Effects of Grouping Feedlot Steers with a Range of Flight Speeds on Liveweight and Temperament Changes

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Poor temperament cattle that are nervous and flighty do not perform as well in feedlots as good temperament cattle that are quiet and docile (Burrow and Dillon, 1997). There are contradictory anecdotal reports from industry about the effect of mixing cattle of different temperament on subsequent performance and temperament. Supposedly the presence of a few docile cattle in a feedlot pen-group will have a 'calming' effect on flighty pen-mates or the presence of a few flighty animals will 'upset' a group of quiet cattle. These hypotheses were tested using data in the experiment described by Petherick *et al*. (2000) where cattle were grouped into feedlot pens of good temperament, poor temperament and mixed (some good and some poor) temperaments.

One hundred and twenty Brahman x Shorthorn steers, about 2.5 years of age, were allocated by temperament to 12 feedlot pens (10 per pen) in an experimental feedlot. Temperament was assessed by flight speed (FS, m/sec) which is measured by recording the time taken for an animal to cover a certain distance on release from the weighing crate. The mean of three FS recordings taken monthly prior to feedlot entry was used for allocation to treatment groups. Steers were 455 kg at induction (day 0) and were fed for 100 days. Steers were weighed and their flight speeds recorded on days 0, 21, 45, 70 and 101.

For data analyses, the steers were divided into 5 groups (Table 1). The original group of 40 steers classified as mixed temperament was divided into 3 sub-groups: good-mix which were the 15 steers with the slowest FS of the 40, intermediate-mix which were the 10 steers with intermediate FS values, and poor-mix which were the 15 steers with the fastest FS values. The remaining 2 groups were the poor temperament (40 steers) and the good temperament (40 steers) treatments. Data were subjected to ANOVA with the animal as the experimental unit. Differences between means were tested using the least significant difference procedure (p=0.05).

There were no differences between groups for ADG from day 0 to 101 (p=0.10) (Table1).

In all groups FS increased to day 70 then decreased to day 101 (Figure 1). There were significant differences between the five groups in FS throughout the feeding period (p<0.001). However, there were no differences between the good and the good-mix groups or the poor and the poor-mix groups, or for the change in FS from day 0 to 101 (p=0.62) (Table 1).

Table 1. ADG (day 0 to 101), FS (day 0, induction) and change in FS (day 0 to 101) for groups. Group

	n	ADG kg/day	FS m/sec	FS change m/sec
Poor	40	1.37	2.60[a]	0.39
Poor-mix	15	1.48	2.59[a]	0.28
Int-mix	10	1.35	2.13[ab]	-0.02
Good-mix	15	1.43	1.82[bc]	0.26
Good	40	1.54	1.62[c]	0.32
SD		0.30	0.69	0.73

Within columns, means followed by a different letter differ significantly (p <0.05).

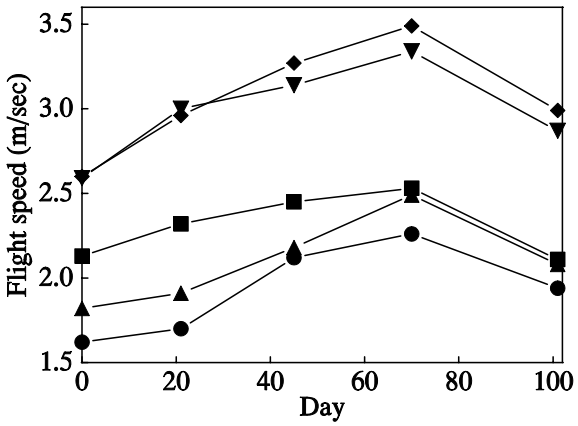

Figure 1. Flight speed during feedlotting of poor (▼), poor-mix (■), int-mix (▲), good-mix (●) and good (◆) temperament steers.

The groups maintained their flight speed differences throughout the feeding period. The results do not support the concept that the temperament or the liveweight performance of steers under feedlot conditions is influenced by the temperament of those

animals with which they are grouped. Steers with good temperament remained good and steers with poor temperament remained poor.

Burrow, H. W. and R. D Dillon. 1997. Aust. J. Exp. Agric. 37:407.
Petherick, J. C., B. K. Venus, V. J. Doogan and R. G. Holroyd.2000. Anim. Prod. Aust. 23: In this proceedings.

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