Herbicide Resistance: Challenges for Farmers and Implications for the Environment

George Frisvold
University of Arizona

David E. Ervin
Portland State University, ervin@pdx.edu

Let us know how access to this document benefits you.
Follow this and additional works at: https://pdxscholar.library.pdx.edu/econ_fac
Part of the Economics Commons, and the Sustainability Commons

Citation Details
https://pdxscholar.library.pdx.edu/econ_fac/83

This Conference Proceeding is brought to you for free and open access. It has been accepted for inclusion in Economics Faculty Publications and Presentations by an authorized administrator of PDXScholar. For more information, please contact pdxscholar@pdx.edu.
Herbicide Resistance: Challenges for Farmers and Implications for the Environment

A proposed plenary session at the 19th ICABR Conference on:
Impacts of the Bioeconomy on Agricultural Sustainability, the Environment and Human Health
Ravello, Italy
June 16 - 19, 2015

Organizers: George Frisvold and David Ervin

Session Description:
Genetically modified, herbicide resistant (HR) crops offer not only improved weed control, but also the potential to reduce soil erosion and fossil fuel use and to allow substitution toward less toxic or persistent herbicides. The widespread adoption of HR crops, however, has reduced the diversity of weed control tactics and increased ecological selection pressure for weeds resistant to dominant herbicides. This has led to a dramatic rise of HR weeds in many cropping systems. Resistant weeds threaten the sustainability of HR crops, pose environmental risks from alternative weed control practices, are altering public and private R&D programs, and necessitate new approaches to manage such resistance. The mobility of many weed species means that the susceptibility of weeds to herbicides is more of a common pool resource than previously appreciated. Such weed mobility limits the efficacy of traditional extension efforts aimed at farmers in isolation of each other. The session presents different international perspectives on HR weeds by a distinguished expert panel from developing and developed countries. The discussion will focus on innovating public policies and private sector strategies to address current weed resistance problems, including initiatives that encompass hard and soft technologies.

Organizers:
George Frisvold: frisvold@ag.arizona.edu
David Ervin: dervin@pdx.edu

Moderator:
George Frisvold
Department of Agricultural & Resource Economics
University of Arizona

Panelists:
David Ervin
Department of Environmental Management, Department of Economics
Institute for Sustainable Solutions
Portland State University
David Pannell  
Centre for Environmental Economics and Policy  
School of Agricultural & Resource Economics  
University of Western Australia  
Perth, Australia

Emilio Rodríguez-Cerazo and / or Pascal Tillie  
Agriculture and Life Sciences in the Economy Unit  
European Commission, Joint Research Centre  
Institute for Prospective Technological Studies  
Seville, Spain

Carl Reinhardt  
Department of Plant Production and Soil Science  
University of Pretoria  
Pretoria, South Africa

José Maria F.J. da Silveira and /or Anderson Galvão  
University of Campinas  
Center of Agriculture and  
Environmental Economic Research (NEA)  
Campinas, São Paulo, Brazil

Discussant:  
David Zilberman  
Department of Agricultural and Resource Economics  
University of California, Berkeley