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 **MIXED SHEEP –GOAT GRAZING ON HILLCOUNTRY**

BALLANTRAE FILE NOTE:Grasslands Division DSIR 1979-83

D A Clark, M P Rolston, M G Lambert et al NZ Grasslands Assn Vol 45 pp 160-166 1984

**This research with treatments of sheep alone, goats alone and mixed animals at two different ratios on lower fertility Wairarapa hill country proved that goats preferred to not eat white clover and that including goats in the livestock grazing mix increased clover content in pasture with several beneficial results**

**NITROGEN**

* **More white clover tissue entering the soil as plant litter reduces Nitrogen losses from soil**
* **Improved Nitrogen fixation with more clover could be the reason for the significantly increased pasture produced**

**PHOSPHOROUS**

* **Uptake and translocation of P is depressed when the plant is eaten**
* **Phosphorous translocated from white clover that is aging because not being eaten (by goats) can be used for new growth within the plant, thus improving efficiency of P use**
* **When goats are included in the hill country grazing mix, the need for P could be reduced**

**GOAT GRAZING**

* **Goats strongly rejected white clover in mixed pasture, and preferred grasses especially flowers and seedheads**
* **Goats grazed steep banks in preference to slopes and tracks grazed by sheep, thus improving total paddock pasture utilisation, and especially reducing Browntop competition that also increased clover content**
* **Goats ate upper layers of plants and did not patch graze like sheep**

**Four years of goat grazing markedly changed the botanical composition of the pastures, as well as increasing pasture production. Goats also ate weed species – thistles, rushes, gorse and manuka when present that were not eaten by sheep**  ****