SIR,—We refer to an article under the above title (Cordes et al., 1969). In May of this year, a similar problem occurred on two properties in the Kaitaia area and the following observations were made:

**FARM “S”**

Fifty Aberdeen Angus steers aged 8 to 9 months were grazing lush kikuyu. On May 27, four were found dead, one was dying, and up to 20 more were showing signs of depression, salivation, polydipsia, and sunken eyes. Some had diarrhoea. Necropsy examination of two animals showed agonal haemorrhages on the epicardium and the rumen over-full with kikuyu grass and fluid. All other animals recovered.

**FARM “R”**

This property had cattle similarly affected last year. For one week, six cattle had been grazing a pasture of poor quality kikuyu which had been infected with army worm. On May 27, one cow (6 years old) was found dead, and one bull (4 years old) and three cows (3 to 4 years old) were depressed, were salivating, had sunken eyes, depressed rumen movements, and polydipsia. Another bull was bloated. Post-mortem examination of the dead cow revealed a full rumen, agonal haemorrhages on the epicardium, an empty small intestine and large intestine distended with gas.

Blood samples taken from clinically affected animals were examined at Kaitaia Hospital Laboratory within 18 hours. Serum bicarbonate values were of the order of 24.0 to 28.0 mM/litre for five cows and 34 mM/litre for the two bulls showing clinical signs. Three cattle which were clinically normal had bicarbonate values of 23 to 26 mM/litre. There was thus no evidence of alkalosis in the affected animals, other than in the bulls in which the values were slightly elevated. Serum sodium and potassium values were within the normal range.

The pH of the rumen liquor was between 6.5 and 7.5 and regarded as normal. [In the previous article (Cordes et al., loc. cit.) the pH values for the rumen liquor were omitted from Table 2. These ranged from pH 5.8 to 6.7 in eleven cattle, and the normal range was regarded as 5.0 to 7.0.] In nine cattle from the two farms “S” and “R”, the haemoglobin values ranged from 12.0 g% to 18.6 g% and the corresponding packed cell volume from 36% to 59%. Blood preserved with fluoride-oxalate from five affected cattle was assayed for lactic acid. The values ranged from 19.6 to 82.0 mg% (values of up to 10 mg% are regarded as normal). However, the serum pH of these animals ranged from 7.35 to 7.59. Furthermore, less than 2 mg% of lactic acid was present in the rumen liquor of two animals and 116 mg% in a third animal (values of 100 mg% or less are considered normal).

The total steam-volatile fatty acids in the rumen liquor of these three animals ranged between 4.9 and 10.0 mM/100 ml and this was regarded as being within the normal range. There was approximately 56% acetic acid, 44% propionic acid and no butyric acid in these samples.

In one animal, the pH of the abomasal contents was measured and found to be 5.6. This was similar to that found previously, that is, the abomasal liquor was less acid than normal.

These data suggest that further study of the problem is warranted.

J. BUSCH, D.V.M.,
G. H. HARRIS, B.V.SC.,
M. R. COUP, B.SC.,
D. O. CORDES, B.V.SC., M.S.,
Ruakura Agricultural Research Centre,
Private Bag, Hamilton.

August 4, 1969.

**REFERENCE**