

NONRUMINANT NUTRITION SYMPOSIUM
Nutrient Management Procedures to Enhance Environmental Conditions

16 Environmental concerns of animal manure. A. W. Jongbloed* and N. P. Lenis, *Institute for Animal Science and Health, Lelystad, The Netherlands.*

The structure of swine production has changed dramatically compared with the fifties. Large confinement systems for swine have been developed on holdings with limited acreage. Raw materials for swine feeds are often grown in other regions than where swine production takes place. Swine manure produced is mostly spread in the neighborhood of the facilities which may lead to accumulation of minerals in the soil, like, phosphorus, copper and zinc. This may contribute via leaching and runoff to eutrophication of groundwater and freshwater sources. Eutrophication may cause excessive growth of algae and reduction of the biological diversity. Large swine units generate bad smell, ammonia and dust, that may exceed tolerable levels. Negative aspects of swine production in some countries or states on the environment have already led to a new legislation that limits the use of animal manure or the expansion or localization of pig operations. This may lead to higher production costs and impairment of income of pig farmers. In this paper, the consequences of intensive swine production on the environment will be outlined and possible ways of solution by means of nutrition will be suggested. Also, attention will be paid to the Dutch experience and forthcoming legislation, and the consequences of the delay in implementing some of the earlier recommendations for alleviating the so called manure problem.

Key Words: Swine, Manure, Environment