



## National Center for Food and Agricultural Policy

### NCFAP 2021 Annual Report April 19, 2022

#### I. Projects Completed in 2021<sup>1</sup>

##### I.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:** Aleks Schaeffer, Bob Myers, Stanley Johnson, Michael Helmar.

**Term:** October 2019 – May 2021

**Summary** We provided the Office of the Chief Economist two completed research papers about 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. This manuscript has been refereed and is now published as: “How have oilseed relative price relationships changed over time?” by Schaefer, K. A., Myers, R. J., Johnson, S. R., Helmar, M. D., & Radich, T. (2021). *AgBioForum* 23(1), 72-83.

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 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 knew if petroleum prices respond to the prices of vegetable oils, or if vegetable oil or meal prices respond to petroleum prices. This manuscript also has been refereed and accepted for publication as: “Biodiesel Production Incentives and Shale Oil Expansion: How Have They Changed Oilseed and Crude Oil Price Dynamics?” *Agricultural and Resource Economics Review*, forthcoming.

#### II. Continuing Projects

##### II-1. Professional Development Training: “*Policy Brief Writing*” CARE Program

**Sponsor:** *International Institute for Tropical Agriculture (IITA) “Enhancing Capacity to Apply Research Evidence in Policy for Youth Engagement in Agribusiness and Rural Economic Activities in Africa (CARE Scholars Program),”* funded by IFAD.

**Training provider:** Maureen Kilkenny

**Term:** 2018 – 2019 – 2020 – 2021 - 2022

**Summary:** The objective of the CARE program is to ensure that young African agricultural economists can produce high quality policy briefs from their research about ways to increase the employment of African youth in African agriculture. Each year, NCFAP’s training provider delivered: (i) evaluations of about 100+ applicant proposals (in French), (ii) tailored training materials, (iii) a weeklong workshop for 30 post-graduate scholars (during 2020, due to covid-19 the workshop convened Monday through Friday, 6am to 10am PST via ZOOM); and (iv) one-on-one guidance via email, ZOOM or SKYPE with each scholar while they write their policy briefs. The 2020-2021 cohort was the third and final cohort. As of December 2021, only 10% of that cohort had finalized their reports, so we plan to continue working with scholars in 2022.

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<sup>1</sup> Note: The Covid-19 outbreak that began in late 2019 and which was declared a pandemic in 2020, continued through all of 2021 and beyond. The pandemic disrupted many programs, projects, and operations, including at NCFAP. It is the main reason why NCFAP output was unusually low in both 2020 and 2021.

### III. New Projects

#### III-1. “Farm-Level Implications of Climate-Smart Agriculture Practices and Policies”

**Sponsor:** FAPRI (the *Food and Agricultural Policy Research Institute* at the University of Missouri) as a subcontract to the FAPRI contract for the USDA OCE: “Analysis of Agricultural Markets and Policies 2021-2022,” USDA Project ID 58-0111-21-012.

**Term:** January 01, 2022 – September 29, 2022.

**Investigators:** Stan Johnson and Maureen Kilkenny; Mary Ahearn +

**Summary:** In 2021, anticipating the 2023 Farm Bill focus on GHG emission reduction, we at NCFAP proposed to deliver a research and analysis pilot project describing the farm-level implications of “climate-smart” farming practices, the motivations for adopting the practices, and the effects on GHE emissions, farm resource use and farm-level income among those who may implement such techniques.

For the first deliverable, we reviewed the soil science, crop science, agricultural economics, and greenhouse gas emission literature, as well as hundreds of existing surveys of farmers who have adopted no-till or cover crops or other relevant techniques. FAPRI read our review and agreed with our plan to use *Agricultural Resource Management Survey (ARMS)* panel data on corn and soy farmers in Iowa, Illinois, and Indiana that documents the tillage, cover cropping, and “4R” nutrient management practices they have used (or not used), the “working land” farm bill programs they have participated in, along with the farmers’ costs, returns, and government payment receipts. With that ARMS data we can estimate statistical models of how changes in policies and incentives have actually affected the observed adoption of those ‘climate smart’ practices in the past.

By September 2022 we will produce the reduced form estimated models of acres by practice, yields, costs, GHG emissions, etc., for corn and soy farmers in the three states of Iowa, Illinois, and Indiana. Our estimated parameters might then be used in those three of FAPRI’s state-level models for “what if” 2023 farm bill analyses.

In sum, NCFAP supports FAPRI’s work for the USDA-OCE to provide policy makers with objective information about what American farmers can do to achieve greenhouse gas reduction targets by (i) estimating FAPRI-model-relevant coefficients and (ii) writing an in-depth pilot study. NCFAP’s pilot project will cover what corn and soy farmers in the three states of IA, IL, and IN have been doing-- and what they could do-- to reduce GHG emissions, and which policy options best motivate these reductions. We hope in future years to expand the scope to other states.

#### III- 2. “World Food Consequences of The War on Ukraine”

**Sponsor:** Agricultural and Applied Economics Association (AAEA) Invited Paper Session

**Dates:** July 31-August 1, 2022

**Organizers:** Maureen Kilkenny, Willi Meyers, and Stan Johnson

**Summary:** Russia invaded Ukraine on February 24, 2022. Because Ukraine has become a significant grain and oilseed producer and exporter, the war impacts world markets and threatens food security both regionally and globally. On March 21, we asked AAEA President Dr. Madhu Khanna about convening a session on this rapidly evolving topic at the annual meetings of the AAEA. Dr. Khanna invited **NCFAP** to organize this Invited Paper Session (all other sessions had to be organized by January 18). Ukraine recently accounted for about 10% of world wheat exports, 15% of corn, 15% of barley and 50% of world exports of sunflower oil. Russian airstrikes, active military battles, mines in cropland, and the occupation of some areas in Ukraine has stopped some spring planting and will interfere with the harvest of winter wheat. It has destroyed some storage facilities, supply routes for inputs as well as products, and essential Black Sea port facilities. This plenary session will feature 3 presentations. The 1<sup>st</sup> -- by our Ukrainian colleagues at the C4FLUR, will document Ukraine’s agricultural situation and present the latest outlook. The 2<sup>nd</sup> by IFPRI’s Joe Glauber and David Laborde will document world market, price trends, stocks, trade situation and the outlook and risks going forward. The 3<sup>rd</sup> by a former executive director of the UN World Food Programme (Catherine Bertini) and the current WFP Chief Economist (Dr. Arif Husain) will discuss the impacts and implications for world food security and policies. Willi Meyers will be the able discussant. **Register to attend here:** <https://www.aaea.org/meetings/2022-aaea-annual-meeting/registration-travel> .