



National Center for Food and Agricultural Policy

NCFAP 2019 Annual Report

I. Projects Completed in 2019

I-1. Sponsored Research: “Impacts of the U.S. Renewable Fuel Standard on Commodity and Food Prices”

Sponsor: *National Corn Growers Association & Renewable Fuels Association*

Principal Investigator: Wally Tyner, Farzad Taheripour, Harry Baumes

Term: January-September 2019

Summary: The relationship between the U.S. Renewable Fuel Standard (RFS), biofuel production, and commodity and food prices is very complex. When a government imposes a regulation, it usually indicates that the market would not produce the socially desired outcome. The U.S. Renewable Fuel Standard (RFS) is a good example of such a regulation. Congress believed that markets would not produce the desired amounts of renewable fuels, so it established requirements for minimum levels of use of different kinds of renewable fuels, providing biofuels access to the fuels market. However, it is not always the case that the mandate is binding, especially if market conditions change. It is possible that with changes in market conditions, a biofuel would be produced and used regardless of regulation.

This study examined the extent to which commodity and food prices and farm income were impacted by the RFS and biofuel production. In addition to a thorough literature review, we provided long run CGE analyses for two time periods: 2004-2011 and 2011-2016. A computable general equilibrium model (GTAP-BIO) and a partial equilibrium model (Agricultural Energy Partial Equilibrium) were used to assess long-run and short-run impacts of the RFS and biofuels production. Our results showed that in general the long-run price impacts of biofuel production were not large. The contribution of RFS to the price increases were about one-tenth of the 5.5% increase in the price of coarse grains through 2011. And long run price impacts were even lower. In the second time period, due to biofuel production, crop prices increased by less than 1%. However, during this period, the RFS was the main driver of the (near-negligible) price increases.

In addition, biofuel production raised U.S. annual farm incomes by an estimated \$8.3 billion (2004-2011, with 28% due to the RFS) and \$2.3 billion (through 2016, with 100% due to the RFS). That is, with no biofuels, U.S. annual farm income would have been an estimated \$10.6 billion lower.

Finally, we examined the long run price impacts of an increase in the conventional RFS level of up to 1 BG. The results show that this expansion in RFS would have minimal impacts on commodity and food prices, but some positive impact on farm incomes.

I-2. Professional Development Training: “Economic consequences of agricultural activity in environmentally valuable areas” by Joanna Stefanczyk, PhD Candidate, *Warsaw University of Life Sciences, Faculty of Economic Sciences*.

Sponsor: *Naodowa Agencja Wymiany Akademickiej, European Union Foundation/Europejski Fundusz Społeczny*

Training provider: Maureen Kilkenny; referred by Willi Meyers

Term: March-August 2019

Summary: We organized and provided a program of study that complemented and elaborated Joanna Stefanczyk’s dissertation research. The program included hosting Joanna during a two-week internship in Nevada. Prior to and during her time in Nevada, we helped develop her scientific research skills: how to pose testable hypotheses, formalize

models, design surveys, and choose the appropriate analytical approaches. For the internship we arranged her meetings with faculty with the relevant research expertise, visits to the relevant public land management offices, environmental protection agencies, and NGOs. We helped her conduct interviews and collect data for her PhD dissertation.

I-3. Professional Development Training: “U.S. Wine Production and Marketing for Serbia”

Sponsor: USDA-FAS *Cochran Fellowship Program* Eastern Europe and Eurasia region

Training Providers: Maureen Kilkenny, Stan Johnson, Bill & Lucy Eryasian (Fresno State U.)

Term: September 15-28, 2019

Summary: NCFAP designed and delivered a two-week training program for six wine industry professionals from Serbia to expose the Fellows to the advanced practices in the U.S. wine industry and wine tourism, to identify new U.S. wine products available for export to Serbia, and to improve their understanding of the production and quality of U.S. wine. During their first week the Fellows met with enology, viticulture, and marketing faculty at CSU Fresno, toured growing regions in the California Central Valley, and met with winemakers, marketing experts, and distribution companies, including the largest wine company in the world –Gallo-- at their headquarters in Modesto.

During their second week the delegation relocated to Napa, where they were hosted by some of the world’s largest and most famous wine companies in the famous Napa Valley, and by boutique vintners in Sonoma County. They learned about the history of the California wine industry, wine costs and prices, and wine promotion. They made ‘for the trade’ tours and tastings at two dozen wine companies, including the world-renown *Opus One*. They were hosted by the director of the Robert Mondavi Institute at UC Davis where they saw state-of-the-art enology and viticulture research. They learned about wine and grape data collection and provision by USDA-NASS from the responsible field officers at the California Dept. of Food and Agriculture (CDFA). Also during their jam-packed two week program, they were able to earn “*California Sustainable Wine Growing Ambassador Course*” and completion certificates.

II. Continuing Projects

II-1. Sponsored Research: “Changing Demand and Relative Price Relationships among Oilseed Crops”

Sponsor: *USDA Office of the Chief Economist, Energy Policy and New Uses*

Investigators: Stanley Johnson, Michael Helmar, Robert Myers, Aleks Schaeffer

Term: October 2019 – September 2020

Summary We will provide the Office of the Chief Economist two completed papers on the changes in vegetable oil prices historically and on the relationships between vegetable oil, meal, and petroleum prices.

The first looks at monthly soybean, canola, palm and sunflower vegetable oil and meal prices from 2000 through 2019. Because vegetable oils and meals satisfy different demands, a focus only on oil prices could be misleading. The analysis is designed to provide OCE an improved basis for exports and projecting domestic consumption of oils and meal.

The second focuses on the impact of increased production of vegetable oils on the price of petroleum. This is a new focus of analysis for OCE. We will utilize the monthly data used for the first paper to investigate how movements in those prices link to movements in petroleum prices. The objective is to begin to equip the OCE with a better understanding of the links between vegetable oil and petroleum prices. We know that they are linked, but no-one yet knows whether petroleum prices respond to the prices of vegetable oils, or if vegetable oil or meal prices respond to petroleum prices.

II-2. Sponsored Research: “Case Study of Emery County Agricultural Water Quantification System Implementation”

Sponsor: *Rural Water Technology Alliance (RWTA) for the State of Utah, Division of Water Resources.*

Principal Investigators: Rangesan Narayanan, Roger Hansen, Colby Green and Amy Green.

Term: August 1, 2019 - June 30, 2020.

Summary: Emery county, Utah has had real-time monitoring of the irrigation service area water conveyance and delivery systems since 1992. The purposes of this project are to engage stakeholders in Emery County -including water managers and producers- to understand, document, and evaluate the drivers, methods, costs, benefits and lessons learned from the actual implementation of a network of flow measurement structures with transparent, real-time monitoring. The ex-post cost-benefit analysis for Emery County prepared by NCFAP’s Senior Fellow provides guidance for real-time measurement and control systems to be installed in other Utah counties in the future.

II-3. Professional Development Training: “Policy Brief Writing”

Sponsor: *International Institute for Tropical Agriculture (IITA) “African Youth in Agriculture”*

Training provider: Maureen Kilkenny

Term: 2018 – 2019 -- 2020

Summary: The objective of the program is to ensure that young African agricultural economists in numerous African countries can produce high quality policy briefs from their research about ways to increase the engagement of African Youth in Agriculture. The training provider’s deliverables each year include (i) evaluations of about 100+ applicant proposals, (ii) development of the training materials, (iii) presentation of a weeklong workshop to 2-3 dozen young scholars, most of the PhD candidates; and (iv) provision of one-on-one guidance via email and SKYPE to the scholars while they write their policy briefs and beyond. 2019 was the second year of this three-year program.

END of REPORT

Respectfully submitted (as edited and approved by the Board) **February 29, 2020,**



Dr. Maureen Kilkenny
NCFAP Senior Fellow
NCFAP Treasurer