Deodorization of faeces in calf-rearing sheds

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Abstract
Intensive calf rearing faeces presents a malodour (and animal health) problem. The main components of malodour of livestock faeces are the volatile fatty acids (VFA's) iso-butyric, valeric and caproic acids which can be consumed by some microbes.

Effective Microorganisms (EM) has been successfully used to control faeces malodour by applying EM over manure and/or including EM in the feed or water, the last of which might influence the intestinal flora and reduce levels of malodour causing bacteria (e.g. *Clostridium* and *Eubacterium*).

EM was tested on two New Zealand calf-rearing operations for ability to deodorise faeces. EM was sprayed each morning (@ 50 mL extended EM – 1:10 dilution per calf) over animals and flooring (concrete and grating at one location, woodchip at the other). Employees were asked to assess a difference in malodour level and reported a marked decrease in malodour at both locations after two days of EM application.

The result gives encouragement for studies on the mechanisms and level of effect. One focus of study will be to identify the optimum dosage rates and methods. In comparative testing of odour control products various biological products have either proved ineffective or expensive. Other successful microbial inoculants are reported but often require high incorporation rates e.g minimum10% w/w of seed mixture in manure. EM appears to offer significant advantage in being effective, versatile and relatively inexpensive.

Keywords: calf faeces, manure, odor, Effective Microorganisms