

# **The Coronavirus and Potential Impacts on the Agricultural Economy**

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## **Introduction**

The impacts of the coronavirus on the U.S. and NC agricultural economies are unfolding and fluid, so it is going to take time for agricultural economists to measure the full impacts. The purpose of this brief is to outline four significant concerns and questions I foresee for the U.S. and NC agricultural economies, with what we know presently, for policymakers and legislators to consider as they respond to the crisis. These four concerns and questions are as follows:

- 1) Farming will likely be unprofitable in 2020 with most commodity prices currently tanking to double-digit percentage losses since the crisis began;
- 2) Can the agricultural supply chain function at capacity given that processing of meats, poultry, and produce are labor-intensive which makes social distancing difficult and means workers could contract and spread the coronavirus, forcing processing plant shutdowns?;
- 3) Can the agricultural supply chain transform to support how Americans are now consuming food due to stay at home and social distancing rules?;
- 4) A significant spike in unemployment and loss of income will shift and change the demand for food. Some Americans will spend less on food due to having less disposable income, and they will change their preferences to less expensive basic foodstuffs for at-home consumption;

## **Before the Coronavirus**

Pre-coronavirus, the U.S. general economy, was strong. In 2019, GDP averaged 2.3%, unemployment was around 3.5%, and the S & P 500 was up 29% for the year. However, the U.S. and N.C. agricultural economies were recovering from adverse weather, a trade war, diseases, and a significant slump in commodity prices. The U.S. farm net cash

income had declined as much as 30% from its highs in 2013 of \$135 billion to \$96 billion in 2016.<sup>1</sup> Since 2016, the agricultural economy has been slowly inching forward, gaining strength with the total U.S. farm net cash income forecasted to be \$120 billion in 2019, up 25% from previous recent lows. The agricultural economy was on an upward trajectory pre-coronavirus.

### **Enter the Coronavirus**

Then “boom,” enter the coronavirus into the U.S. around mid-January. It did not take long, and the U.S. and N.C. agriculture economies were jolted like so many other sectors of the economy, by a pandemic that brought daily life to uncharted waters. Central to this shock is the stay at home orders and social distancing, which means commercial entities and places of learning, which involve close personal interactions, have had to either cease operations, modify to a skeleton workforce, or transform to a virtual world. The demand for agricultural-based products from food service, restaurants, schools, and colleges has been devastated in a matter of weeks. The U.S. agricultural supply chain has never experienced an economic shock of this magnitude. In truth, it is just too early to measure impacts on the agricultural economy, and it is ongoing and fluid. One gauge of the potential economic impacts is to turn to the commodity futures markets that serve a critical role in price discovery. A glance of a portfolio of some key agricultural commodity futures prices is sobering. Since the arrival of the coronavirus, nearby futures have plummeted double-digits percentage losses for most commodities. Examples include:

Nearby Futures	15-Jan-2020	10-Apr-2020	% Changed
<b>Wheat</b>	5.79	5.48	<b>-5.4%</b>
<b>Soybeans</b>	9.55	8.63	<b>-9.6%</b>
<b>Corn</b>	3.96	3.31	<b>-16.4%</b>
<b>Class III milk</b>	17.26	13.56	<b>-21.4%</b>
<b>Cotton</b>	0.71	0.54	<b>-23.9%</b>
<b>Live cattle</b>	127	94	<b>-26.0%</b>
<b>Ethanol</b>	1.38	0.89	<b>-35.5%</b>
<b>Hogs</b>	75.25	42.8	<b>-43.1%</b>
Source: <a href="https://www.cmegroup.com/trading/agricultural/">https://www.cmegroup.com/trading/agricultural/</a>			

<sup>1</sup> <https://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/data-files-us-and-state-level-farm-income-and-wealth-statistics.aspx>

For this portfolio of agricultural commodities to almost all be down double-digits in percentage terms is unprecedented. These market declines underscore my first significant concern that farming will not be profitable in 2020, further accentuating financial strains from the previous five years.

### **How Americans Consume Food Now Has Changed**

An aspect of U.S. food consumption that is not well appreciated is that Americans spend more money on food away from home than they do on food at home. In 2018, U.S. consumers spent \$1,712 billion on food in total.<sup>2</sup> The total spending can be broken out between \$781 billion (46%) on food at home and \$931 billion (54%) on food away from home. Of the food spent at home, 59% is at the grocery store, and 22% is at warehouse clubs and supercenters. Of this food spent away from home, 37% is at limited-service restaurants, 36% is at full-service restaurants, and 8% is at schools and colleges. Thus, \$784 billion (or 80%) of the food away from home spending or 43% of total spending on all food is in restaurants, schools, and colleges.

Now imagine that U.S. restaurants, schools, and colleges go offline for food demand, and potentially for an extended period, which is the predicament with the current stay at home and social distancing rules. *If I had analyzed this scenario six months ago in an economic study for peer review, it would have almost certainly been rejected for being unrealistic. Still, here we are with this very scenario today.* Herein lies my most significant concern for U.S. agriculture with respect to the coronavirus. How resilient is the downstream agricultural supply chain for feeding America with the coronavirus in the mix to be able to stay online, and at the same time, transform into the different way Americans will meet their nutritional needs if this pandemic stretches out? That is, how quickly can the \$784 billion or 43% of the total food spend be transformed so that Americans can continue to meet their nutritional needs with consumption limited to at-home without foodservice operating. The logistical transformation of processing plants changing to produce sufficient quantities of single-serve or family-serves for the retail sector as compared to supplying the foodservice sector in bulk is at best an extreme challenge and, at worst, impossible given the current challenges. Of course, the need for this transformation

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<sup>2</sup> <https://www.ers.usda.gov/data-products/food-expenditure-series/>

hinges critically on the length of stay at home and social distancing rules that have foodservice no longer demanding food, which remains unknown. Below are a few questions and concerns for policymakers and legislators to consider and assess to avoid the situation of empty shelves in stores and farmers who have production ready for the market but have no market to accept delivery:

- What is the capacity of grocery stores, warehouse clubs, and supercenters to become the primary supplier of food that would have otherwise been supplied by restaurants, schools, and colleges?;
- Can the supply chains transform food products that would typically go to restaurants, schools, and colleges in the form of bulk production volumes, cuts, and serves to smaller general household consumption that requires single- and household-serves? If so, how long will this take and how expensive will this be?;
- At what capacity can the agricultural supply chain function given that processing of meats and produce are labor-intensive, and workers are contracting and spreading coronavirus, forcing processing plant shutdowns. Over the Easter weekend, Smithfield announced shutdowns of a processing plant in South Dakota that handles 4 to 5 percent of U.S. pork production, due to hundreds of employees contracting coronavirus. Also, production has slowed due to measures taken to ensure the safety of workers. More shutdowns and less efficient production can be expected if the pandemic persists;

### **Demand for Food Will Change**

The significant spike in unemployment and loss of income will shift and change the demand for food. The CARES Act stimulus will help offset income shortfalls in the short-run. However, some Americans will demand less food because of less disposable income, and their preferences will change to less expensive basic foodstuffs for at-home preparation and consumption. This decrease in demand and shift in preferences, will also have significant implications for profitability for agriculture at the farm gate the question is how much?

## **Final Thoughts**

In sum, the impact of coronavirus takes the agricultural economy to uncharted waters. The most significant concerns are profitability for farmers with most commodity prices tanking double-digit percentage points and the supply chain resiliency to stay online but also transform to support the different way America is now consuming food. Finally, the significant spike in unemployment and loss of income will shift and change the demand for food, influencing the profitability of agriculture at the farm gate. As the situation is fluid and changes are happening daily, other concerns and questions will be forthcoming.