

OBSERVATIONS ON THE INFLUENCE OF REPEATED SAMPLING PROCEDURES ON TEMPERAMENT CHANGES OF WEANER CATTLE

J.C. PETHERICK^{AC}, R.G. HOLROYD^{BC}, V.J. DOOGAN^{BC} and N.J. COOPER^{AC}

^A Queensland Beef Industry Institute, Dept of Primary Industries, Swan's Lagoon, Millaroo, Qld 4807

^B Queensland Beef Industry Institute, Dept of Primary Industries, Animal Research Institute, Yeerongpilly, Qld 4105

^C CRC Cattle and Beef Industry (Meat Quality), University of New England, Armidale, NSW 2351

Experimental cattle are often restrained for repeated blood collection and faecal sampling and may balk at entering the crush, possibly from learning that crush entry is followed by an unpleasant experience. We asked whether repeated sampling affects temperament. One measure of temperament is flight speed, which is the time, measured electronically, for an animal to cover a set distance on release from a weighing crate (Burrow *et al.* 1988).

A group of 200 five-eighths Brahman male and female calves was used to investigate the effects of timing of processing (vaccinating, ear-marking, de-horning, branding and castration) and weaning on health, welfare and performance (Petherick *et al.* 1998). These cattle were mustered nine times and weighed 10 times during a 9 month period. All animals were weighed, their flight speeds recorded and a subgroup of 38 males drafted-off. These animals were moved through the race a second time for sampling, which involved the animals being caught and held in a head bail, a rectal temperature recorded, a faecal sample collected from the rectum and blood taken by jugular venipuncture. Flight speeds of these sampled animals were compared with the other experimental males which were only weighed on each occasion.

Flight speeds, liveweights and their changes were subjected to analysis of variance for unbalanced data to determine the effects of repeated sampling, after adjusting for the effects of paddock of origin, horn status, treatments and their interactions

Figure 1 shows that sampled and non-sampled animals had similar flight speeds until weaning. After weaning, apart from on Day 99, sampled animals had significantly faster flight speeds. Changes in flight speed after weaning were significantly ($P < 0.01$) greater in sampled animals up to both Days 77 and 268 (1.05 ± 0.41 m/sec ; 0.71 ± 0.12 m/sec. respectively) although the changes from Day 1 to 268 were not significant (0.71 ± 0.21 m/sec for sampled and non-sampled respectively). Throughout there were no differences in liveweights or ADGs between sampled and non-sampled animals.

Repeated sampling influenced temperament, as measured by changes in flight speed, but there were no effects on liveweight. We could not determine whether these changes were permanent as no follow up flight speed measurements were taken when all animals were only weighed.

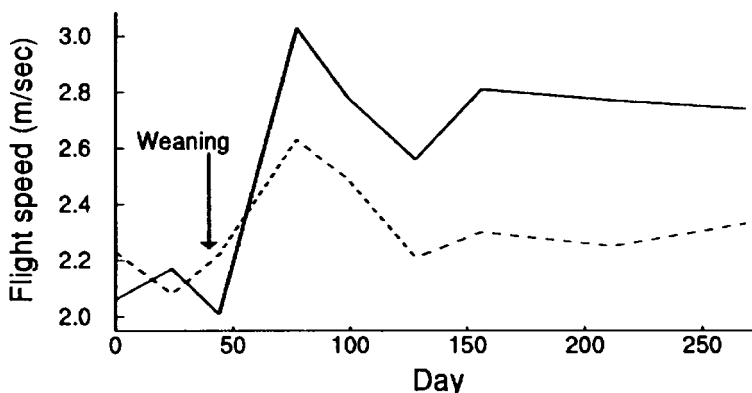


Figure 1. Flight speeds of male weaners weighed (—) or weighed and sampled (- -)

BURROW, H.M., SEIFERT G.W. and CORBET, N.J. (1988). *Proc. Aust. Soc. Anim. Prod.* **21**, 154-7.

PETHERICK, J.C., HOLROYD, R.G., DOOGAN, V.J. and COOPER, N.J. (1998). *Anim. Prod. Aust.* **22**, 320.