

BLOOD AND RUMINAL PARAMETERS OF SHEEP FED PELLETTED DIETS
SUPPLEMENTED WITH ATTAPULGITE AND BENTONITE

M.H. ROUND* and R.J. HUGHES*

The reactive clays attapulgite (A) and bentonite (B) are sometimes used as binding agents in pelleted diets. Dietary bentonite is known to reduce dietary acidosis in lambs fed grain diets but there is no data on the effects of attapulgite in ruminants.

Eighteen wethers (6/diet) previously fed hay were given a pelleted 60% wheat diet containing (1) nil, (2) 5% A or (3) 5% B for 90 minutes commencing at 8.00 a.m. (time 0). Blood (Corning 165/2 pH and blood gas analyser) and rumen fluid (stomach tube) parameters were monitored over 24 hours.

Blood pH and pCO_2 were higher and blood pO_2 lower for sheep receiving the supplemented compared with the control diet at 8, 12 and 24 hours after start of feeding ($P < 0.05$). Blood HCO_3^- fell over 0-12 hours but was not different between diets. Blood pH at 0, 8, 12 and 24 hours were for (1) nil: 7.42, 7.41, 7.41 and 7.43; for (2) 5% A: 7.43, 7.46, 7.45 and 7.49 and for (3) 5% B: 7.45, 7.47, 7.47 and 7.49. Rumen fluid pH was less than pH 5.8 for 13.6, 5.8 and 6.3 (s.e.d. = 3.6) hours for sheep fed diets (1), (2) and (3) respectively but data were highly variable.

Both attapulgite and bentonite reduced acidity resulting from fermentation of grain diets but comparison of their effects at lower levels of inclusion is warranted.

* Dept. of Agriculture, Box 1671, G.P.O., Adelaide, S.A. 5001.

A MOBILE CATTLE HANDLING UNIT

W.J. RYAN* and B.L. MCINTYRE**

Cattle handling facilities on farms are often inadequate and inappropriately located for research purposes. A unit was built to overcome these problems. It was designed (a) to be mobile, allowing for easy relocation between experimental sites and (b) to contain facilities enabling most procedures (weighing, drenching, dehorning, ultrasonic backfat testing, pregnancy testing) to be carried out easily.

A tandem trailer of approximately 6.2 x 2.5 m forms the basis of the unit. A scale and cattle handling section are mounted on the right hand side of the trailer. Cattle move on and off via ramps at the front and rear. These ramps fold up for travel. Space remaining on the left hand side of the trailer allows comfortable working area for up to three people. Jockey wheels are mounted in each corner for levelling and stability.

The scale consists of a weighing crate mounted on two load cells connected to an electronic readout. Sides are constructed of heavy duty marine ply and sliding doors are fitted front and rear. A head bail is contained in the cattle handling section. On the near side adjacent to the head bail are two panels. The top panel swings upwards for access to the side of the animal while the bottom panel swings inwards to provide further restraint. Doors provide access to the head and rear of the animal.

* School of Agriculture, University of W.A., Nedlands, W.A. 6009.

** W.A. Department of Agriculture, Baron-Hay Court, South Perth, W.A. 6151.