

## Preface

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Professor Kyösti Pietola

*MTT Agrifood Research Finland*

Dr. Jussi Lankoski

*MTT Agrifood Research Finland, and OECD, Directorate for Food, Agriculture and Fisheries*

This issue of *Agricultural and Food Science* contains a selection of articles that focus on economics and policies related to agriculture, food and the environment. The selection highlights the broad scope of the economic and policy issues. The articles show the merit of integrating economics and natural science research in addressing questions that have high policy relevance and influence the future development of the agri-food sector. It should be stressed that the economic incentives faced by individual agents that ultimately determine how efficient different policies are in improving the quality of the agri-environment and the economic performance of agri-food sector.

The first article, by Pasi Rikkinen, underlines the challenges, uncertainties and alternative paths with which the agricultural and food sectors in Northern countries are confronted. The development scenarios simulated in the article reveal how distinct the alternative paths can be and how much they can alter the role of agri-food sector in society. Rikkinen's results urgently call for careful strategic policy plans and consistent implementation of these plans so that we can steer the future development of the food and agricultural sector desired by the society.

The special value of the article by Jyrki Niemi is in presenting the first quantitative estimates about the welfare effects of Finland's EU membership concerning agriculture. The results reveal that policies can make a difference. Agricultural policy reforms, brought in by accession to the EU have resulted in significant welfare gains for Finnish society. Furthermore, these gains clearly exceed the value of direct income payments that are paid to farmers to partially compensate the decreased producer prices.

The paper by Bojnec and Peter is very topical in the context of integrating the new member states into European single market, because the welfare benefits gained by expanding the European Union crucially hinge on market efficiency. When the structure of the food market is changed, one of the key questions concerns the extent of market integration between different stages of the food distribution chain.

Besides successful policies and efficient markets, the foundations for improving competitiveness of European agriculture lie in productivity growth, technical innovations and the efficiency of allocating production resources on individual farms. The articles by Sipiläinen and Ryhänen, and Bäckman and Oude Lansink, reveal how strongly productivity growth and efficiency of agriculture are rooted in and bounded by the state of nature and biological growth processes. The problems are complex because, in addition to traditional productivity increases, decreasing nutrient runoffs is a necessity and it constraints even further the means for improving competitiveness and market performance of the sector. The articles by Iho and Sumelius et al. show that the marginal costs of nutrient abatement are significant and they strongly depend

on the abatement target levels. Tightening the target levels calls for re-allocating the abatement measures in order to maintain cost-efficiency. Therefore, it is expected that new measures and innovations are required for cost-efficient nutrient abatement in the future.

We would like to thank the authors, the referees and associate editor Sari Torkko for their invaluable contribution in writing, reviewing and finalizing this special issue. We hope that the articles will promote fruitful discussion and dissemination of knowledge among the readers of the journal.