Animal Science Seminar Series

When: **Tuesday 10th July, 12:00 – 1:00 pm**

Where: **EM1, W055 Resource Management Building**

DOES MEAT AND BONE MEAL, PHYTASE AND ANTIBIOTICS AFFECT GUT DYSFUNCTION, BLOOD INDICES AND BONE INTEGRITY IN BROILER CHICKENS DURING NECROTIC ENTERITIS CHALLENGE?

Holy Kwabla Zanu

PhD student, University of New England

Meat and bone meal (MBM) is an economical source of protein, calcium and phosphorus in broiler diets. However, the high level of indigestible protein in MBM potentially acts to predispose growing chickens to necrotic enteritis (NE). Undigested protein is deaminated in the hindgut and releases ammonia that increases pH favouring growth of pathogenic *C. perfringens*. Phytase enzyme used at normal (500 FTU per kg diet) or super-dose (1500 FTU/kg) have been used over the years to release nutrients especially Ca and P in poultry diets. Therefore, a diet formulation that seeks to replace MBM with phytase is worth-investigating. Since most Australian meat chicken diets contain both MBM and antibiotics, it is not far-fetched to think that the use of phytase without MBM might reduce or eliminate the need for antibiotics. It was on this premise that a study was designed to investigate the effect of superdosing phytase with or without dietary MBM and with or without antibiotics on performance during necrotic enteritis. This seminar will give a snippet of the whole study and highlight the physiological effects of MBM-free or MBM- based diets on the integrity of the gut, bone and blood parameters of chickens during necrotic enteritis and whether or not phytase enzymes or antibiotics played a major role in ameliorating these effects.

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School of Environmental and Rural Science