

Swartberg Farmers' Day: Filling the fodder gap.

Alan Short

KZN Department of Agriculture and Environmental Affairs

Email: Alan.Short@dae.kzntl.gov.za

Fodder flow, especially winter feeding, has always been the most important constraint for livestock producers in sourveld. To address some issues around ideas for winter feeding, Bom Louw of the National Wool Growers' Association (NWGA), together with the KwaZulu-Natal Department of Agriculture and Environmental Affairs, hosted a fodder flow day for sheep farmers at Swartberg in East Griqualand.

The event was attended by about 50 people, most of whom were local farmers, with several extension officers from the Department of Agriculture. Bom Louw set the scene by giving an overview of the critical periods in the typical production cycle of a sheep farmer. The productivity of the veld falls well below even maintenance requirements for an adult sheep in winter, and obviously cannot provide the nutrition required by a breeding ewe and her offspring.

Alan Short, of the Department of Agriculture, followed with a summary of the two long-term sheep grazing trials at Kokstad Research Station. These trials were established in the

mid 1990s by Mark Hardy to examine the so-called "blaze and graze" system of veld management, and are designed as a follow-up to the trials established by Kevin Kirkman and Denis Barnes at Nooitgedacht in Mpumalanga. The grazing system is very simple: half of the veld is burned early in the season and grazed as soon as possible thereafter, continuously, by merino weaners. In the following season, the other half of the veld is burned and grazed. The veld is therefore rested for a full growing season every second year, and grazed heavily every second year.

One of the two trials, established in 1992, was established on relatively flat slopes (4-13%) with deep soils, while the other was established in 1995 on a steep slope (up to 20%) with shallow and heterogeneous soil profiles. The differences in the response of the veld between the two sites were dramatic. The veld on the flatter site was far more stable, in terms of the change in composition over 12 years, than the veld on the steep site. In one of the camps stocked at a high stocking



Left: Mike Joyner explaining his grazing maize system

rate on the flatter site (1ha/AU over the long term), the proportion of *Themeda triandra* in the veld actually increased by nearly 25 percentage points. The changes in veld condition on the steep site were determined as much by the precise location of the camp (near the top or the bottom of the slope), as by the stocking rate. In general, there was a very strong interaction between edaphic factors and stocking rate in driving the amount and direction of change in species composition, which still needs to be thoroughly explored. Stocking rate alone did not determine the outcome of changes in veld condition. Primary productivity, on the other hand, was directly affected by stocking rate,

with the vigour of the veld on the high stocking rates being much reduced compared to the vigour of the veld on the low stocking rates. There was a general decline in vigour over time, especially at the high stocking rate; at the end of the last rest year, production in the high stocking rate treatments had declined to less than half of the potential production of ungrazed veld.

Erika van Zyl, Animal Scientist at Dundee Research Station, summarised 10 years of research at Dundee on grazing maize, with and without companion crops. A range of companion crops was tested, either intercropped with maize, or side-by-side. The most important part of managing a grazing maize system



with companion crops is that the fodder should be carefully rationed, for example by using electric fencing to allocate a row or two of the companion crop per day. The economics of the various maize systems were dependant on the season, with rainfall have a significant effect on production. She pointed out that the simplest system, and one that was generally as productive as any other system, was grazing maize alone. In the highveld, maize is a useful dual-purpose crop, where it can be used for grazing livestock in a bad season and the surplus sold. In East Griqualand, maize is rarely planted as a cash crop, and therefore the opportunities for selling a surplus are more limited.

Anele Jikijela, Animal Science Technician at Kokstad Research Station, presented the results of a five-year lambing season trial. Traditionally, lambing occurs in Autumn and the lambs and ewes must be carried through the winter on pas-

tures or green feed, a very expensive undertaking. The trial, established by Don Lyle in 1998, examined the potential of spring lambing, with the pregnant ewes being carried through the winter either on veld or tall fescue.

The sheep on veld were fed a production lick through the winter (Maxiwol at 300g/day, later increased to 400g/day). The fescue group was supplemented with a phosphate lick at 25 g/day. The weaning weights of the lambs from both groups are low at five months (about 20-22kg). However, the maiden ewes had grown satisfactorily by 18 months (44kg). Lambing percentages on veld were usually lower than fescue, but both groups were about 80% in most seasons. A financial analysis showed that overwintering on veld was generally substantially cheaper than overwintering on fescue.

Mike Joyner, a local farmer, then took the participants out to his

farm, where he had established a grazing maize system. The sheep had been grazing for three weeks at the time of the visit, and the maize had been almost completely flattened. Mike had planted a dense population in order to force the maize to grow relatively slender stalks. He had also chosen a variety that is known for its ability to lodge easily (not usually considered a desirable attribute in maize). In his case, there was no option of using the maize for anything other than grazing, since it would have been exceptionally difficult to harvest the maize without most of the crop lodging and being left behind.

Kevin Kirkman, of the Grassland Science discipline at the University of KwaZulu-Natal, summed up the day by referring back to two previous farmers' days at Kokstad (reported in the Proceedings and the Bulletin of the GSSA, respectively). He pointed out that communication between the local farmers and the researchers needed to be re-established in order to guide the direction of future research, and to ensure that research results reached the audience for which they were intended.

The day ended with a braai at the Swartberg Farmers' Hall, where sum of the new connections made earlier in the day were strengthened over a frosty beer or two. One important by-product of the Farmers' Day was re-establishing the weakened connections between farmers, the Department of Agriculture, and organisations like the National Wool

Growers' Association. Kevin had tried to encourage the locals to re-establish the joint farmer-department research committees of yore, although at the end of a long day, there was limited enthusiasm from the audience. However, with enthusiastic people like Bom Louw in the NWGA coordinating such efforts, the connections between organised agriculture, government departments and farmers should be strengthened in the near future.



Graham Peddie

Previous page: the audience listening to Mike Joyner.

Above: maize after three weeks of grazing (foreground) and protected by an enclosure (background)

