

## EFFECT OF PASTURE TYPE ON ANIMAL PRODUCTIVITY ON THE STURT PLATEAU, N.T.

T.G.H. STOCKWELL\* and B.W. NORTON\*\*

Norman (1968) reported improved performance of steers given access to Townsville stylo (*Stylosanthes humilis*) in the dry season in Katherine but comparative figures are not available for growing or breeding cattle on Verano stylo (*S. hamata*) in this region. This report outlines the responses of cattle to grazing either native pastures or native pastures partially oversown with Verano stylo.

At 'Sunday Creek', 270 km south of Katherine, two year old Droughtmaster (*Bos indicus* x *Bos taurus*) heifers and steers were allocated to either a native pasture paddock (Bravo) at 1 beast/20 ha or a native pasture paddock 25% oversown with fertilized Verano stylo at 1 beast/8 ha. Both groups were offered a supplement supplying phosphorus, sulphur and salt continuously. Live weight and mortality data were collected from a draft of heifers from June 1984 to June 1986, and from two drafts of steers over the same period.

First-calf heifers in good condition at average live weights of 300 kg suffered mortality rates of 14% and 24% per annum for the Verano and Bravo groups respectively. Results for the steers are given in Table 1.

Table 1 Live weights (kg) (adjusted for covariance) and liveweight gain (g/day) of steers grazing either native pasture (Bravo) or native pasture 25% oversown with Verano stylo (Verano), on the Sturt Plateau of the Northern Territory

Year/Treatment	n	Live weight	Live weight	Liveweight gain
1984		June 1984	December 1984	June - December
Bravo	11	293	278	-96
Verano	13	293	299*	42*
l.s.d. (P=0.05)			10	68
1985/86		August 1985	June 1986	August - June
Bravo	17	250	333	271
Verano	10	250	350*	326*
l.s.d. (P=0.05)			10	33

\* P&lt;0.05

While the steer performance demonstrates the ability of Verano to improve liveweight gains over the dry season similar to that reported for Townsville stylo in Katherine (Norman and Stewart 1967) and provide superior year round growth of dry animals, the high losses in both groups of heifers was unexpected. Severe nutritional stress of the growing lactating female combined with botulism appeared to be the major cause of loss. Improving survival and reproduction of the female herd, through management and research, should take precedence over steer weight gain research, especially considering the effect of destocking under the Brucellosis and Tuberculosis Eradication Campaign and the need for rapid herd rebuilding to achieve commercial viability.

NORMAN, M.J.T. (1968). Aust. J. Exp. Agric. Anim. Husb. 18: 21.

NORMAN, M.J.T. and STEWART, G.A. (1967). Aust. J. Exp. Agric. Anim. Husb. 7: 225.

\* Dept Primary Industry and Fisheries, Katherine, N.T. 0851.

\*\* Dept Agriculture, University of Qld., St. Lucia, Qld. 4067.