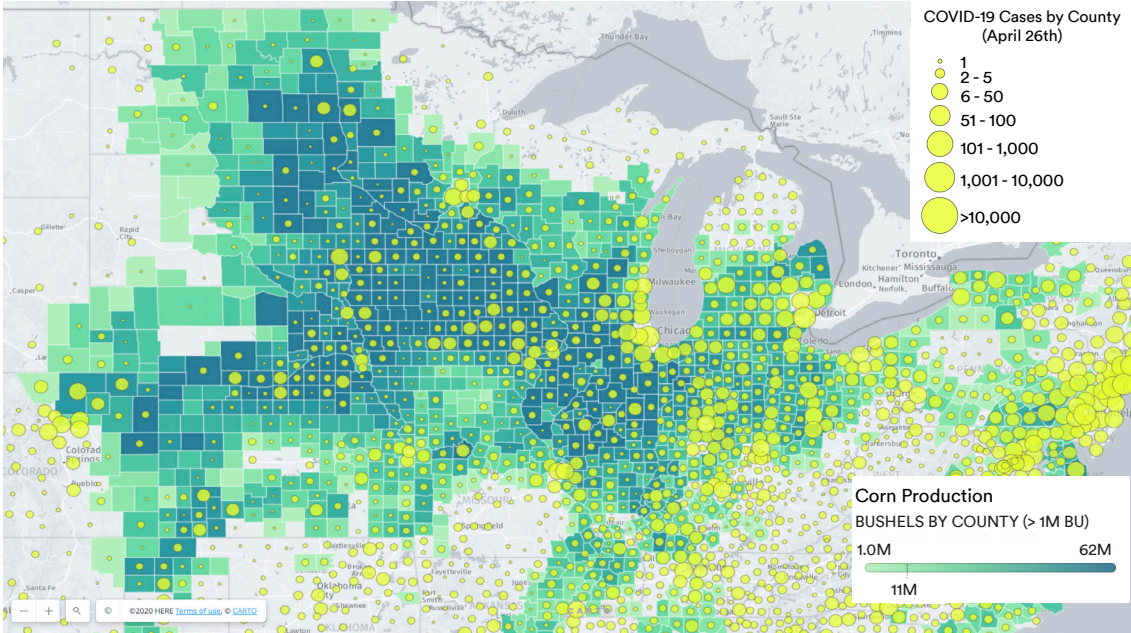


As of April 26th, the 1,300 US corn-producing counties¹ have a combined COVID-19 incidence of 155.2 cases and 6.9 deaths per 100,000²; since last week these rates have increased 41% and 48%, respectively. In comparison to US States, the Corn Belt region's ranking has stabilized, with 22 States at higher case rates. The share of producers in these COVID-19 affected counties has remained stable at 94%. Despite these COVID-19 statistics, today's Planting progress report puts both corn and soy ahead of 5-year means at 27% and 8% planted, respectively.

COVID-19 Cases in Corn-producing Counties



Farming in COVID-19 affected counties

3.2 million producers (94%)

17.5 billion bushels corn and soy (92%)

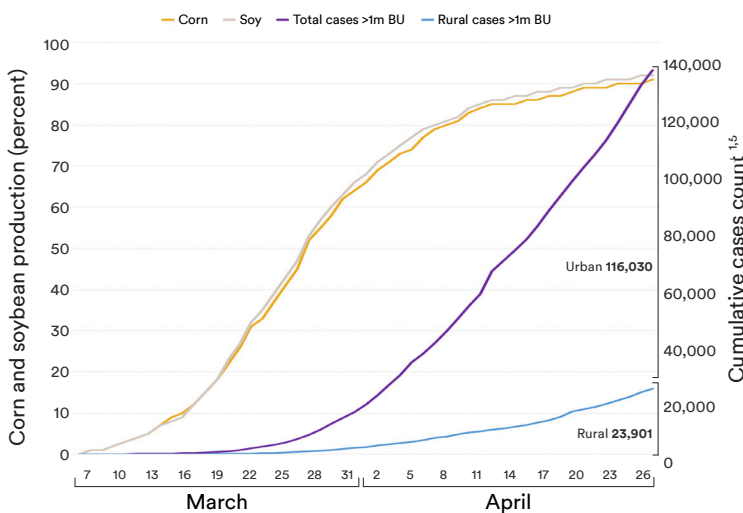
2020 planting progress⁷ Ahead as of April 27th

	2020	5 yr avg
Corn	27%	20%
Soybean	8%	4%

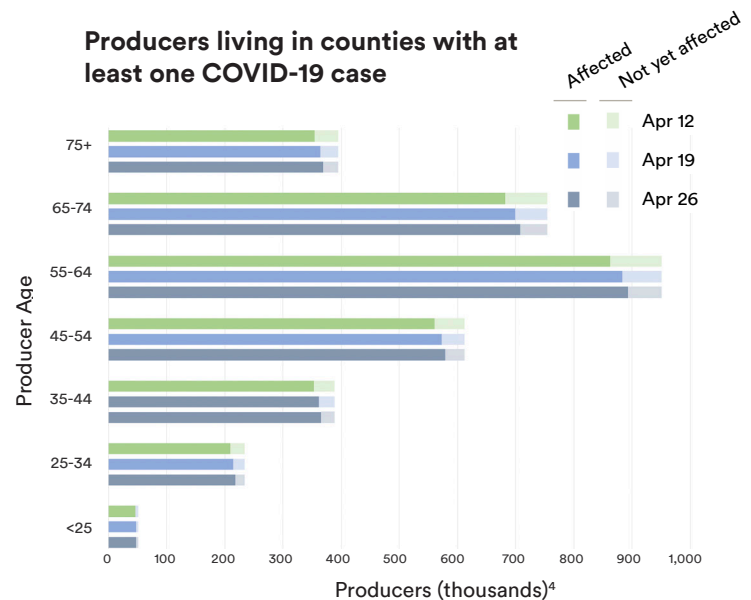
Tracking changes in COVID-19 in the Corn Belt

The presence of COVID-19 cases in corn and soy producing counties is nearing saturation levels – 91% of corn counties have a case and 92% of soybeans. There are now 139.9k cases in counties with 1 million or more bushels of corn production, and of those, 16.8% are in rural places and 83.2% are in counties considered urban, a slight increase in the rural share vs. last week.

COVID-19 and the US food system, daily progression

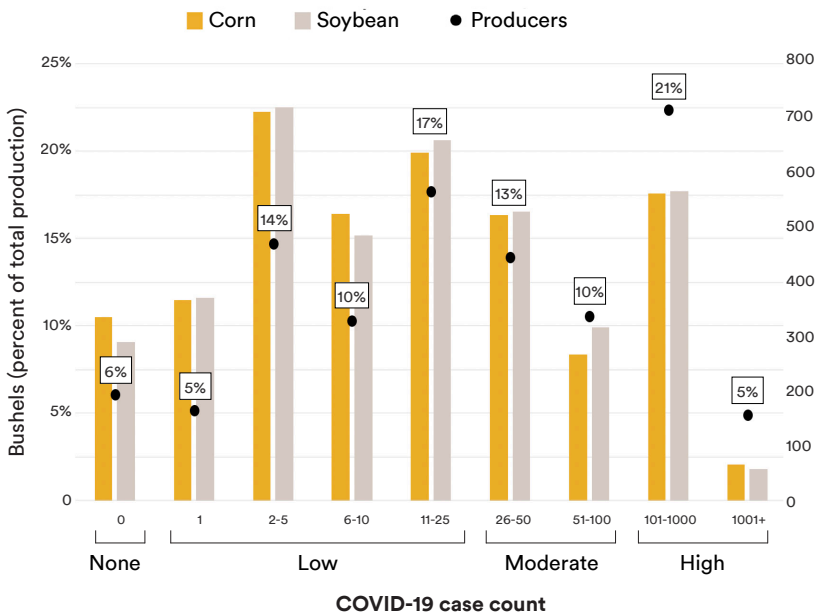


Producers living in counties with at least one COVID-19 case

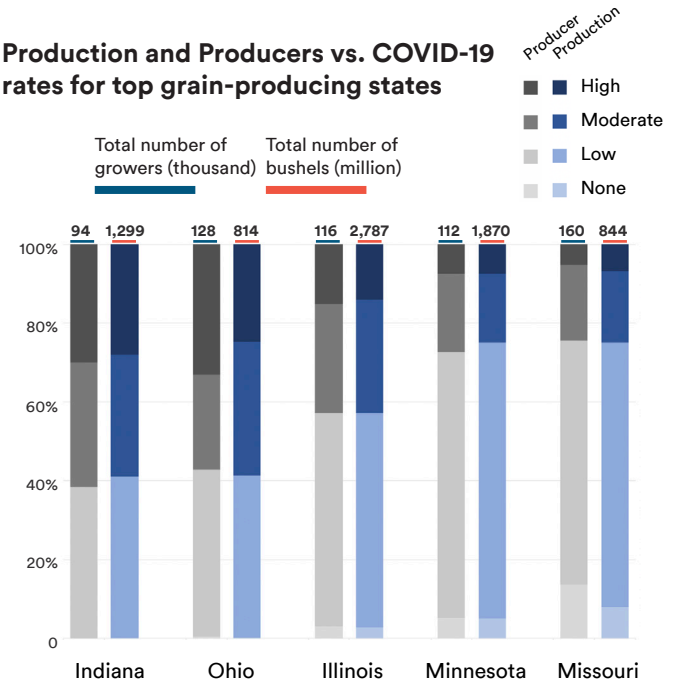


Since last week's report, the fraction of US corn and soy production in places with high to moderate case rates has continued to increase. Today, an average of 36% of production (bushels) and 49% of producers are in moderate to high case-rate counties.¹ Indiana continues to have the highest proportion of production and producers in moderate to high case-load counties; Ohio now has similar levels.

Grain production producers affected



Production and Producers vs. COVID-19 rates for top grain-producing states



Methodology

This is the fourth in a new series of special coverage on the impact of coronavirus in farming communities. For more information or to share ideas for future topics please contact Indigo at covidmap@indigoag.com. This geospatial analysis was conducted at the scale of US counties, with all of the US production system in view. There is a two day lag in the COVID-19 case record used in this analysis due to lags in the most reliable available source data. Tracking presence or absence of COVID-19 at a county scale matters: recent research shows that even 1 reported case boosts the likelihood of an undetected outbreak to 51% from a background risk of 9% for counties with no cases.⁵

Sources:

¹ "High-intensity corn-producing counties are defined as places with 1m bushels or more corn produced according to the 2017 Census of Agriculture (USDA NASS; www.nass.usda.gov/AgCensus)

² For COVID-19 prevalence, the team relied on the NYT COVID-19 dataset which is updated daily and based on "state and local health agencies, hospitals, and the CDC." NYT cautions that data represents "number of people there who have tested positive, which may differ from where they contracted the illness. (<https://www.nytimes.com/article/coronavirus-county-data-us.html>)

³ Data on producers comes from the 2017 Census of Agriculture (USDA NASS), which defines a producer as "all persons involved in farm operations and agricultural production" and people who identify as "someone involved in making decisions for the farm."

⁴ We define moderate case counts as 26-100 cases and high as 100 or more cases per county

⁵ Urban and rural distinctions made via the 2013 USDA ERS Rural-Urban Continuum Codes (<https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx>)

⁶ "Probability of current COVID-19 outbreaks in all US counties", Emily Javan, Dr. Spencer J. Fox, Dr. Lauren Ancel Meyers. Available at: (https://cid.utexas.edu/sites/default/files/cid/files/covid-risk-maps_counties_4.3.2020.pdf)

⁷ USDA Crop Progress Report, National Agricultural Statistics Service (NASS). Released April 28th. Available at: (<https://downloads.usda.library.cornell.edu/usda-esmis/files/8336h188j/vd66wk03z/9z903k54h/prog1820.pdf>)

These materials have been prepared by Indigo Ag, Inc. (“Indigo” or the “Firm”) personnel based on publicly available sources. These materials are not research reports and are not intended as such. These materials are provided for informational purposes only and are not otherwise intended as an offer to sell, or the solicitation of an offer to purchase, any commodity future, swap, security or other financial instrument. These materials contain preliminary information that is subject to change and that is not intended to be complete or to constitute all of the information necessary to evaluate the consequences of entering into a transaction and/ or investing in any financial instruments. These materials also include information obtained from sources believed to be reliable, but Indigo does not warrant their completeness or accuracy. In no event shall Indigo be liable for any use by any party of, for any decision made or action taken by any party in reliance upon, or for any inaccuracies or errors in, or omissions from, the information contained in these materials and such information may not be relied upon by you in evaluating the merits of participating in any transaction. All displayed quotes and rates are meant for informational purposes only. They are not to be relied upon to make any trades nor are they meant as a recommendation to participate in a particular trade. There is risk in trading and due diligence should be performed before executing any trades. Indigo makes no representation as to the accuracy of the data. Trades can only be made through an account at a registered broker/dealer or futures commission merchant. Indigo is neither a futures commission merchant nor a registered broker / dealer. Indigo is not a SEF. All projections, forecasts and estimates of returns and other “forward-looking” statements are based on assumptions, which are unlikely to be consistent with, and may differ materially from, actual events or conditions. Such forward-looking information only illustrates hypothetical results under certain assumptions. Actual results will vary, and the variations may be material. Nothing herein should be construed as an investment recommendation or as legal, tax, investment or accounting advice.