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Nils Bjugstad, NMBU, Ås, Norway

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DETECTION OF ODOUR FROM ANIMAL PRODUCTION IN FINLAND

Maarit HELLSTEDT
Natural Resources Institute Finland
maarit.hellstedt@luke.fi

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Agriculture is the most significant source of ammonia emissions that cause e.g. odour problems and acidification. Odour has become a local problem as a nuisance to the neighbourhood. Animal production farms have traditionally been situated in the rural areas well apart from densely populated areas. But as these urban areas grow, urban population comes nearer the farms. Problems arise when farms need to grow or change their production and neighbours oppose this due to expected odour annoyance. Odour annoyance has to be taken into account on environmental permissions for animal production units.

There are two different estimation methods used in Finland. The first simple one is a curve that is based on the number of livestock units in the production unit. The other one is a model that is based on animal and production dependent odour factors, prevailing wind directions and topography of the area. Both these methods have deficiencies. The prevailing odour can also be measured with an olfactometric method that is based on odour sensation of a panel of people with different sensitivities with annoyance of odour. Examples of the use of olfactometric method are presented.