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FOR IMMEDIATE RELEASE

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Note: This is the sixth of an eight-part series from the National Institute for Animal Agriculture (NIAA), with thought leadership and technical support from Merck Animal Health. The One Health series explores antimicrobial resistance and the collaborative efforts between ranchers, and animal health and human health experts to explore the issue.

Video package available at: <https://vimeo.com/298093226>

Photo available upon request.

One Health Series:

What's Next for Antibiotics in Agriculture?

Longtime beef vet outlines mounting pressures of antibiotics use and what producers can expect.

Antibiotics use in animal agriculture has received increased media attention in recent weeks. Some sources call for less use in livestock, but solving antibiotic resistance problems isn't that simple, says Dr. Bob Smith, longtime beef veterinarian, professor and speaker.

“Throughout the years, I think in both human medicine and veterinary medicine, we’ve assumed that we can continue to use antibiotics as we always have and that they will always be there and always be effective for us,” he says.

Not so. Rather, he says, the future of effective antibiotics isn't certain for humans nor animals. Doctors and veterinarians are seeing resistance issues surface with increasing frequency. He began noticing a concerning trend beginning in the late 2000s.

“We started seeing more and more cases where the bacteria were resistant to the antibiotics that we have available. So that then brings us to where we are today,” Smith notes. “We are now trying to learn more about antibiotic resistance, how it develops and also what we can do to use fewer antibiotics, and to use our antibiotics more wisely so we can sustain the life of the antibiotics we have available.”

Smith's practice oversees health care for feedyards in nine states, with more than one million head of cattle. Antibiotics are an important management tool in fighting infection, he says — and preserving them is everyone's responsibility. It begins with management.

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“What we need to be doing is looking for management systems that will allow us to produce beef, in our case, with less disease and less need for antibiotics,” Smith says. “The responsibility really goes to our producers, our farmers and ranchers, to our veterinarians, to our educators, to our extension people and our researchers, so we can better understand how we can reduce disease and, therefore, reduce the need for antibiotics and have animals that are healthier and happier at the same time.”

For beef cattle, those management systems could include fence-line weaning, which creates less stress for calves and, therefore, less disease in the postweaning period. Smith says proper nutrition and preconditioning are also key steps to disease *prevention*.

Smith: “We can vaccinate those calves while they are still on the cow to reduce the likelihood that they will get sick as they go through that stressful process of weaning and shipping and commingling. Research shows this time and time again, if we go through many of those steps then there is less chance that the calf will get sick once it leaves the farm of origin. If they don’t get sick, we don’t need to use the antibiotics.”

In the future, Smith sees feedyards demanding more preconditioned calves that are less likely to become sick. And, with imminent pressures from consumers and national beef chains, he suggests producers may see more change in how they’re able to administer antibiotics.

“Currently, we have antibiotics that are classified as over-the-counter and those classified as prescription. I would not be surprised to see regulations in the future where if you want to go down and buy a bottle of penicillin or tetracycline that will be a prescription product rather than over the counter,” Smith suggests.

Antibiotic resistance is a real issue that concerns *all* livestock producers, he says.

“We have the responsibility of judicious antibiotic usage but also we have a responsibility to treat animals when they are sick just as physicians have a responsibility to treat children and the adults when they become sick with a bacterial infection,” Smith says. “If resistance continues to develop to these antibiotics then we could have not only costly losses in companion animals, costly losses in livestock but also we could have loss of life on the human side if we have nothing left to treat them with.”

Producers can learn more and join in the One Health conversation during NIAA’s 8th annual Antibiotic Symposium, Nov. 13-15 in Overland Park, Kansas. Register for the conference *today* at animalagriculture.org.

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About the One Health series:

This series of video- and print-ready resources is funded by Merck Animal Health and brought to you by the National Institute for Animal Agriculture (NIAA), which works with industry producers, leaders and others to address issues concerning animal agriculture. This is an eight-part series that explores NIAA’s ongoing One Health initiative to collaboratively address antimicrobial resistance (AMR) in the animal and human health sectors.

About NIAA:

The National Institute for Animal Agriculture (NIAA) was established in 2000 to provide a forum to facilitate and engage industry leaders and organizations to derive solutions on the most current issues in animal agriculture. Its members include producers, veterinarians, scientists, and government and allied industry representatives.

NIAA is dedicated to programs that work toward the eradication of diseases that pose a risk to the health of animals, wildlife and humans. It also promotes a safe and wholesome food supply and best practices for animal health and well-being as well as environmental stewardship. NIAA issue initiatives encompass the entire animal agriculture field including cattle, sheep, swine, avian, equine and aquaculture industries. More information is available at animalagriculture.org.