



Case Study

myaniml

Kansas Rancher Installs MyAnIML to Save Labor, Benefits in Unexpected Ways

"I never could have imagined I would get so much value from MyAnIML's technology. It is hard to believe that something so simple, could do so much," - Kansas rancher Nathan Leiker, speaking about MyAnIML's predictive health solution for cattle producers.

Producer: L5 Farm's Inc. - A mixed cropland and cow-calf to finish operation

Location: Hays, Kansas

Owner and Operator: Nathan Leiker and family



JULY 19, 2023





Like most U.S. cattle producers, one of Kansas cattleman Nathan Leiker's biggest challenges is finding enough of himself to go around. Especially when it comes to keeping an eye on his herd's health.

"On our operation, I'm the only person that's had multiple years of working with animals and doctoring sick cows. When I realized MyAnIML could turn anybody on my farm into a health specialist, that I could spread that expertise out, that was a huge possibility," Leiker said.

THE MYANIML PREDICTIVE HEALTH SOLUTION

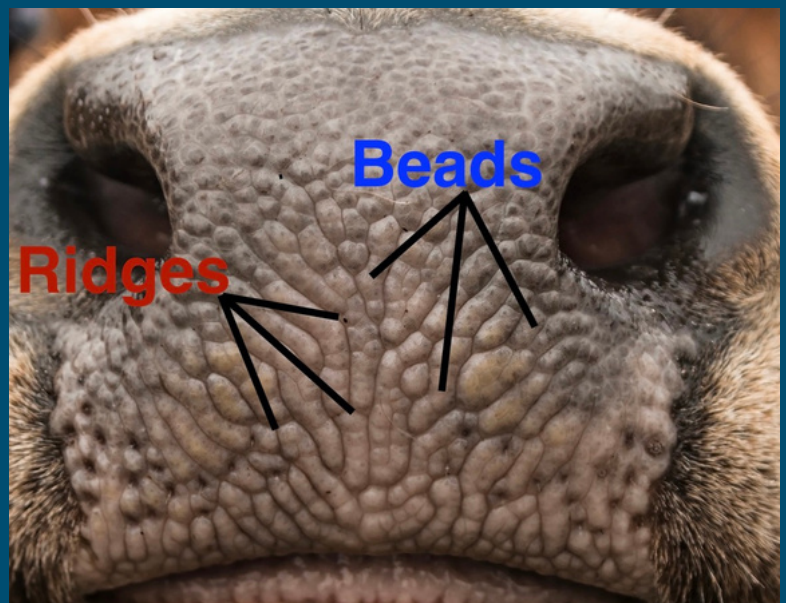
MyAnIML uses AI, machine-learning and facial recognition technology to analyze a cow's muzzle for signs of an impending health event two to three days before visual symptoms occur.

Each cow's muzzle is unique, like a human fingerprint, and can be used to accurately identify individual animals. But it was not until MyAnIML's patented technology platform that subtle changes in the ridges and bumps on a cow's muzzle were recognized as early-onset indicators of a stressful health event.

MyAnIML's data solution is already proven to predict infectious bovine kerato-conjunctivitis, or pinkeye, with an 86% accuracy and Bovine Respiratory Disease (BRD) with 70% accuracy. These rates are expected to improve rapidly as more images are added to the software platform's dataset and learning algorithm.

Images are taken by inexpensive GoPro camera's mounted in places that cattle frequent on a daily basis. Common mounting stations include a water tank, a milking booth (in the case of a dairy herd) or mounted on a feeding truck snapping images as feed is delivered. Photos are rapidly analyzed through MyAnIML's proprietary database and software system and within hours, a health status report on every cow photographed is automatically sent to the producer for review.

In addition, MyAnIML developed a complementary geo-location app which gives producers the ability to easily find and identify a target animal for follow-up inspection. The app works in conjunction with inexpensive Bluetooth-enabled ear tags.





With MyAnIML, herd health management no longer takes years of experience to recognize the subtle signs or sickness, Leiker said, anybody just “doing the job of feeding the cows” is now part of a rapid-response herd health team. By mounting a camera on a feed truck anybody who feeds the cows is also spotting sick animals, whether that is Leiker’s 12-year-old son or a high school-age employee he had hired for extra help.

PREVENTING PINKEYE JUST ONE WAY PRODUCERS SAVE MONEY WITH MYANIML

By using MyAnIML to predict pinkeye, a highly-contagious cattle disease with a typical 90% infection rates, a 500-cattle herd producer can expect to save \$10,000 in treatment costs simply through early detection and isolation of infected animals to prevent the spread of the disease.

“We can run the silage truck at say nine o'clock in the morning, and I'll have a health status report in my inbox before noon,” Leiker said. By expanding the predictive health capabilities, Leiker has been able to more effectively monitor his herd’s health, resulting in earlier detection and less treatment.

“When I'm able to go out there and catch something like a respiratory infection a little earlier it means I can treat with a \$20 antibiotic instead of \$40,” Leiker said. But reducing his veterinary bill wasn't the only advantage to using MyAnIML, Leiker quickly realized.

HARD-TO-BELIEVE RESULTS WITH MYANIML

Leiker and his family have always been willing to try new technology that made sense. They ran an embryo-transfer and surrogate cattle operation for years, producing high-quality Angus beef genetics. Leiker himself has been raising cattle since he was 18-years-old, more than 20 years, and has confidence in his ability to manage cattle health and herd productivity.

Indeed, Leiker was initially dismissive the MyAnIML technology would deliver as promised or at least do better than he could when it came to spotting sick cows.

“When I was first introduced to MyAnIML, I could see the potential, but I thought, there’s no way this is going to work, there’s no way this is going to catch a problem,” Leiker said. “When you see a sick animal, it’s standing off by itself, the ears are laid back. You learn to recognize all the signs to say, that's a sick animal. But this technology will tell me they're sick before you see any of those signs? How was that going to work?”

But after installing a camera and taking images, Leiker became a quick convert to MyAnIML technology. With the very first set of results he got a list of sick animals and within the next few days he ended up needing to treat every one of the animals the MyAnIML report had identified as sick. One even ended up dying.

“I had respiratory and all sorts of different problems from weaning and high stress. When I saw those results I said, okay there’s some meat here, there’s something here,” Leiker said. Since then, Leiker has realized the MyAnIML technology has the potential even more than just spot sick animals, even alerting to heifers coming into heat or cows getting close to delivery.





A LOW STRESS SOLUTION FOR PREDICTIVE CATTLE HEALTH ANALYTICS



A big selling point for Leiker was MyAnIML's low-stress, easy-to-use approach to predictive health management, especially as compared to other health solutions he had looked at.

Technologies that require running his cattle through a chute and capturing health metrics, like listening to a cow's lungs or heart or monitoring temperatures, make more work for him and his cows. Smart collar technology could have captured health parameters remotely, but with a major change and expense to his operations, Leiker said.

MyAnIML's technology, on the other hand, was affordable and as simple as installing the cameras in places his cattle already frequent.

"I have a very low-stress strategy for handling my animals, just for quality of their life and mine. So, I like easy, less invasive management techniques. That's what really drew me to MyAnIML. It's easy to handle, easy to grasp and doesn't require any changes to how I handle my cattle. For my cattle it's just business as usual, they're just getting their photos taken," Leiker said.

COSTS RISE, PROFITS FALL HAS BEEN THE TREND FOR U.S. RANCHERS

Even while beef prices rise and demand remains consistent, U.S. ranchers like Leiker struggle to stay in business.

Industry consolidation, increased input costs and drought have taken their toll on cattle profitability. Since the 1980s, an estimated 40% of U.S. ranchers have gone out of business. Net incomes for the average U.S. cow-calf producer have declined by about 32% between 2014 and 2021. Between 2002 and 2020 the average profit margins for U.S. feedlots remained negative most years.

With an estimated profit margin of just \$100 to \$150 for most U.S. beef cattle operations, keeping a tight rein on expenses is crucial to profitability. Outside of feed, hay and pasture costs, veterinary and health expenses plus labor remain two of the highest operating costs for cattle producers. Plus, poor herd health leads to inefficiencies in weight gains, increasing feed and input costs.





FINE-TURNING HERD PRODUCTIVITY WITH MYANIML

One of Leiker's biggest revelations was realizing MyAnIML was identifying a cluster of nursing mother cows with large, robust calves as sick. After giving the matter some thought and noticing that the cows didn't come down with an obvious illness, Leiker wondered if MyAnIML was alerting him to extra nursing stress on cows with the biggest calves. Operating under that theory, Leiker bumped up the protein and energy in his ration and "the alerts went away."

His hunch was validated when those calves were big enough to be weaned and Leiker noticed they weighed an average of 25 to 30 lbs more than his typical calves, "all because the ration was balanced right and those cows were more productive." When it comes to market day, that extra productivity gained by fine-tuning his herd's health pays off, Leiker said. Profitability can be something as simple as an extra 10 lbs at slaughter.

"It definitely makes you look at your operation a little bit closer, puts it under a microscope and shows where you can improve. The possibilities are endless on what you can find, once you start monitoring with MyAnIML," Leiker said.

FOR MORE INFORMATION ON MYANIML'S PREDICTIVE HEALTH TECHNOLOGIES, GO TO WWW.MYANIML.COM

DOWNLOAD MYANIML'S "ARTIFICIAL INTELLIGENCE FACIAL RECOGNITION FOR EARLY DISEASE PREDICTION IN CATTLE" WHITE PAPER REPORT DETAILING HOW THE TECHNOLOGY WORKS AND ITS BENEFITS FOR CATTLE PRODUCERS.