

To be prepared for future pandemics and devastating livestock diseases requires highly-funded, long-term research

The approval of an Emergency Use Authorization of a vaccine for SARS-CoV-2, the virus that causes the disease called COVID-19, is an important step in bringing the pandemic under control.

Because of supply limitations of the current vaccine and the speed of the development of multiple vaccines for this disease, it is likely that in the coming months we will see Emergency Use Authorizations issues for a number of these vaccines. With the production of more vaccines we eventually will get to the point that the pandemic will begin to fade.

Until then our collective best defense against the disease is wearing facemasks, limiting our social interaction to a small number of people, and social distancing when we need to interact with anyone outside our small group.

Though we have a glimmer hope for a quick end to the pandemic as the result of the successful of a number of potential vaccines for COVID-19, it could be a year or more before life gets back to a transformed normal—many things will never be the same.

For us the SARS-CoV-2 virus provides a cautionary tale about the nature of and dangers of zoonotic diseases. Zoonotic diseases are diseases that have developed in non-human animals and are at some point transmitted to humans.

These zoonotic diseases have been with us for a long time and include cat scratch fever, Lyme disease, hepatitis E, malaria, Rocky Mountain spotted fever, HIV, E. Coli O157:H7, and the list go on. Some have been with us for a long time while others are new (novel) diseases that we have not seen before.

Other animal diseases can cause significant economic harm to producers but do not cause illnesses in humans.

In our minds, this brings us back to the issue of agricultural policy and the need for long-term support for research into and monitoring of both animal diseases that affect animals and those that make the jump to humans causing significant harm to the human population.

We're not too worried about the near-term provision of adequate funding for both classes of animal diseases. The memory of COVID-19 will keep us on our toes for a while.

Our worry instead is for the continuation of significant funding when we have a half-decade or more without a significant disease outbreak within our animal herd/flock or the transfer of a zoonotic disease to humans.

Under those circumstances, it will be all too tempting to take money away from research into animal diseases and shift it to what is perceived to be of greater immediate importance. The risk is that while our attention is diverted, we will be caught unprepared for the next animal disease that has the potential to morph into a pandemic that will result in a large number of human deaths or wipe out a significant portion of our animal herd.

If we are not to be caught unprepared, like we were with COVID-19, we need to maintain significant funding within the USDA and health research budgets to maintain our readiness for the next disease to come down the pike whether it effects only animals or makes the fatal jump to humans and triggers the next pandemic.

The period from late 2018 through today provides us with a cautionary tale. In late 2018, African swine fever began to appear in China. The initial tendency of local officials was to treat the outbreak like a limited disease and hope that it went away. It did not and during the first half or 2019, China had to reduce its hog herd by half in order to get the disease under control.

In late 2019 a novel coronavirus made the jump from the animal population in Wuhan China to the human population. As we write this column the US death toll from this novel coronavirus (SARS-CoV-2) is approaching 300,000 and will certainly exceed that level by the time you read this column.

Diseases in animals and zoonotic diseases that are transferred humans can catch us unaware and unprepared and when that happens the result is devastating.

As we think about budgeting for research into these diseases, we need to heed the Scout Motto: Be Prepared!

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