Effect of Management on the Productivity of *Chloris gayana* in the Rangelands of Uganda

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Introduction The productivity of Chloris gayana is affected by several factors , especially weeds in the degraded rangelands of Uganda where most grasses are native and have been overgrazed (Sabiiti et al . 2004) . The major weeds are Tagetes *minuta* , *Cymbopogon afronardus* , *Lantana camara* and *Imperata cylindrica* which affect the growth and development of Chloris *gayana* in the cattle corridor , in Mbarara District , Uganda in the rangelands . The aim of the study was to find out the extent to which these weeds affect the productivity (seed yield and herbage) of *C .gayana* under rangeland conditions .

Materials and methods An experiment with several treatments (no weeding , weeding , and shade , late planting) was conducted in Kazo County in Kiruhura District in order to find the effect of management on the productivity of *C . gayana* in the rangelands of Uganda . Data on seed yield and dry matter yield of *C .gayana* were determined . These were considered critical parameters and would reflect the growth and development of the grass under study .

Results and discussion The results of seed yield and herbage production are presented in Figure 1 and Table 1 , respectively .It is very clear that a treatment with two weeding significantly produced more seeds than all other treatments and this was also true with herbage yield in Table 1 . There appears to be a relationship between herbage production and seed yield . The majority of pastoralists in this cattle corridor do not mange their pastures and take them granted and it is not surprising that large areas have been overgrazed and invaded by weeds (Mugasi et al . , 2000) .

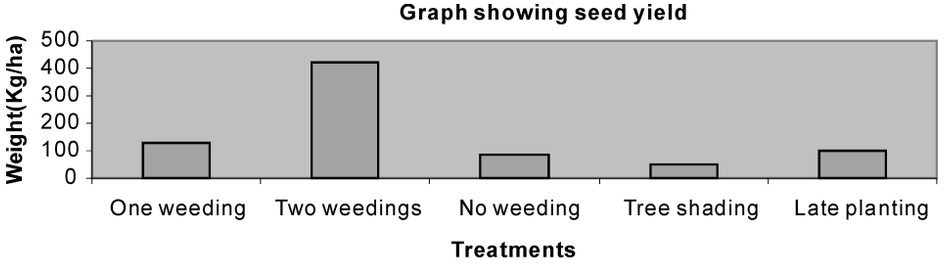

Table 1 *Mean Herbage dry matter (DM) Kg/ha .*

Treatment	Measurement (KgDM/ha)
1st weeding	4 ,263
2nd weeding	7 ,350
Not weeded	1 ,020
Grown under tree shade	622
Late planting	2 ,205

Conclusions The productivity of *C .gayana* is enhanced by proper management and weeding more than anything else produces the best performance of the grass species in these rangelands to replace native grasses which are less nutritious . Pastoralists need to be advised that pastures require care if they have to remain productive .

References

Mugasi , S .K . , E .N . Sabiiti and B . Tayebwa , (2000) . The economic implications of bush encroachment on livestock farming in rangelands of Uganda . *Agric . J . Range and Forage Sci* . 17 (1 ,2 & 3) . 64 -69 .

Sabiiti , E .N . , D . Mpairwe , M .S . Rwakaikara and S . Mugasi (2004) . Restoration of degraded natural grasslands to enhance soil fertility , pasture and animal productivity . *Uganda Journal of Agricultural Sciences* 9 :(1) 466 -469 .