Mitigating Immediate Harmful Impacts of COVID-19 on Colorado Farms and Ranches Selling through Local and Regional Food Markets

These estimates are customized for Colorado based on a national economic impact assessment compiled by Dawn Thilmany, Becca Jablonski, Debra Tropp, Blake Angelo, and Sarah Low at the request of a national food system collaboration, the National Sustainable Ag Coalition to inform current stimulus policy formation.

Bottom Line

Across key local and regional markets (i.e., farmers markets, farm to school, food hubs serving other institutions, and restaurants) we estimate a $3.9 million decline in sales (the most conservative estimate for direct sales losses) leading to a payroll decline of up to $585,000, and a total loss to the economy of ***up to $6.7 million from March to May 2020.*** Without immediate mitigation (in addition to the innovation supply chain solutions our producers are already creating themselves), we may lose many small, socially disadvantaged, and beginning farms and the important markets they serve.

Policy Recommendations for Colorado

- *Explicitly Include Local Food and Farm Businesses in Small Business Support Programs:* Declare local farm and food assets as key community assets. Require emergency food assistance dollars flowing to communities to support local farm and food businesses. Work with state agencies to assure local farm and food businesses are deemed qualified and provided technical assistance to secure resources from small business, workforce and emergency loan programs.
- *Expand Incentives for Food and Farm Businesses Market Innovations:* Use relationships with past grant and programming partners (associations, food hubs, farms) immediately provide "seed monies" to pilot innovations to respond to the market. For example, for past specialty crop (potato, peach, millet) or FSMIP grantees (bison, wine), offer resources to elevate the capacity to do market promotions, online sales and new delivery systems. For past workforce grantees, offer monies to quickly "train" new employees to staff new distribution and delivery models.
- *Accelerate Waivers and Expand Flexibility for Current USDA Programs:* In cooperation with federal partners, explore the opportunity to waive limitations on the reach of feeding programs' ability to purchase food from local and regional suppliers. Relax expenditure limitations so that current USDA award recipients can innovate and rapidly respond to community needs, e.g., Michigan reported that due to lost sales at schools, their Michigan Farm to Freezer program is shifting to freeze items for other markets.

Context

Among the businesses facing losses as a result of COVID-19 are the farms and ranches that sell through local and regional food markets. Social distancing measures such as the closure of universities, schools, restaurants, and local food markets (e.g., farmers markets, farm stands) will result in significant shifts in where food is sold or acquired, and subsequently, markets for farms and ranches. The Congressional Research Service estimated local food sales at $11.8B in 2017 (Johnson 2019), with nearly 8% of U.S. farms and ranches (159,000 operations) participating (USDA NASS 2017).

The vast majority (85%) of participating farms and ranches are small. Further, about one in four beginning farmers and ranchers use local food markets to differentiate their product (securing a premium above commodity pricing) (USDA NASS 2018). Census data from 2007 and 2012 show that beginning

farmers with local food sales had higher survival rates across all sales classes (Low et al. 2015), and local food markets support profitable operations, even among those with lower sales (Bauman et al. 2018).

Projected impacts by selected market, based on March-May period of social distancing:
This short brief provides a preliminary estimate of economic losses to the Colorado local and regional food sector and provides guidance for policymakers as they evaluate solutions that will minimize negative impacts to food businesses and rural economies. It is our expectation that Colorado faces market challenges similar to the U.S. We reframed the national brief using Colorado numbers. Further, where possible, we collected information from Colorado producers and markets to estimate projected losses.

1) Farmers Markets

- Using estimates from the 2017 Ag Census and recent USDA ARMS data, we estimate $29.9 million in sales through farmers markets. Since the Governor declared farmers markets as 'critical businesses' and the Colorado Farmers Market Association is actively trying to guide markets on how to adapt to social distancing and other health recommendations, we expect many markets will continue to operate. However, existing winter markets closed their season early, and we anticipate that changes to market operations may impact the number of farmers and customers attending the market. Accordingly, we assume a minimum of 10%, or at maximum 25% of annual sales will be lost.
- Assuming a 10% loss in market sales resulting from measures implemented due to COVID-19, there would be a ***$2.9 million decline in sales, leading to a $435,000*** decline in payroll given estimates of the labor share of revenues paid by farms using direct markets.
- Assuming a more significant 25% loss in market sales resulting from measures implemented due to COVID-19, there would ***be a $7.5 million decline in sales, leading to a $1.1 million decline in payroll*** paid by farms marketing to local markets.
- The multiplier effect of a loss of $2.9-7.5 million in sales would lead to an ***estimated loss to the Colorado economy of $4.9 - $12.8 million*** based on the USDA AMS Local Food Impact calculator: https://calculator.localfoodeconomics.com/

  Other important issues to note regarding farmers markets:
  - The March-May season of the market year is mostly a start-up phase, particularly outside of the Southern U.S. and California, so the range of lost sales was hard to forecast, and the range of 10-25% of annual revenue was deemed reasonable to present as an estimate.
  - As part of its new shelter in place policy, Colorado has deemed farmers markets part of "essential infrastructure" along with grocery stores and food banks. Such policies should be encouraged, and perhaps provided financial and technical support, given food supply chains continue to be disrupted. Support for the Colorado Farmers Market Association may help to keep such losses relatively lower.
  - 8% of local food farms had an online marketplace in 2015. These farms had higher local food sales and value-added sales, suggesting online is a viable platform for food farms that could be expanded. We have seen a number of online platforms begin and grow significantly such as https://farmrunners.com/, https://thepigandtheplow.com/our-bakery/, NoCO Virtual Farmers Market, https://www.facebook.com/groups/499722194053286/.
    - Technical assistance or mini-grants for developing online platforms and additional broadband infrastructure could both help with this supply chain disruption but also buoy future food farm sales.

2) Farm to School

- Based on discussions with people involved in farm to school in Colorado, we estimate a 10% loss in farm to school sales resulting from closures related to COVID-19. Total farm to school purchases were estimated as $7.94 million during the 2013-2014 school year. We assume that 1/3 of these sales were direct from farms ($2.6 million), whereas the remainder moved through an intermediary (e.g., food hub, DOD Fresh, $5.34M). For the intermediated sales, we assume that the farm received 70% of the price the school paid ($3.73M) after subtracting the distributors' mark up. ***10% loss of $2.6 million + $3.73 million = $630,000.***
- Given estimates of labor share of local farm market revenues, this would equate to ***$94,500 in lost payroll.***
- The multiplier effect of a loss of $630,000 in farm to school sales would lead to an ***estimated loss to the community economy of: $1.075 million*** based on the USDA AMS Local Food Impact calculator: https://calculator.localfoodeconomics.com/

  Other important issues to note regarding farm to school:
  - The March-May period of the school year represents the smallest overall portion of farm to school purchases during the school year (not the calendar year), thus lost sales for farms would have been worse if the outbreak had occurred during the fall. Still, some farms had invested in season extension and already established contracts with schools for the 2020 school year, and subsequently, were left with perishable product that did not have a buyer.
  - LiveWell Colorado is currently in the process of collecting the relevant data, but it appears that as schools shift to emergency feeding programs, they favor shelf stable (non perishable) items, which farm enterprises are less likely to supply.

3) Universities and Restaurants

- With the closure of Universities (dining halls) and restaurants for at least 6 weeks, we assume significant losses in intermediated sales (20% of annual sales)
- Direct sales by Colorado farms to restaurants and Universities are an estimated at $404,000 (0.4% of intermediated sales).
- We assume most sales moved through a food hub as an intermediary. Extrapolating from numbers reported in Michigan State University's 2017 Food Hub survey, Colorado food hubs would have sold approximately $1.1 million to restaurants and caterers and $303,000 to Universities. Again, for sales through hubs, we assume that the farm received 70% of the price paid ($212,000) after subtracting the distributors' markup.
  - ***20% loss of $404,000 + $1.4 million + $212,000 = $403,000.***
- Given estimates of labor share of local farm market revenues, this would equate to ***$60,000 in lost payroll.***
- The multiplier effect of a loss of $403,000 in restaurant and institutional sales would lead to an ***estimated loss to the community economy of: $686,000*** based on the USDA AMS Local Food Impact calculator: https://calculator.localfoodeconomics.com/

  Other important issues to note regarding sales to universities and restaurants:
  - Although retail sales are stronger in the current period, there is little evidence higher demand and prices are benefitting producers at the shipping point markets. For example, retail potato prices are up 10-20% given strong demand, but shipping point prices are flat.
  - Based on conversations with food hubs in Colorado, we have heard about some marketing innovations that are happening quickly. Thus, despite the loss in sales to important intermediated markets, many of the state's food hubs have been able to pivot to provide food

directly consumer. Though we do not account directly for this growth in sales, based on previous research conducted by the authors we know that a) these direct sales tend to involve higher transaction costs, as each household places smaller (on average) orders and the food hubs must provide customer service, packaging, and delivery per order, and b) assuming food hubs maintain similar pricing structures, these sales tend to be less profitable on a per $1 basis as there are additional variable costs (e.g., labor, transportation).

Data Sources

Given the rapidly evolving nature of the virus, as well as government responses, we utilized the best available information to formulate our scenarios and estimate potential impacts. Where possible, we also consulted with stakeholders.

- U.S. Department of Ag, National Ag Statistics Service, 2017 Census of Agriculture
- U.S. Department of Agriculture, National Agriculture Statistics Service, 2018. Highlights: Beginning Farmers – Characteristics of Farmers by Years on Current Farm https://www.nass.usda.gov/Publications/Highlights/2014/Beginning_Farmers/index.php
- U.S. Department of Ag, National Ag Statistics Service, 2015 Local Food Marketing Survey
- U.S. Department of Agriculture, National Agriculture Statistics Service/Economic Research Service, Agricultural Resource Management Survey
- Bauman, A. G., D. Thilmany McFadden, and B.B.R. Jablonski. 2018. The financial performance implications of differential marketing strategies: Exploring farms that pursue local markets as a core competitive advantage. Agricultural and Resource Economics Review. 47(3):477-504.
- Low et al. 2015. Trends in local and Regional Food Systems. Report to Congress. U.S. Department of Ag, Economic Research Service, Administrative Publication Number 068.
- Low, S. and K. Thompson. 2020. Could Online Sales Be a Direct Marketing Opportunity for Rural Farms? University of Missouri Extension Guide G6224. https://extension2.missouri.edu/g6224
- Johnson, R. 2019. 2018 Farm Bill Primer: Support for Local Food Systems. Congressional Research Service IF11252 https://fas.org/sgp/crs/misc/IF11252.pdf
- Primary data collected from member states of the National Farm to School Network, 3/17/2020-3/18/2020
- MSU and Wallace Center's 2017 National Food Hub Survey, https://www.canr.msu.edu/foodsystems/uploads/resources/2017%20national%20food%20hub%20survey%20findings.pdf)

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