

## **Costs of biosecurity and factors contributing to biosecurity in Finland**

*Jarkko K. Niemi and Jaakko Heikkilä*

*MTT Agrifood Research Finland, Economic Research*

Biosecurity can be regarded as the management of risks of specific hazards such as contagious animal diseases. This presentation reviews recent Finnish research in the field of economics of biosecurity. The costs of biosecurity measures vary by the type of measure and farm. The costs increase by farm size, but the costs per animal seem to be lower on large farms. Hence, there may be economies of scale in biosecurity. Simple practices such as wearing clean protective clothing and boots when entering an animal shelter can be quite inexpensive, yet effective. Typically they cost perhaps a few hundred euros per farm per year. When all measures are taken together typical biosecurity measures, for instance for a batch of 75 000 broilers have been estimated to be €2 700 per batch.

Studies suggest that the adoption of biosecurity measures depends on farm-specific factors such as production type and farm size, and on the type of measure. Pig and poultry farms tend to use more biosecurity measures than cattle farms. The adoption of biosecurity measures is reduced when the costs of using a measure increase. This is particularly important for measures which require investments. Besides developing more cost-efficient practices, biosecurity can be promoted through the training of livestock producers.

Biosecurity is a public good, because all can benefit from it, and it can be consumed endlessly once produced. Livestock and biosecurity are produced jointly and the costs are typically carried and biosecurity decisions made by individual economic agents such as livestock producers. Hence, it is important that the use of biosecurity is promoted by public policies and production contracts.