In a climate of increasing restrictions on the use of antibiotics in animal production, the poultry industry is searching for alternatives to replace antibiotics.

Both organic acids and phytogenic feed additives (PFAs) — a wide range of plant and plant-derived compounds, including essential oils — have shown evidence of improving performance in swine and poultry when added to the feed. Research appears to indicate that the response is better and, perhaps, more consistent for swine than for poultry.

Researchers have speculated that rapid absorption of organic acids and PFAs in the duodenum may reduce their effect on intestinal microflora and modulate the response to these additives in poultry.

M. Gheisar, A. Hosseindoust and I. Kim with the department of animal resource and science at Dankook University in South Korea reported research on a specific microencapsulated blend (MEB) of organic acids and essential oils (Aplus-S) supplemented to broiler diets.

The MEB used in this research consisted of: 25.0% citric acid, 16.7% sorbic acid, 1.7% thymol, 1.0% vanillin and 55.6% carrier (starch), protected by a matrix coating with a lipid base.

Microencapsulation has been proposed as an approach to reduce the absorption and/or degradation of organic acids and PFAs in the duodenum. The literature shows that several researchers have reported improved effects of microencapsulated organic acids and PFAs in both swine and poultry.

The MEB used in this research consisted of: 25.0% citric acid, 16.7% sorbic acid, 1.7% thymol, 1.0% vanillin and 55.6% carrier (starch), protected by a matrix coating with a lipid base.