

****ASK THE TAFE TEAM****

**With Rural Studies Teacher, Dr Jim Shini
13 January, 2016**

Question: *Probiotics for livestock – What are the benefits?*

Answer: The use of probiotics for ruminant and monogastric type livestock is a growing trend in Australia. Sometimes referred to as ‘good’ or ‘helpful’ bacteria, probiotics can be added to livestock feed (direct-fed microbials) to help restore or balance the microbial communities in the gastrointestinal tract of the host animals. The introduction of these probiotics to the animal’s diet can result in better immunity which enhances its resistance to disease. Importantly, probiotics will improve the digestion of the animal, allowing it to utilise more nutrients from the feed and this will lead to feed efficiency. If you are thinking about using probiotics in your livestock, there are a number of points you should consider first:

Different probiotics, different animals, different results

The specific benefit of a probiotic might be different depending on the host animal and on the characteristics of the probiotic; different strains of bacteria provide different benefits. Select the probiotic based on strains and the ability to provide the desired benefits.

The efficacy of the probiotic can vary

The number of strains in a probiotic and the number of colony forming units (CFU) contained in a given dose play important roles in the efficacy of the probiotic. Pick one that has at least seven strains, and 10^7 – 10^9 CFU per gram or ml.

Storage information is very relevant

Some probiotics need to be refrigerated while others need a dark, cool space. Keep probiotics away from moisture and heat. Use probiotics labelled as “*Viable through end of shelf life*” which contain living cells by the time of use.

Pick a probiotic supported by research

Make sure the probiotic you have selected to use has been thoroughly studied in animals. In the swine industry the control of *Salmonella* during the feeding phase has shown to reduce the pathogen in fresh pork products. The feeding of a mixture of *Bifidobacterium pseudolongum* and *Lactobacillus acidophilus* to piglets reduced the mortality and increased growth and feed efficiency. Feeding *L. acidophilus* NPC747 to feedlot cattle has significantly reduced the occurrence of *E. coli* O157:H7 and increased daily gain and feed efficiency; it also decreased *E. coli* on fresh meat. For dairy cattle, studies have shown that feeding *L. acidophilus* or a probiotic containing *Enterococcus faecium* plus a yeast culture has resulted in increased milk yield. In poultry, *Lactobacillus* species have shown to exert inhibitory action toward *Salmonella* in the intestinal tract of chickens.

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In conclusion, some of the benefits claimed for probiotics in livestock include: increased growth rate, improved feed efficiency and resistance to diseases; improved milk yield, egg and meat production. There are multi-strain probiotics commercially available in Australia that can be fed or given in drinking water to animals and birds. Livestock owners should demand evidence of quality and efficacy of commercial probiotics before using in their animals.

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Disclaimer: The comments provided in this article are general in nature only and are not a substitute for professional advice. The author accepts no responsibility for any action taken by a reader in relation to this article.

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