

Traffic

Traffic associated with swine production as an environmental issue is a topic which receives little discussion as an environmental issue. The chapter on Noise and Soils should also be consulted to obtain other information on traffic.

The size of the swine production unit effects the level of traffic associated with the operation. As noted by Lines et al. (1994), noises associated with this traffic can become a nuisance for the neighbours at certain times (end of the finishing period, manure spreading period). Avoiding or limiting the evening and night traffic is a way to lower this nuisance.

As presented in the Chapter on Soils, compaction induced by traffic associated with the manure application operations must be considered as a long-term effect and can be measured through decreasing crop yields and soil degradation (Tessier et al., 1995). Also as heavy loads are hauled in and out of the farm, access and public roads have to be well design and constructed to support heavier traffic.

■ What Else Needs to Be Done

Compaction is the major environmental problem associated with traffic. Manure application alternatives to the popular tank trailer or truck application systems should be chosen where soils are prone to compaction. An increase use of irrigation pipes for moving manure would help prevent compaction.

References and Abstracts

Lines, J.A., S.R. Lee and M.A. Stiles. 1994. Noise in the countryside. *Journal of-Agricultural-Engineering-Research*. 1994, 57:4, 251-261.

Environmental noise is a subject of growing public concern. Two surveys are reported which explore the attitudes of the British public to noise in the countryside and in particular to environmental noise caused by agricultural activities and other uses of farm land. The results indicate that agricultural noise has been the cause of annoyance to 6% of the rural and semi-rural population in the last 2 yr. Aircraft, domestic and road traffic noise each cause 4 times more incidents of annoyance than agriculture. The most frequent sources of agricultural noise annoyance are acoustic bird scarers and field or transport operations. When compared with the comparable issue of unpleasant smells in the countryside, noise was judged by a small majority of the survey respondents to be less important. Complaints about farm noise comprise about 3% of the noise complaints received by rural local authorities. These complaints most frequently refer to noise from acoustic bird scarers, clay pigeon shooting and rough terrain motor sports.

Tessier, S., L. Chi, S. Richard, C. Laguë and S. Pigeon. 1995. Traffic Induced Soil Compaction and Solutions: Farmer's Perspectives. Proceedings of the 5th North American Regional Meeting/Workshop of the International Society of Terrain Vehicle Systems. Saskatoon, May 10-12, 1995.

In Québec, the soil compaction resulting from manure spreading with high capacity spreaders has been a concern for farmers, recognizing that soil compaction can result in a \$3 000/year lower farm income. A survey has been developed to measure the farmers' understanding of soil compaction damages and the economical consequences of such compaction. This survey also seeks to verify how their understanding influenced them in their decision making process to find a solution to the compaction resulting from manure application. Lower ground pressure spreaders and alternative liquid manure spreaders have been proposed as part of the survey with a short analysis. The results of the survey showed that in order to reduce compaction, up to 80% of the producers would consider alternative liquid manure spreaders. As most producers (up to 70%) would consider as a first choice an alternative manure application system that doesn't use tanks (irrigation type with wide-span boom), almost half of them would reconsider their choice toward a system less expensive in investment cost. The spreader most likely to be purchased by farmers in Québec is a 15 cubic meter capacity spreader with a tandem axle and oversized 281-26 tires.