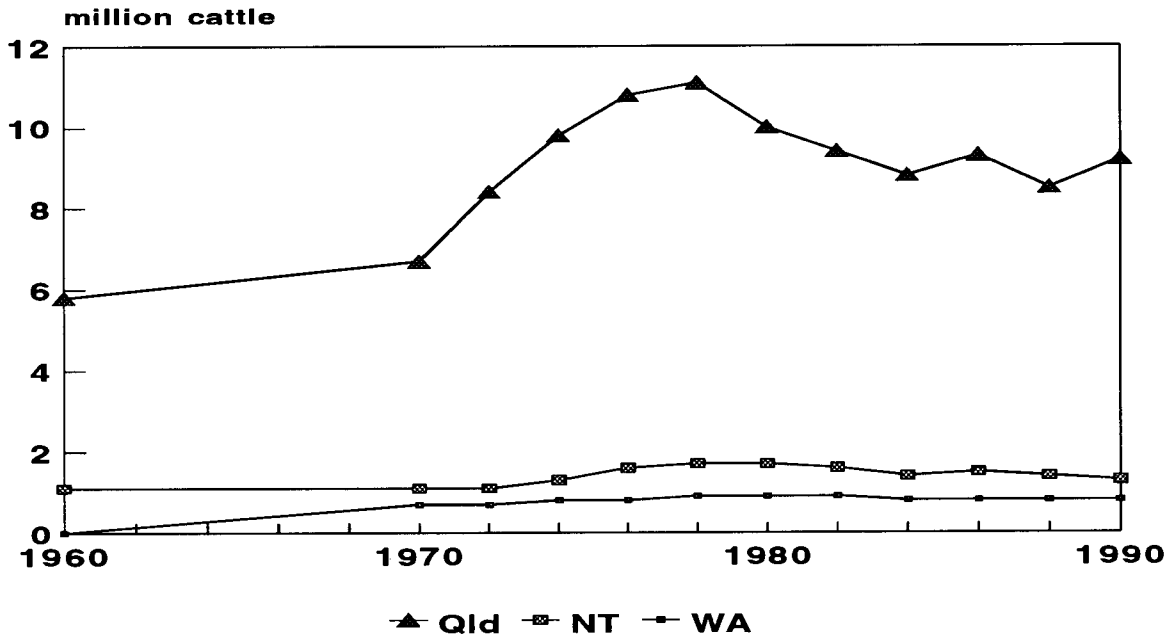
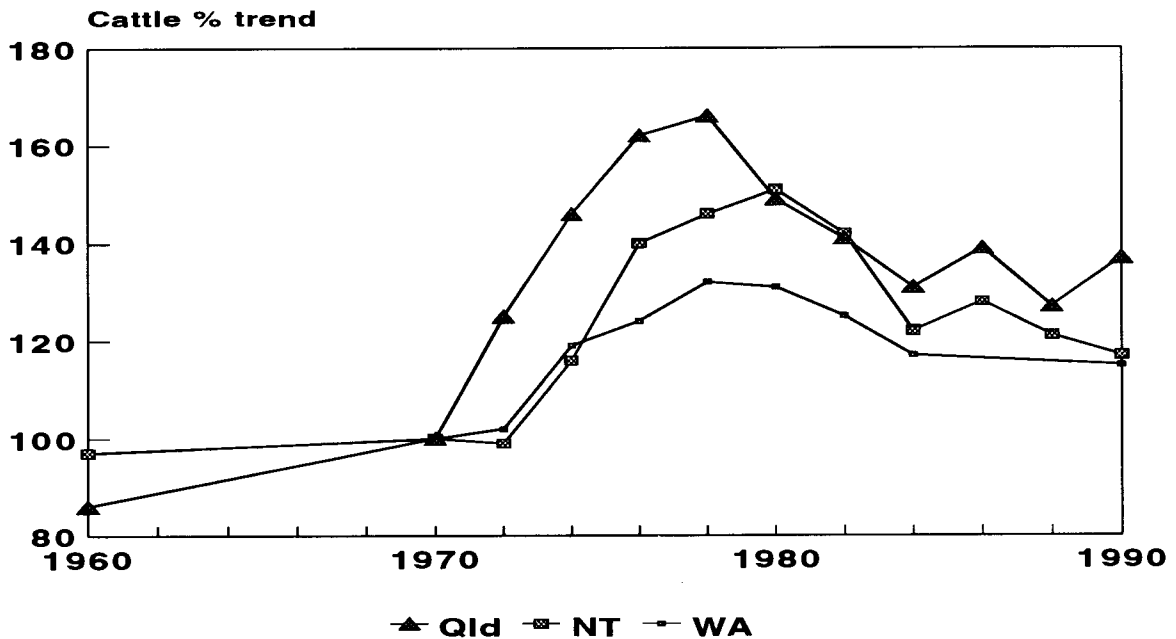


Appendix 2 Livestock statistics and pasture condition

Figure 1 Changes in beef cattle populations in northern Australia (1960-1990 for Queensland and Northern Territory, 1970-1990 for Western Australia)

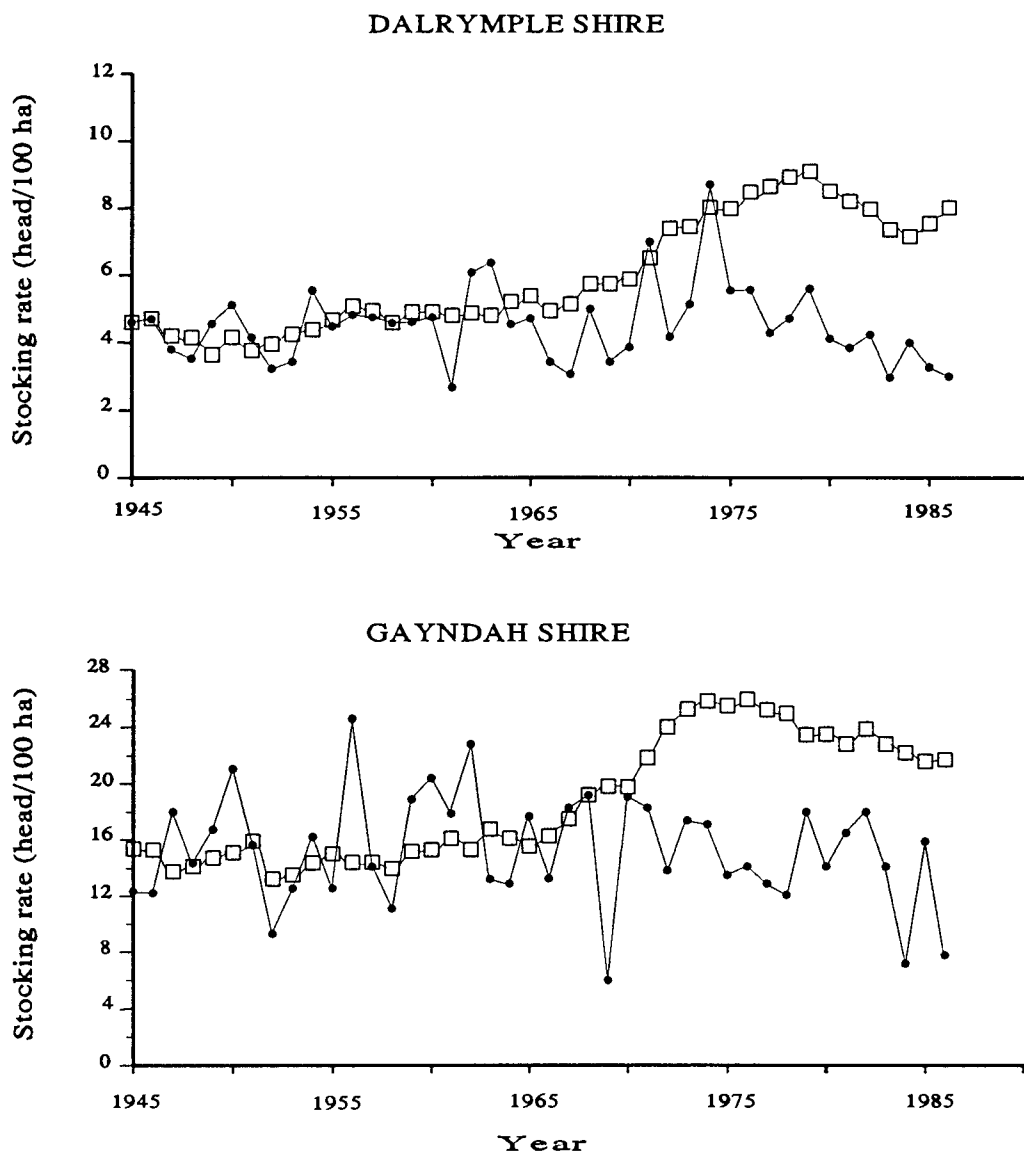


1a Cattle populations



1b Relative changes in cattle populations – using 1970 as a base

Figure 2 Potential (•) and actual (□) stocking rates in Dalrymple shire (northern black speargrass) and Gayndah shire (southern black speargrass) 1945-1986. (See explanatory notes below)



Comparison of potential and actual stocking rates between 1945 and 1986 in the shires of Dalrymple (Pressland and McKeon 1989) and Gayndah (McKeon and Orr, unpublished data).

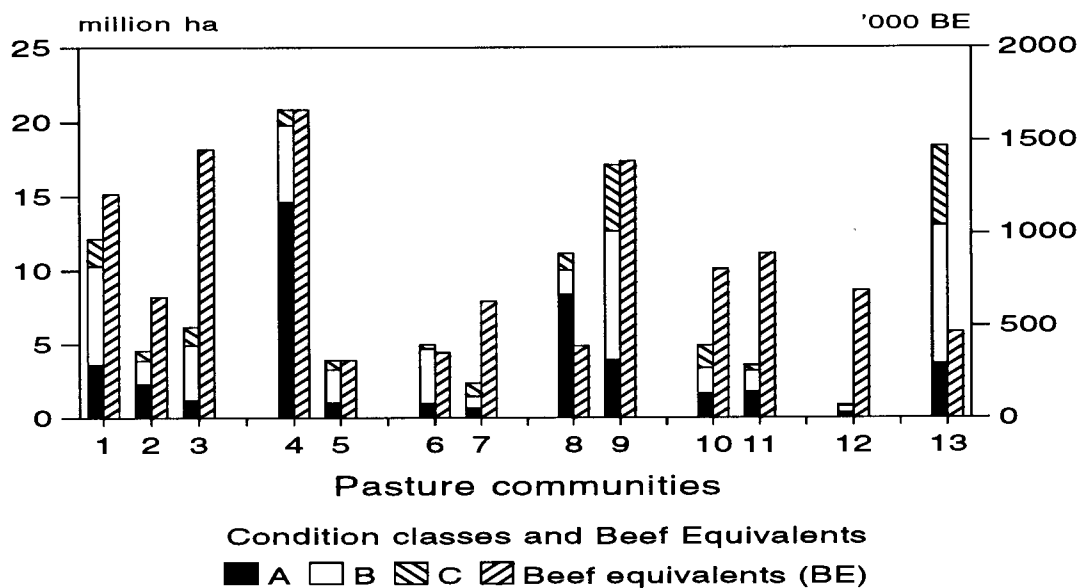
Potential stocking rate = summer pasture growth (kg/ha Dec-May) x safe (30%) utilisation + animal intake for 6 months (1800 kg/Adult Equivalent dm) x Shire Index (to account fo effect of trees and other land uses).

Pasture growth was calculated using the GRASP model with data from Springmount and Brian Pastures Research Station, Gayndah.

Shire Indices were calculated for 1945-1963 (a period of pasture stability) as the ratio of the actual shire stocking rates to the calculated safe stocking rate for cleared pasture; actual shire stocking rates were calculated as the ratio of total number ofbeef cattle to the shire areas.

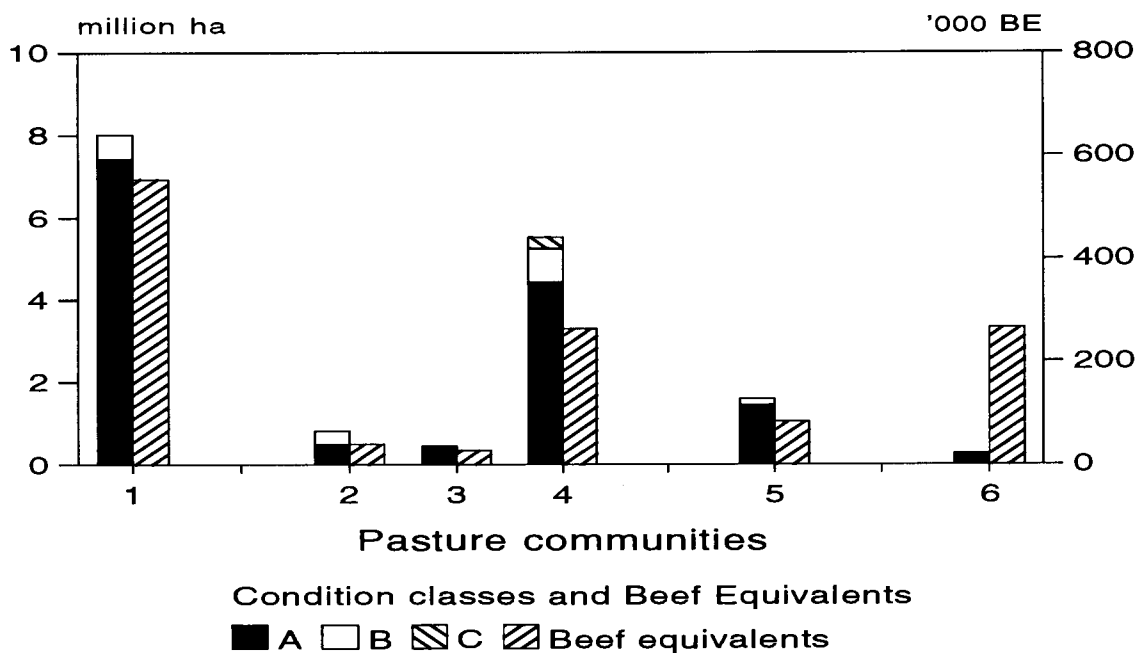
Figure 3 Condition and productive capability of northern Australian pasture lands

3a Queensland



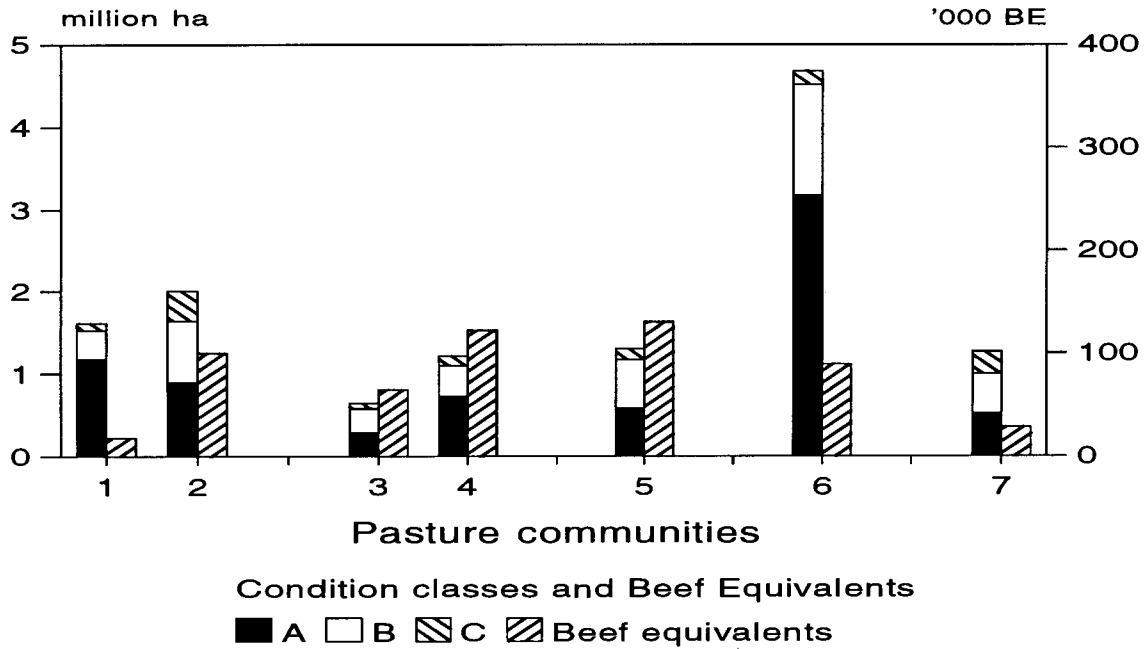
Pasture communities: 1, 2, 3 = Black spear grass (northern, central, southern); 4, 5 = Mitchell grass (northern, southern); 6, 7 = Tropical bluegrass-browntop, Qld bluegrass; 8, 9 = *Aristida-Bothriochloa* (northern, southern); 10, 11 = Brigalow (northern, southern); 12 = Rainforest-derived; 13 = Mulga.

3b Northern Territory (northern part)



Pasture communities: 1 = Ribbongrass (Victoria River District and Gulf); 2, 3, 4 = Mitchell grass (other spp. VRD, plains VRD, Barkly); 5 = Bluegrass-browntop (VRD and Gulf); 6 = Ricegrass-*Hymenachne* (Darwin).

3c Western Australia



Pasture communities: 1, 2 = Ribongrass (monsoonal, tropical); 3, 4 = Mitchell grass (East Kimberley, West Kimberley); 5 = Shortgrass-tussock (Pilbara); 6 = Annual sorghum; 7 = Annual shortgrass