

[Back](#)

Agricultural and Food Science - abstract



Vol. 14 (2005), No. 3, p. 250-263

SIPILÄINEN, TIMO, RYHÄNEN, MATTI,
Technical change in Finnish grass silage production

Keywords productivity, technical efficiency, stochastic frontier,

Abstract

Stochastic production frontier analysis is applied in decomposing output growth of grass silage production to technical change, technical efficiency change, scale effect and input growth. For 1990–2000 in a complete panel of 138 Finnish farms, almost three fourths of the output growth was linked to input growth. The annual technical change, the shift of the production frontier, was on average 1.4 percent. Technical efficiency indicated a slightly decreasing tendency, less than 0.2 percent per year. Harvesting techniques were used as indicators of different technologies. The analysis showed that production frontiers differed between harvesting techniques. The choice of harvesting technique seemed to be related to circumstances on the farm. Thus, overall technical efficiency should not be interpreted as a measure of managerial competence when all the factors are not in the farmer's control. Controlling background and production environment related factors yields a considerably lower level of technical inefficiency than the models without the control. It is also shown that in general a more productive harvesting technique may be on average less efficiently utilized when compared to its own frontier.

Contact timo.sipilainen@mtt.fi

[[Full text](#)] (PDF 153 kt)

Update 29.11.2005.

Source: MTT's Publications database [Afsf](#)