

Texas Dairy Matters

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COVID-19: How to protect your dairy farm and community

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The current outbreak of the new Coronavirus Disease that started in December 2019, known for its acronym as COVID-19, has become a pandemic and is a worldwide concern as cases continue to rise daily (Figure 1; WHO, 2020). The disease affects mostly the respiratory tract and is generally mild, especially in healthy children and young adults. However, it can be severe, especially in people over 65 years old or with cancer, diabetes, or cardiovascular/respiratory diseases. The disease requires hospitalization in 1 out of every 6 cases. Symptoms develop between 2-14 days after being infected and the main ones are fever, cough, and breathing difficulties. It is transmitted between people mainly through respiratory droplets or when touching surfaces contaminated with the virus and then touching eyes, nose or mouth (WHO, 2020).

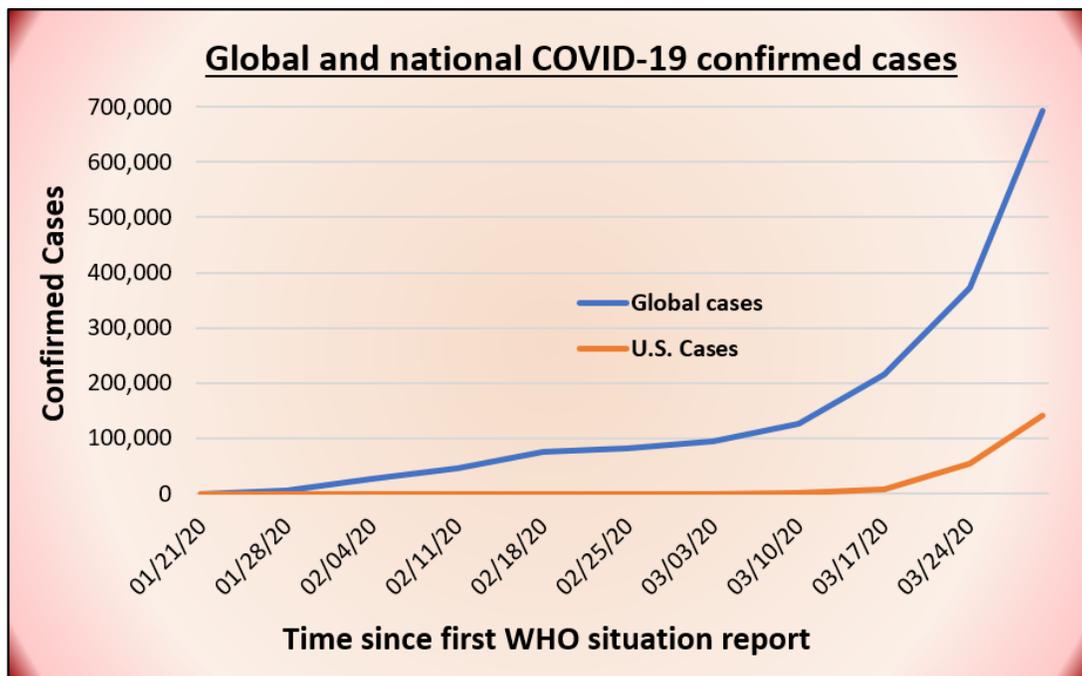


Figure 1. Confirmed COVID-19 cases globally and in the U.S. Source: WHO and CDC.

The first case in the U.S. was confirmed on Jan. 21 and it is now present in all 50 states and territories with over 140,000 cases by March 30 (Figures 1 and 2B, CDC, 2020). The first case in Texas was confirmed on March 4 and by March 30, over 2,800 cases have been confirmed in 124 counties (Figure 2A, Texas Department of State Health Services, 2020).

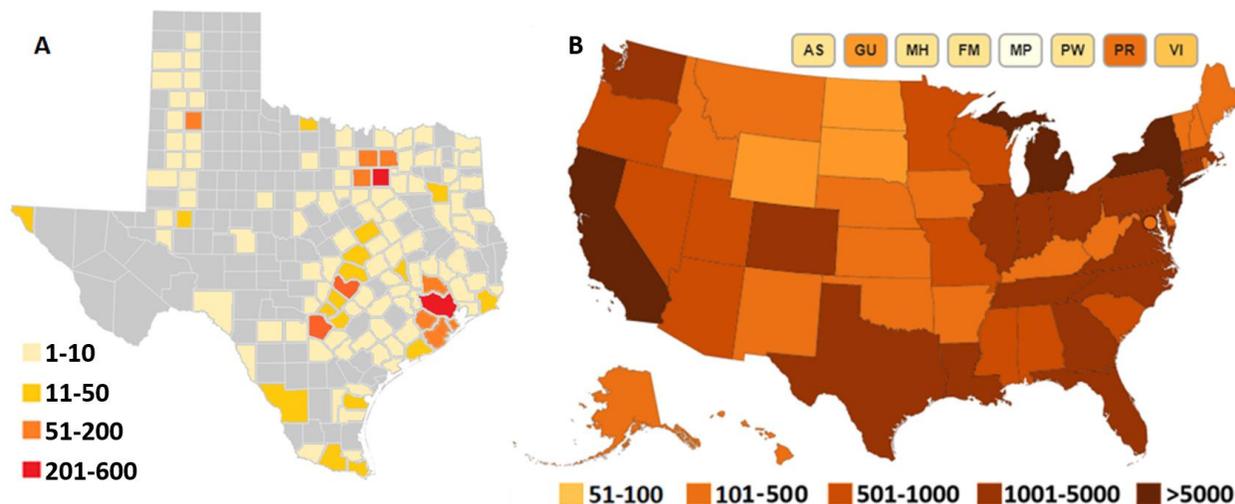


Figure 2. A. Confirmed COVID-19 cases in Texas. Source: Texas Department of State Health Services (March 30). B. Confirmed COVID-19 cases in the U.S. Adapted from the CDC, (last update March 30).

At least 60 counties in Texas have instituted “shelter-in-place” measures. This means that people should stay at home as much as possible (with exceptions for essential activities), avoid gatherings and maintain reasonable distance to reduce the risk of contact with infected people. The vital importance of this measure is to reduce the spread of the disease, **flatten the infection curve** and help to not saturate the health system capacity. However, some essential businesses, such as dairy operations, cannot shut down. Dairies operate 365 days a year regardless of the weather or other conditions in order to provide consumers with nutritious products.

Dairy products continue to be safe and wholesome

The U.S. Food and Drug Administration (FDA) confirmed that heat treatment, such as pasteurization, kills other coronaviruses and likely kills COVID-19. Pasteurization kills coronaviruses because the surface of COVID-19 is comprised of glycoproteins, which can be broken down by heat thus rendering the virus inactive (Cascella et al., 2020). In addition, there has been no evidence that cows can get COVID-19 (AVMA, 2020). Although there is bovine coronavirus for which vaccinations are given to prevent in cattle, this coronavirus is species specific and different from COVID-19. Furthermore, the vaccine for bovine coronavirus cannot be used to prevent COVID-19 and should not be given to humans (AVMA, 2020).

How to protect your community and dairy farm?

Take this outbreak seriously but remain calm. Follow the guidelines from the CDC and the Texas Department of Health State Service (<https://www.dshs.state.tx.us/coronavirus/>). Dairy farmers and employees need to understand how to remain safe and minimize the risk of contracting COVID-19 by maximizing biosecurity practices, education and training programs:

1. Whenever possible, employees should maintain 6 feet of distance between themselves. **Why?** The virus is transmitted through respiratory droplets that travel 6 feet when people cough, talk or sneeze. Although airborne transmission is possible and the virus could remain in the air for three hours (van Doremalen et al., 2020), large respiratory droplets are still the most likely cause of infection.
2. Encourage your personnel to have good hygiene practices:
 - a. Cough/sneeze in the inner part of their elbow or tissue paper and discard it.
 - b. Avoid shaking hands. **Why?** The virus can remain viable on surfaces from several hours to a few days.
 - c. Avoid touching your eyes, nose and mouth (the “T” area in your face, Figure 3). **Why?** When we touch contaminated areas and then our mucous membranes, we could become infected.
3. Farm personnel should wash their hands regularly using soap for 20 seconds or use hand sanitizer. **Why?** Lipid solvents, such as soap, also inactivate the virus (Cascella et al., 2020). Provide soap and hand sanitizer in all areas at the dairy.
4. Wash clothing and PPE daily and clean routinely touched surfaces (doorknobs, radios, panel, keyboards, etc.)
5. Avoid exposure to people who are sick outside of the dairy.
6. If someone is showing signs of COVID-19 [fever (temperature >100 F), dry cough and shortness of breath] send him/her home **immediately**. They can call 211 or 877-541-7905 (more information at <https://www.211texas.org/search/> and <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/index.html>)
7. Encourage social distancing and discourage travelling among all personnel in your dairy.
8. If you need information or help educating your employees, please reach out to Drs. Juan Piñeiro (806-679-0440) or Jennifer Spencer (208-440-9037) and we can help remotely.



Fig. 3. Avoid touching your face.



Fig. 4. Wash your hands regularly.

References

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<http://texasdairymatters.org>

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