is unlikely to reverse the problem and more innovative and holistic solutions have to be found. A local understanding of the varied historical and spatial impacts of these different drivers is important, as well as the ecological variables such as soil, vegetation, rainfall and water availability. Institutional arrangements and economic conditions that influence resource use and management also vary considerably between areas.

Apart from improving resource management, another aim of interventions is to increase the contribution that livestock make to rural livelihoods within the communal system. The approach most commonly taken is to improve herd productivity for offtake, but there is now ample evidence that this is not an objective of the majority of livestock owners and that the contribution of livestock to rural livelihoods

cannot simply be measured and improved by focusing on offtake and sales. Instead, livestock development should take into account the objectives, practices and constraints of livestock owners. Because livestock contribute only a fraction of household income, livestock development needs to be part of an integrated development agenda to improve sustainable livelihoods from land-based activities. A fact that is often overlooked when designing rural development around livestock is that over half the households in many areas own no livestock at all. A typical figure that emerged from studies in KZN and the Eastern Cape is that only about 40% of households own livestock. Among those people who have livestock, ownership is highly skewed, with a few people owning large herds or flocks and the majority owning very low numbers.

What have we learned about communal rangelands, and what do we still need to know to improve the success of interventions?

It is now well known that people in rural areas keep livestock for multiple objectives including milk, manure, ploughing, ceremonial slaughter, slaughter for meat, lobola, sale when money is required, and as a form of savings and security. The relative importance (perceived and actual) of these benefits differs between areas and livestock species. Most research focus in the Eastern Cape and KwaZulu-Natal has been on cattle, and the current and potential contribution of small stock to rural livelihoods is less well understood.

There still seems to be a common perception that people in communal areas keep large numbers of livestock for “cultural reasons” and that they try to keep as many livestock as possible as a measure of wealth and status. Livestock do fulfil important spiritual and social functions and there is no denying that having large herds does confer social status. Interviews in the Eastern Cape and KwaZulu-Natal have, however, revealed that

keeping lots of cattle as a sign of status is not an important reason for keeping livestock.

Many livestock farmers are trying to increase the size of their herds. The most commonly cited reason is that their present herd size is too small to permit regular selling or slaughtering of cattle. The small average herd size of cattle owners (the majority of people in many studies have less than 10 head) is an important factor which leads to low overall herd productivity: 1) because people are reluctant to sell or slaughter from small herds, and 2) because of the male-biased herd composition that results when a farmer has a small herd and needs a bull or some oxen for ploughing. Having larger herds or flocks also buffers against drought risk, and this comes out particularly strongly in studies from Namaqualand. It is commonly argued that people in communal areas keep too many livestock; while it is true that the animal densities are very high, the average person has too few livestock to meet their needs, or no livestock at all. This explains why every study conducted in communal areas has found people to be strongly opposed to destocking.

Livestock development which focuses on maximizing sales, low stocking rates and high-performance breeds has not worked on any significant scale in communal areas. This is not to say, however, that people are unwilling to use their livestock to make an income, as the success of some wool marketing schemes has shown. Cattle sales have met with far more mixed success, partly because people prefer to keep their cattle, and partly because of a distrust of the marketing system and low prices. Livestock owners appear to be more prepared to sell and slaughter small stock than cattle, because of the greater live value of cattle. Insufficient or unfavourable marketing opportunities are leading to lower sales of livestock and wool than farmers would be prepared to make. Insufficient grazing, livestock diseases, drought and stock theft are also major constraints on livestock production.

Why have so few interventions had lasting success?

Two fundamentally different reasons may explain the lack of success of interventions in communal rangelands. The first is that the interventions are appropriate and desired by at least part of the rural population but that they fail due to various constraints that make their implementation difficult. Some widely cited reasons for low success rates are the high population density in rural areas, the lack of co-ordination and co-operation among livestock owners, weak institutional capacity, crime and a lack of interest in improved resource management among livestock owners and institutions. These are real and deep-rooted problems in most rural areas and cannot simply be wished away. It is important to understand and acknowledge the historical and political factors that have led to this state of affairs: skewed access to land, forced removals, generalised rural impoverishment and the effects of apartheid-era 'show-case' agricultural development schemes in the so-called "independent homelands".

Ainslie (1999) discusses some of these factors and how they affect people's attitudes towards, and a capacity for, managing natural resources. He stresses the need to identify, strengthen and work with legitimate local institutions when trying to improve livestock productivity and resource management. As rangeland ecologists and agricultural scientists we are poorly equipped to deal with many of the underlying problems that hamper development. It is thus crucial that we recognize these limitations and integrate our efforts with those of others tackling broader development issues.

Some of the papers presented at the Congress illustrated the amount of time and effort required to build trust around development interventions, and how important genuine participation is in achieving some success. Although an increased emphasis has been placed on participatory methods in recent

years, the development and research agenda is still largely driven by traditional agricultural approaches and political agendas. "Participation" is in most cases used as an information-gathering exercise, and rural people are usually little more than passive recipients of development schemes. Participation seldom extends as far as allowing people to have a say in the types of interventions that take place.

Another reason for the failure of development interventions may be that the interventions themselves are inappropriate and undesirable to all or the majority of people. Most interventions have been based on the premise that commercialisation is the solution to low productivity and poor resource management in communal areas. The solutions offered involve reducing stocking rates, selling more animals, improving breeds and the implementation of grazing systems such as rotational resting based on fenced grazing camps to improve veld condition. In practice, people resist destocking because they need their livestock and most have fewer than they need. Grazing systems are expensive to implement and often do not yield tangible benefits in the short to medium term. Fencing in many areas causes or exacerbates conflicts over particular areas, and when fences cut people and livestock off from important resources they are very likely to be removed. It is important to critically examine the motivation for the choices of interventions, and who actually benefits from schemes such as fencing and the introduction of improved breeding stock.

Contrary to the image some people hold of contented rural dwellers peacefully making a living from the land, the former bantustan communal areas are best characterised by poverty, economic marginalisation, social exclusion, HIV/AIDS devastation, inferior infrastructure (schools, clinics, roads, water and electricity provision) and extreme dependence on government social welfare. This places limits on rural people's ability to

and interest in taking economic risks such as commercial production. Development needs to build on what rural people are already trying to do and provide options that reduce risk rather than increase it through greater livelihood specialisation.

A one-size-fits-all approach should not be allowed to persist for another decade. We need to differentiate between blocks of communal land along a number of criteria (agro-ecological, social, politico-institutional and economic) and come up with credible ways of improving livelihoods that are applicable to those more homogeneous blocks. In order to improve the effectiveness of interventions, it is essential that planners and extension staff have a realistic grasp of the objectives and constraints of communal livestock farmers in particular areas and stop basing their interventions on the ecological and economic assumptions and ideals of the commercial farming model.

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PAC REPORT 2004/2005

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South African Council For Natural Scientific Professions (SACNASP)

The Natural Scientific Professions Act of 2003 is in the process of being implemented and the current Council has entered into consultation with the various “learned societies” such as the GSSA to discuss issues related to these different organisations and how it will affect the members of such organisations. The following is a summary of the information that was disseminated at a meeting held between the SACNASP Council and the “learned societies” on 1 July 2005 in Pretoria.

Natural Scientific Professions Act Of 2003

The new Act of 2003 brought a number of changes to the previous Act of 1993. Several of these have a direct effect on the different professional/learned societies such as the GSSA. These societies are now described as “voluntary associations” and do not have direct council representation anymore. It is seen as being a more inclusive approach. According to the new Act the minister of Science and Technology (currently Minister Mosibudi Mangena) is responsible for the nominations and placements of advertisements for council members of SACNASP. A panel will then be appointed by the minister to make recommendations on appointments. The minister will have to inform “voluntary organisations” to nominate persons as members of council. The invitation to nominate members will be done by notice in the Government Gazette.

Powers of the council

Council will have to make recommendations