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## Public Lecture



### Prof. Rida Shibli Khawaldeh

The Jordanian Senate, Jordan

### *“Genetically Modified Crops: Current Status and Future Prospect”*

**3:00-4:00 PM, Tuesday, November 14, 2017**

**Building G, Ground Floor, Multi-Purpose Hall**

#### Abstract

Genetically modified organisms (GMOs) are those living creatures whose DNA was altered, and consequently possess new traits that don't occur naturally in their original species. In genetically modified crops, these traits resulted in production of a number of crops with elite properties such as, superior productivity, high resistance potential against insects and pathogens in addition to rich nutritional and medicinal values. Genetically modified crops have attracted a large amount of media attention in recent years. Till now there is no real awareness in the communities about benefits of GM crops, and how they can be used for increasing human prosperity. In 2016, global cultivated area of biotech crops increased from 179.7 million hectares to 185.1 million hectares, with 3% increase in hectares. Out of the 26 countries that planted biotech crops in 2016, 18 countries were considered as biotech mega-countries. Globally, USA remained as the top producer of biotech crops planted on 72.9 million hectares in 2016, and covering 39% of the global biotech crop plantations. Brazil landed on the second spot, with 49.1 million hectares which represents 27% of the global output. The most planted types of biotech crops in 2016 were soybean, maize, cotton, and canola. The global market value of biotech crops in 2016 was US\$15.8 billion. This indicates that, there was a 3% increase in the global market value of biotech crops compared to those recorded in 2015, which was US\$15.3 billion. This value represents 22% of the US\$73.5 billion global crop protection market in 2016, and 35% of the US\$45 billion global commercial seed market. As crop biotechnology faces the third decade of commercialization, new innovations are expected to transform the development of biotech crops and traits. This is manifested by the increasing use of stacked traits, the new generation of biotech crops that does not only address farmers' concerns but also consumers' preference and nutritional needs, and the amplified use of gene discovery in crop improvement and development of new varieties. Together with conducive and harmonized regulations, crop biotechnology innovations can help double food production to address the needs of the growing global population, especially those in the developing countries. Biotech crops contributed to food security, sustainability and climate change; by increasing crop productivity up to 574 million tons (valued at US\$167.8 billion in 1996-2015; and 75 million tons valued at US\$15.4 billion in 2015), and conserving biodiversity and providing a better environment. Onerous regulation for transgenic crops remains the principal constraint to adoption, which is particularly important for many developing countries, denied the opportunity of using biotech crops to address food, feed, and fiber security. Overcoming challenges to adopt biotech crops is a daunting task that requires a cooperative partnership among the North and the South, East and West, and public and private sector. Moreover, increased production and utilization of GMOs would provide the required nutrients especially for the poor to meet their nutritional requirements. But commercialization of GM crops is still an issue as people are yet to accept them globally. Finally, the future prospect of GM plants will flourish unless it is met by some loop holes.

#### About the Speaker

Prof. Rida Shibli Khawaldeh is a Jordanian academic and politician. He was the Minister of Agriculture in the government of Hani Al-Mulki between 1 June 2016 and 28 September 2016, when he left the government in a cabinet reshuffle and was replaced by Khaled Hneifat. He was subsequently appointed to the Senate. He previously served as President of the University of Jordan at Aqaba. In April 2013, he was appointed as President of Mutah University per Royal Decree. He was one of the three University presidents appointed in the government of Al-Mulki. Prof. Rida Shibli Khawaldeh studied plant production at the University of Jordan and obtained a BSc and MSc there. He later obtained his PhD from the University of Illinois.