

# Fertilizer prices put squeeze on farmers

By **DIANA MCFARLAND**  
*Star-Tribune Editor*

For most farmers, unpredictable weather typically causes the most concern.

Not this spring. Instead of too much, or too little, rain, farmers are now facing a wildly unpredictable — and expensive — fertilizer market.

The price of fertilizer has skyrocketed, with the cost of liquid nitrogen having nearly doubled since last spring's planting season, said Java farmer Brad Ragsdale.

Ragsdale started to notice fertilizer prices creeping up last fall and now he's wondering how he can fit the increased cost into his budget.

The profit margin as a farmer is always thin, and this causes even more uncertainty, said Ragsdale.

It would be great year to sit it out and not grow tobacco, but the contracts are set and if they did, they would lose those, and their workers would go elsewhere, he said.

Fertilizer is a necessity for farmers, allowing them to achieve the high yields needed to meet demand and keep their operations afloat. According to the American Farm Bureau Federation, fertilizer costs have risen as much as 300% in some areas — adding significant pressure

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Diana McFarland/Star-Tribune  
**Bill Nuckols with Southern States in Chatham shows where farmers can order custom fertilizer mixes.**

# Prices

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to farmers' pocketbooks.

Meanwhile, Russian exports of six of seven fertilizer components ranks in the top three worldwide, and with its recent invasion of Ukraine several weeks ago, the U.S. has suspended normal trade relations, further complicating the mix.

Clark Gregory of Java grows hay for his livestock operation. He can't afford to grow less hay than he has in the past because his herd needs the same amount of feed. And he also can't use less fertilizer because it is designed to be used for one season and doesn't persist in the soil over time.

Gregory said the ratio of commodity prices versus inputs, such as fertilizer was already tough, and this year it's worse.

"There's no way the math can hold on this," he said, adding that he hopes the weather and commodity prices remain steady, but "I can't imagine it's enough."

Some local farmers have indicated that it might be time to get out of the farming business and this doesn't surprise Gregory, as it's not just commodity and fertilizer prices, but other input price increases, such as diesel fuel.

"I think there will be a lot of people pulling out, a lot of bankruptcies and foreclosures," he said.

Bill Nuckols with the Southern States cooperative in Chatham, traces the beginning of the price crunch back to the spring of 2020, when fertilizer costs were the lowest in 20 years.

Later that year, the price of grain shot up and by spring of 2021, with pandemic supply logjams and government tariffs on phosphorous, fertilizer prices began to increase, he said.

Typically, as the crops go in the ground in the spring, prices begin to ease and the market experiences a "reset," said Nuckols.

That didn't happen, and by the fall of 2021, prices were climbing, he said.

As spring rolls around this year, there is still no "reset," supply chains remain dicey, grain prices are high and there's a tariff on liquid nitrogen, said Nuckols.

All that was bad enough, but then Russia decided to invade Ukraine, he said.

"That throws a kink in everything," he said.

The U.S. imports around half of its liquid nitrogen from Russia and Trinidad-Tobago, said Nuckols.

Add to that a rail strike in Canada, where the U.S. imports most of its potassium, he said.

Nitrogen, potassium and phosphorus are the three main ingredients in fertilizer.

The result is high prices, said Nuckols.

"There's no relief before the crop goes in the

ground," he said of this spring's planting season.

Nuckols said the U.S. could produce its own nitrogen, but that would take awhile to get started because it requires large quantities of natural gas.

Nuckols took a chance last fall and bought all he needed to serve his customers who grow tobacco. The price then was high, but if he had waited, it would have been worse. He also believes he has enough on hand for corn and soybeans, but the price will be stiff, he said.

Ragsdale said he usually plants about 100 acres of corn, but doesn't think he will do that this year and will switch to soybeans instead.

Another concern is rising gasoline prices, the ongoing supply chain disruptions and a fire at a North Carolina fertilizer plant that has led to shortages— along

with the war in Ukraine, said Ragsdale.

"Right now it's a perfect storm," he said.

Meanwhile, Nuckols is looking for a "real reset."

"That's been my hope all along," he said.



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# Farmers grapple with dry, hot conditions on top of rising costs

By **DIANA  
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Nearly an inch of rain fell Sunday near Keeling, providing much needed moisture to parched grass and other crops in that corner of Pittsylvania County.

Across the county, however, rainfall amounts have been hit and miss this summer and it will still take a "hurricane-esque" event to make up for soil moisture lost during last year's dry summer followed by similar conditions last winter, said Extension Agent Stephen Barts for

Pittsylvania County.

The U.S. Geological Survey's Drought Monitor recently expanded the area considered "abnormally dry" in Pittsylvania County, from the far southeastern corner to covering about half of the county as of July 26.

Hunter Johnson tends cattle near Keeling, and while the inch or so of rain on Sunday brought relief, he's had to resort to feeding his cows hay this summer — a strategy he doesn't typically employ until winter.

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Diana McFarland/Star-Tribune

**Tobacco is considered rather resilient crop when it comes to hot and dry conditions.**

# Dry

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Grasses are easily stressed by lack of rain, and coupled with the heat, has resulted in dried up grass, he said.

Ironically, Johnson's cousin, Robert Mills, said a few recent rains around Callands were enough to turn it around to the point where they couldn't pull tobacco because the fields were too muddy.

For Tim Shelton in Dry Fork, the growing season started out as normal, but when "the rains just shut off."

Shelton grows tobacco and soybeans, as well as hay for about 500 head of cattle. He's seen spurts of less than an inch of rain, but he hasn't seen inches of the wet stuff in quite awhile.

His hay crop came in at 50% this year, and Shelton has been irrigating his tobacco crop to supplement anything Mother Nature sends his way.

Because tobacco is resilient, Shelton believes it can adapt if there is enough rain in August.

Barts said the pattern this year has been for storms generated to the west to dissipate as they move further east. That has left the areas east of US Highway 29 and both sides of US 57 with lesser rainfall amounts, he said.

With Sunday's rainfall, areas west and close to 29 missed out — continuing the hit and miss pattern this summer, said Barts.

"That's the trouble with the thunderstorm pattern. They pop up and dissipate really quickly," he said, adding that what is needed is a nice rainy day.

Different crops respond to the lack of rain and heat differently.

Corn has a narrow window when drought stress is critical, and the corn that

was planted earlier in the season should result in an average or above average yield, said Barts, adding that the jury is still out on corn planted in June.

Mills said the heat has done more damage than anything else, but as long as the soil stays moist, then it's okay.

If the temperatures get too hot, tobacco undergoes a process called "sun baking," which cooks the oils out the leaf and it doesn't cure as well.

It was getting close to that point, but the rains have helped, said Mills.

Most soybeans in this area are of an indeterminate variety and continue to flower until pollinated and set pods, giving the plant a longer window of opportunity than corn, said Barts.

Shelton said that if the

soybeans set fruit with pods and then a hot spell hits, it could cause the blooms to drop off.

"It can definitely diminish yield on soybeans," he said.

To battle the vagaries of weather, many farmers have started using a staggered planting model to spread out the risk, said Barts.

And with warming temperatures, the date of a typical first frost has now been pushed from Oct. 15-20 to Oct. 31 and into the first week of November, said Barts.

The hot, dry conditions have added another layer of stress on Johnson — and other farmers grappling with dry soil and high temperatures — after the growing season already got off to an expensive start with

fertilizer doubling in cost, not to mention the cost of fuel and inflated prices on other materials.

In addition to farming, Johnson is also a crop insurance agent, so he has an up close look at the various stressors his fellow growers are under this year.

Caswell and Rockingham counties have been even drier than Pittsylvania County, he said

The dry conditions, along with the increase in input costs, such as fertilizer, has "alot of folks pretty worried how this year will shake out," said Johnson.

Johnson said with the conditions this year, some farmers may have to find outside work to keep afloat and it's hard for many of them to do that.

"There's a lot left to be determined for this year,

but I don't think this is going to be a year where everyone says they had a successful year. Most farmers are in survival mode due to weather conditions and input costs," he said.

Shelton said his professors in college would have told him he's insane to go into agriculture — as fluctuations in commodities prices being another unknown.

"We're the biggest gamblers in the world," he said.

"We're gambling it's going to rain and make enough yield that will turn a profit," he said.

Highs are expected to be in the 90s through Friday with just a slight chance of thunderstorms, according to the National Weather Service.

# Tick borne disease killing cattle

By DIANA  
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Local veterinarian Paul Erwin said the phones "started blowing up in August," with calls about an emerging cattle disease, theileria.

Erwin said the Chatham Veterinary Clinic treated three cows and they still died, and he estimates there have been 20-30 confirmed cases of the protozoan disease in the county.

One farmer near Chatham lost 14 cows and had 23 stillborn calves likely due to thei-



Submitted photo  
The Asian Longhorned tick is known for swarming its host, such as this cow's ear.

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# Tick

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leria. Theileria is transmitted by the Asian Longhorned tick, or ALT, which arrived in the United States in 2013 and was first found in Virginia in 2017 in Albemarle County.

The disease can cause late term abortions, still born calves and cow deaths and has been diagnosed in nine states — Virginia, West Virginia, North Carolina, Tennessee, Kentucky, Pennsylvania, Maryland, New York and Kansas.

"It's spreading fairly rapidly," said Dr. John Currin, DVM with the Virginia Maryland College of Veterinary Medicine, who met with cattle producers Sept. 15 at the Olde Dominion Agricultural Complex.

There are no known risks to human health from theileria, according to the USDA. It also does not affect the meat, as this disease has existed in Pacific Rim countries for years, said Currin.

Currin said the ALT is a small tick and becomes noticeable when it swarms. Currin described how one can walk through a field and come out with a pants leg covered with hundreds of ALT.

So far, it doesn't appear that the ticks are able to suck enough blood to cause clinical disease, but that issue continues to be studied. Instead, the tick spreads theileria, which has led to a \$20 million annual loss in the beef and dairy industry in Australia, where the disease has existed for years, he said.

Symptoms of an acute theileria infection begin after one to eight weeks and it can reoccur. The parasite infects the red and white blood cells, and eventually the red blood cells are destroyed. When the animal loses enough blood, it starts to

show signs of illness, such as depression, weakness, staying separate from the herd, weight loss, high fever, pale or jaundiced appearance, labored breathing and possibly death.

There is an increased risk during periods of stress, and there is a higher risk of sickness for cows in late pregnancy, said Currin. The reason for that is currently unknown, but the immune system is stressed at that time and nutritional demands also increase, he said.

Theileria is also suspected to be transmitted via needles, biting flies and possibly through the placenta, he said, adding that is the reason Virginia Tech is interested in studying stillborn and aborted calves.

"We really need to know that," he said. However, most animals infected with theileria do not show any clinical signs of the disease, and once infected, they remain so for the remainder of their life.

One problem is that the symptoms are similar to a long-standing cattle disease — anaplasmosis. Both cause anemia, but one key difference is that a cow infected with theileria does not exhibit the aggressiveness that comes with anaplasmosis, said Erwin.

But unlike anaplasmosis, there is no treatment right now for theileria, he said.

Currin said a livestock market survey was done in southwest Virginia in 2019 and 2% of the animals tested positive. By 2020, 20% were positive.

"That part should scare you a little bit," he said, adding that once a herd gets infected, it's a short time before 80-100% become infected.

At the same time, "This is not going to run the state of Virginia out of the beef

cattle business," said Currin, as there have, so far, been no problems with calves sent to feed lots.

"As it spreads (across the country), there is less a target on our backs in Virginia," he said.

Currently, some producers may have the disease in their herds and not know it, plus it is not known why some herds become infected and others do not, said Currin.

Currin said Virginia Tech is relying on local producers to further study the reproductive aspect of the disease, as it doesn't appear to affect the libido in bulls after the acute phase has passed.

Eventually this disease will spread through the commonwealth and most cattle will be positive, said Currin.

Erwin advised producers not to change their current management practices to avoid developing resistance to treatments. He also told producers that if they see specific symptoms — such as a cow by itself and staggering, lethargic and with its neck outstretched as if it is having trouble breathing, it could be theileria. However, he doesn't advise testing for the disease until, perhaps, a third cow has died. As for stillborn or aborted calves, those can be tested, but the cow also needs to be tested for a definitive diagnosis, he said.

Currin said a positive test can mean one of three things — a cow is infected with theileria and has died from it; a cow is infected with theileria but died of another cause; or a cow is infected with theileria and showing no clinical signs of the disease.

Investigating stillbirths and abortions are frustrating, and half the time that is not possible, said Currin.

Currin said the Asian Longhorned tick typically swarms in June, July and August, and some producers stop using a pasture that is infested during that time. The ticks like swampy areas and have definitively been found along the spine of Virginia's Appalachian range. It is found on all mammals and birds. Theileria has not yet been detected in sheep or goats, however.

Currin said research is still ongoing. "We know more today than six months ago and less than six months from now," he said.

According to a 2020 study led by Rutgers University, the Asian Longhorned tick most likely arrived in the U.S. in 2013 in New Jersey on livestock or other animals.

Some Asian Longhorned ticks are self-cloning. With parthenogenesis, the tick can reproduce without needing to mate with a male tick.

One of the study's authors cited the U.S.'s relaxed animal import policies as a possible reason the insect was able to spread to the Americas.

"One thing we uncovered is the ease with which pets, especially dogs, can accidentally help ticks cross international borders and state lines," said Dina Fonseca, a senior author of the study and Director of the Center for Vector Biology at Rutgers. "Many countries require dogs to be treated for ticks and other parasites before entering the country, but the United States does not. We urge greater awareness of this issue to prevent future exotic tick introductions."

*Star-Tribune News Correspondent Sami Mirza contributed to this report.*