

Editorial

Innovation, productivity and growth: towards sustainable agri-food production

The expected sustained growth of world demand for food, feed, and energy raises concerns about the ability of global agricultural production to ensure adequate supply growth, while avoiding major turbulences on agricultural markets and still providing healthy and environmentally safe products. How these major challenges can be dealt with is, at once, both a political and scientific question. The scientific community is expected to provide rigorous and sound evidence on the nature and size of these challenges and to put forward effective and viable solutions. In this respect, a first major task for agricultural and applied economists is to investigate the actual dynamics of agricultural productivity growth worldwide and the differences emerging between developed and developing countries. Efforts should also be devoted to deepening the available knowledge on the impact of agricultural productivity on overall economic growth and, consequently, on income distribution, food consumption and international trade. Finally, applied economists are asked to investigate which kind of innovations can better contribute to achieving a sustainable increase of agri-food production and which policies and institutional settings may encourage these innovations. Specifically, in the EU context, attention inevitably involves analysis of the Common Agricultural Policy (CAP) and its recent reform. Whereas agricultural innovation and productivity growth apparently represent some of the key objectives inspiring this reform, a critical review of its actual contents and implementation raises major doubts on its capacity to lead European agriculture in the desired direction.

The aim of the fourth Conference of the Italian Association of Agricultural and Applied Economics (AIEAA), held in Ancona, June 11-12, 2015, was to provide a scientific contribution to these issues by expanding the knowledge base on the fundamentals of agricultural productivity growth and innovation, and also by promoting a critical debate on the underlying theoretical and methodological issues and policy implications. The Conference included about 50 papers addressing a range of research and policy issues such as: long-term patterns of worldwide food production and consumption; measuring and explaining agricultural productivity growth and gaps; the impact of agricultural productivity growth and innovation on income growth and poverty; sustainable knowledge intensification and innovation in agricultural production; design, implementation and evaluation of policies fostering sustainable agricultural innovation; the assessment of social, economic and environmental impacts of new bio-economic production and processes. The BAE Editor invited some of the speakers to submit for publication of their own papers on this BAE issue. The papers published on this issue were among those presented during the Fourth AIEAA Conference, although representing only an essay of the topics covered by the Conference. The paper by Keith Fuglie deals with the issue of the measurement of technical and efficiency change; he proposes a growth accounting

approach to measure the agricultural total factor productivity, which takes into account the animal feed inputs employed in the sector. The findings of the paper show that using these more complex measures could produce rather different results from those obtained by studies based on partial productivity indexes, and provide us with a more optimistic view about agricultural productivity growth. Parthena Chatzinikolaou and co-authors provide an assessment of the Ecosystem service in a traditional Italian cultural landscape, by using a framework suitable to be translated in a Multi-criteria evaluation process. The paper by Ciliberti and Frascarelli deals with the implementation of the new Common Agricultural Policy (CAP) in Italy and in particular aims at assessing to what extent the choices made by Italy about CAP implementation are consistent and effective in pursuing the objectives of the new CAP. Finally, the paper by Davide Viaggi provides an overview of state of the art of the literature and a discussion of the impacts of research and innovation on productivity, in the light of the specific features of the bio-economy; the study highlights a number of new challenges in this research area.

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