



Analysis of Maize versus Ethanol Production in Nebraska, United States and International Agricultural Droughts: Lessons for Global Food Security

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Nebraska is one of the eight main corn (maize) belt states of the United States. Maize is the major crop of Nebraska with an average annual production of about 38 million tons (about 12% of U.S. production), which contributes billions of dollars to the state's economy. The yield of maize has increased significantly over the past century – from 1.6 t/ha in 1900 to 10.4 t/ha in 2010. While the majority of maize (about 40%) is currently used for animal feed and ethanol production, only about six percent is exported. It is estimated that about one billion people accounting for about 15% population of the world live in chronic hunger because of low agricultural productivity and drought. Most of these people depend on the U.S. for grains including maize. If a greater quantity of maize is diverted to ethanol production, considerably less quantity of maize would be available for export to developing countries where it could be used for human consumption and to mitigate hunger and improve food security.

This paper presents analysis of maize production in Nebraska for the past three decades and examines how its commercialization for ethanol production has affected its exports in the face of drought at an international level.