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A COST-BENEFIT ANALYSIS OF ELECTRONIC IDENTIFICATION IN THE DUTCH PIG INDUSTRY

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It seems likely that in the future electronic identification and recording (I and R) systems will become a technical feasible alternative for current eartag-based I and R systems. Hence, authorities are faced with the decision problem to make a choice between both systems. An economic study, focused on this decision problem was carried out for the Dutch pig production chain.

Currently, major application of I and R systems is epidemic disease control. However, previous studies showed that in order to become economically feasible, electronic I and R systems require additional applications. Therefore, three levels of application of I and R were distinghuised, i.e :

- e national/sectoral level, with the control of Classical Swine Fever (CSF) as main application,
- the intermediate level, with the management of integrated Production-Marketing Chains (PMCh) as predominant application,
- on-farm level, with group-housing of sows and production optimization for fattening pigs as most promising applications.

An economic model was designed, aimed at calculating required investments and yearly operational costs (YOC) of both systems under various conditions. Subsequently, the economic impact of electronic I and R compared to the current system was studied with respect to the applications mentioned above. This was mainly done using existing simulation models applicable to the respective topics.

The results of the cost analysis showed for the default situation (assuming a price of the electronic identification device (transponder) of DFl.3) :

- total required investments increased from DFl.13.6 m (for the current I and R system) to 84.5 m (for the electronic I and R system), and total YOC increased from DFl. 35 m to 133.2 m,
- about 58 % of YOC of the electronic I and R system are associated with the costs for transponders ,
- at the farm level, YOC increased from DFl. 17.4 m to 11.2 m,
- for specialized sow herds, the increase in YOC would be about 9 times, whereas for specialized fattening herds this figure was calculated ranging from 2.4 to 3.4. Hence, the increase for sow-herds is much greater than for fattening herds.

The analysis on the benefits are currently (December 1996) still being carried out. Final results are expected in February 1997, and therefore will also be presented at the symposium.

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