

# Strengthening the food supply chain in response to the COVID-19 pandemic

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The unprecedented COVID-19 pandemic sent shock waves through systems and markets around the world, causing complex economic disruptions. The agricultural market too faced significant challenges. A new article in *Applied Animal Science* analyzes these challenges to learn from the experience. Specifically, the authors examine protein-sector

food supply chains and present lessons learned from the COVID-19 pandemic.

The article resulted from the July 2021 Symposium of the American Registry of Professional Animal Scientists. "This invited review examines the nature and causes of these [food](#) supply chain and market disruptions, evaluates the [economic consequences](#), and addresses potential market and policy responses that should be explored to reduce similar adverse effects from such possible events in the future," said David K. Beede, Ph.D., Editor-in-Chief of *Applied Animal Science*.

The authors explore how the pandemic has affected the supply and demand sides of the food market simultaneously. They discuss how panic buying caused an initial surge in food demand that was met with increased production. Lead author John D. Anderson, Ph.D., Department of Agricultural Economics and Agribusiness, University of Arkansas, Fayetteville, AR, U.S., explained that during the following slowdown, "demand was negatively affected both by the near-total loss of [food service](#) outlets and by a consumer shift to precautionary saving." The article next details the challenges on the supply side, discussing how COVID-induced food-processing restrictions, workers being kept at home, and a shift in protein demand from food service to food at home led to plant slowdowns and complete shutdowns.

The meat processing sector also experienced "a significant increase in production and price risks and a dramatic widening of marketing margins," according to Anderson. These insecurities encouraged building the resilience of the food supply chain. The authors pointed out that larger commercial firms have the advantage of increasing resilience through improved efficiency, adoption of technology, and global marketing. But, Anderson adds, "Certainly, the experience of the pandemic highlighted the vulnerabilities of having a food supply chain in which capacity is concentrated in a handful of large firms." The authors

discuss how public interest has resulted in research and investment in shortening the food supply chain and expanding local and regional systems.

The authors predict that if large commercial food supply chains increase efficiency and use of automation in response to challenges faced during the pandemic, this will pose a real threat to the economic viability of smaller local and regional systems. Anderson said these smaller operations might face "an even more [competitive environment](#) than the environment that existed before the [pandemic](#)."

The article appears in the December issue of *Applied Animal Science*.

**More information:** Invited Review: Lessons from the COVID-19 pandemic for food supply chains, *Applied Animal Science*, 2021. [DOI: 10.15232/aas.2021-02223](#)

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