

AGRI-ENVIRONMENTAL INDICATOR (AEI) TO ADDRESS THE ODOUR ISSUE

D.I. MASSÉ, A¹, ADELIN NARJOUX², F. GRANGER, T. PAGÉ, M. COURNOYER

¹ Dairy and Swine Research and Development Centre, Agriculture and Agri-Food Canada,
P.O. Box 90, 2000 Rue College, Sherbrooke, Quebec, Canada, J1M 1Z3
² Odotech inc. 3333, Queen-Mary, bureau 301, Montréal (Québec), H3V 1A2,
tpage@odotech.com

³ Groupe Conseil UDA inc., 426, chemin des Patriotes, Saint-Charles-sur-Richelieu
(Québec), J0H 2G0

Animal production units are a dynamic and rapidly growing sector of the Canadian economy. Over the last thirty years, they have evolved from a diversified to specialized and intensified production systems. However, rapid growth has led to manure mismanagement, which has resulted in serious nuisance and environmental problems. The industrialization of animal production as well as demographic changes in rural areas has resulted into difficult cohabitation problems. Pollution and odours generated from livestock buildings, manure storages and land application activities are major causes of conflicts between producers and their neighbours. The environmental and social issues are presently the greatest challenge faced by Canada's fast growing livestock industry. As a result, in some regions across Canada the industry cannot take advantage of the increasing international market opportunities.

In response to the need for agri-environmental information and to assess the impacts of animal production on the environment, Agriculture and Agri-Food Canada (AAFC) began work on the development of a set of new environmental indicators. Agri-Environmental Indicators (AEIs) are primarily intended to provide reliable, science-based information on the current state and changes in the conditions of the environment in agriculture, at a national or regional scale. One of the indicators will address the odour issue.

A scoping paper was prepared. It describes the approach for the development of an odour environmental indicator. This paper discuss the suitability and feasibility of three broad areas for the development of an Odour Environmental Indicator - Pressure: pressure indicators can provide information on major farming stresses to populations, that can influence farm management decisions - State: state indicators can provide information on the main outcomes from farm activities, expressed either as risk indicators (estimate of potential environmental and social impact) or state indicators (measure of actual presence and degree of impact), and which are responsive to change in farm management practices. - Response: response indicators provide information on the use by producer of various key management options which may influence the potential impact of agriculture on the social environment.

The paper discusses the development steps for the most appropriate type of indicator to address the serious odour issue associated with the livestock industries. The paper also discusses the data requirement and data gaps that need to be addressed in order to develop the odour environmental indicator.

KEYWORDS. Odour, indicator, nuisance, environmental impact, emission factor, livestock, animal feeding
mental Quality) approach.