Russia banned GMOs years ago to distinguish itself from the United States. What’s its current stance toward genetic engineering, CRISPR and other New Breeding Techniques?

When Russian Federation President Vladimir Putin signed a law (passed by the country’s legislature) in 2016 banning the importation and cultivation of genetically modified plants, seeds and livestock, he made an easy decision, politically. But in the long run, it has proved risky.

Agriculture is a pillar of the Russian economy. It is now its second-largest industry after oil and gas. The Ukrainian War aside, how is Russia managing its considerable agricultural resources? Very little is actually known, as much of the Russian economy is shrouded in secrecy.

A prominent scientist, Pavel Volchkov, head of the laboratory of genome engineering at the Moscow Institute of Physics and Technology, offered some scientific “insider” perspectives. When it was still the USSR, government officials used a centrally planned economy to boost livestock production, hoping to increase meat and dairy consumption and improve the nation’s standard of living. Using direct subsidies, they succeeded: Meat production jumped by 60 percent between 1970 and 1990. To feed all these animals, they imported huge quantities of grain, soy, and meal, mostly from the United States.

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Since the USSR’s deconstruction, however, these numbers have reversed. Before the current war, Russia had become a meat importer (it was a lot cheaper than domestic production) and an exporter of grains. These exports have rapidly increased since 2002. Since 2014, Russian military and political forays into Ukraine resulted in economic sanctions against the country from the US, European Union and other countries. Russia retaliated by banning agricultural and food imports from many of those countries. While the ban hurt Russian consumers in their wallets and pocketbooks, it has not been politically harmful. After the 2022 Ukrainian invasion, Russia switched exports to many Western countries to other other neutral countries, including India and in Africa.

Along with natural resources, food experts are key to the economy and woven into the fabric of society. “Agriculture is a fundamental part of our life,” Volchkov said. “Russia owns one sixth of the Earth. But we have more land that isn’t suitable for agriculture.”

This, to Volchkov, is where the risk from banning GMOs comes in. Genetic modification can create plants that are resistant to higher temperatures, droughts, and other issues problematic to growing and raising plants and animals. For Volchkov, CRISPR and other modern breeding tools could pave the way for Russia, and the rest of the planet, to reach higher production rates:

Most scientists think CRISPR is a really magic tool, because with precise genome editing, you can do so many different things. You don’t have to breed animals or plants, and you can try to
combine polymorphisms and alleles of interest and combine in one organism.

However, Putin and Russian regulators and politicians (and to a large degree the Russian people) remain – to put it mildly – skeptical of GMOs. When Putin signed Federal Law 358-Z, prohibiting “cultivation of genetically engineered plants and breeding of genetically engineered animals on the territory of the Russian Federation,” he put restrictions on a technology that polls show is feared by about 80 percent of Russians. On the surface, it also was an economically easy decision, as the proportion of GMO-containing food declined from 12 percent to just 0.01 percent since 2007, according to Russia Today.

Anti-GMO groups and anti-biotech websites like Natural News and Sustainable Pulse also celebrated the decision, making a logical leap that this decision could curb any GMO development. According to Sustainable Pulse, “this law makes Russia the world’s largest GMO-free territory and offers a great platform for the development of organic agriculture.”

Natural News went a step further, posting an alleged quote by Putin critical of GMOs, vaccines, and fast food:

_We as a species have the choice to continue to develop our bodies and brains in a healthy upward trajectory, or we can follow the Western example of recent decades and intentionally poison our population with genetically altered food, pharmaceuticals, vaccinations, and fast food that should be classified as a dangerous, addictive drug._

There’s no evidence, however, that Putin actually ever said this.

In 2016 and again in 2018, Russia injected its anti-GMO fervor/anti-American into US politics.

A 2018 Iowa State University study found that the two most popular English language Russian sites, RT and Sputnik, produced more articles containing the word “GMO” than five other news organizations combined: Huffington Post, Fox News, CNN, Breitbart News and MSNBC. Almost all of it was sharply critical, highlighting the alleged health dangers from GMOs. The researchers also found RT and Sputnik used “GMO click bait” embedded in articles that most people would consider “negative or distasteful” to create an intentional negative reaction. Some of Russia’s propaganda was disseminated by liberal media, including Dr. Oz and Huffington Post.

In 2020, Putin signed into law the Food Security Doctrine, which banned import and distribution of GMOs for planting, and prohibited raising and breeding animals whose genetic code has been engineered. The only exception to the ban is the import and planting/breeding of GM crops for research purposes. It also allows for import of GMO foods (like soybeans) for consumption.

Other provision in that legislation allowing research may yet lead to gene edited crops. According to a federal program announced in 2019, some CRISPR crops are exempt from a 2016 law that banned the cultivation of GMOs except for research purposes. The decree establishing the program described gene editing as equivalent to conventional breeding methods, the view adopted by most of the world except for the European Union. The decree listed four crops — barley, sugar beet, wheat and potatoes — as
priorities for development. Russia said wanted to create almost 40 new varieties of gene-edited crops and animals by 2027, but there is no indication they’ve yet developed any.

“It’s important to do research and development in Russia,” Volchkov said. “Government supports this work with funds, grants, and a little bit with venture companies.” He has worked with US, Canadian and other non-Russian companies to develop genetically modified plants, which is allowed. “But it doesn’t make sense.”

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