

COGRAZING CATTLE AND CAMELS

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Camels are a potential resource adapted to and present in Central Australia. Cograzing cattle and camels represents an opportunity for agricultural enterprise diversification for beef producers in the region. A trial was carried out on "Waite River" station to establish data on livestock production and the vegetative effects of cograzing camels with cattle.

The trial comprised two previously spelled paddocks, Muller and DPI paddocks, 8.4 km² and 20.9 km² respectively. To estimate pasture impacts, conservatively stocked adjoining paddocks on the neighbouring station were used as a control. For two years Muller paddock was cograzed and the DPI paddock ran steers only. To account for any paddock effects on animal performance, a reversal of the grazing regime was run between August 2000 and May 2001 in the final year. In each paddock, pasture comparative yield, percentage frequency of each species and percentage of ground cover was measured at selected sites within each of two land types, "run-on" or "run-off" (depending on surface water flows after rainfall).

Radio collars were used to record camel location and daily activity. Plant species browsed or grazed was recorded and food intake was measured. Muller paddock camel browsing intensity on trees and shrubs was measured at twenty vegetation transects. Comparative transects were established in the control and DPI paddocks.

Steer stocking rates for the Muller and DPI paddocks were 4.2 and 3.6 steers per km² respectively, using a combination of local producer knowledge, land types and pasture yields. Steers were introduced to the paddocks at six and twelve months of age, with relatively uniform liveweights. Uramol[®] blocks were provided during dry seasonal conditions. During the trial, half the steers from the cograzed Muller paddock were swapped with steers of equal liveweight from the DPI paddock.

The trial commenced with fourteen camel cows and one camel bull at a stocking rate of approximately two adult camels per km². Dry conditions during the trial dictated herd replacement with nine young bull camels and the stocking rate reduction to one camel per km². This stocking rate was also used for the reversed grazing regime.

Camels did not deprive the cattle of any important pasture grass species during varying seasonal conditions. Grazing impact on trees and shrubs was largely driven by seasonal conditions. Increases in canopy cover of up to 30% were observed under unusually high rainfall conditions whilst 15% decreases in canopy cover resulted from camel grazing in poor conditions.

Cattle growth patterns reflected seasonal conditions with annual average daily weight gains ranging from 0.41 to 0.45 kg per day, and 0.63 kg per day in the high rainfall period. Cograzing with camels did not appear to limit steer performance, presumably due to lack of competition for feed resources. Bull camels achieved average daily weight gains of up to 0.26 kg per day, on exclusion of rutting behaviour. Importantly, camel rutting behaviour did not affect cattle weight gains.

Cograzing camels with cattle substantially increased the weight of livestock grazed per km². Running young bull camels with steers resulted in camel weight gains accounting for 10% of the total livestock weight produced per km² in 1999/2000 and 16% in 2000/2001.

PHILLIPS, A., HEUCKE, J., DÖRGES, B. and O'REILLY, G. (2001). *Cograzing Cattle and Camels: Report for the Rural Industries Research and Development Corporation*, June 2001. RIRDC Publication, 01/092.

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