Tropentag, September 18-20, 2019, Kassel

"Filling gaps and removing traps
for sustainable resource management"

Agricultural Sector Model: A Tool to Evaluate Agricultural Production and Food Security in Syria

Kindah Ibrahim[1], Yigezu Atnafe Yigezu[2], Mahmoud Babili[3], Raid Hamza[3]

[1] *Czech Univeristy of Life Sciences Prague, Faculty of Tropical AgriSciences, Department of Economics and Development, Czech Republic*
[2] *International Center for Agricultural Research in the Dry Areas (ICARDA), RALS Program, Egypt*
[3] *National Agricultural Policy Center, Rural Development Department, Syria*

Abstract

Syria's conflict has entered its ninth year. The severe war has brought the country's economy to its knees. Only agriculture has been saving the country. No doubt, once the war ends the country will be exposed to recovery challenges. A big issue will be how to enhance food security during the post-war transition. The objective of this study is to explore various options for improving food security in the country shattered by this protracted crisis. The research methodology employs the Agricultural Sector Model (ASM) to depict the possible scenarios for the rehabilitation of Syrian agriculture and thus improving the state of food security. The framework of this partial equilibrium model consists of a quantitative analysis of the structure of agricultural production; the marketing system; government policies and programs; projections of demand for and supply of goods and considerations of alternative policies to improve the performance of the sector. The work in ASM started in 2009, as a part of the AgroSyr project, a research project jointly executed by ICARDA-CGIAR and the National Agricultural Policy Centre (NAPC) in Syria but stopped when the conflict erupted. Recently, the work in AgroSyr project has been resumed, and new data was collected in 2018. The survey covered 13 out of the 14 Syrian Governorates, where more than 1380 households were interviewed and a total of 2144 gross margins with detailed information about main crops production was gathered. The analysis was performed using GAMS software. The results helped to evaluate two dimensions of food security: availability and access; and simulate the future policy options for the stability dimension. The model also served to determine the optimal use of different resources to enhance agricultural production in Syria through policy scenarios.

Keywords: Agricultural policy, food security, sector model, Syria

Contact Address: Kindah Ibrahim, Czech Univeristy of Life Sciences Prague, Faculty of Tropical AgriSciences, Department of Economics and Development, Kamýcká 129, 165 00 Praha - Suchdol, Czech Republic, e-mail: kindah.ibrahim@gmail.com