

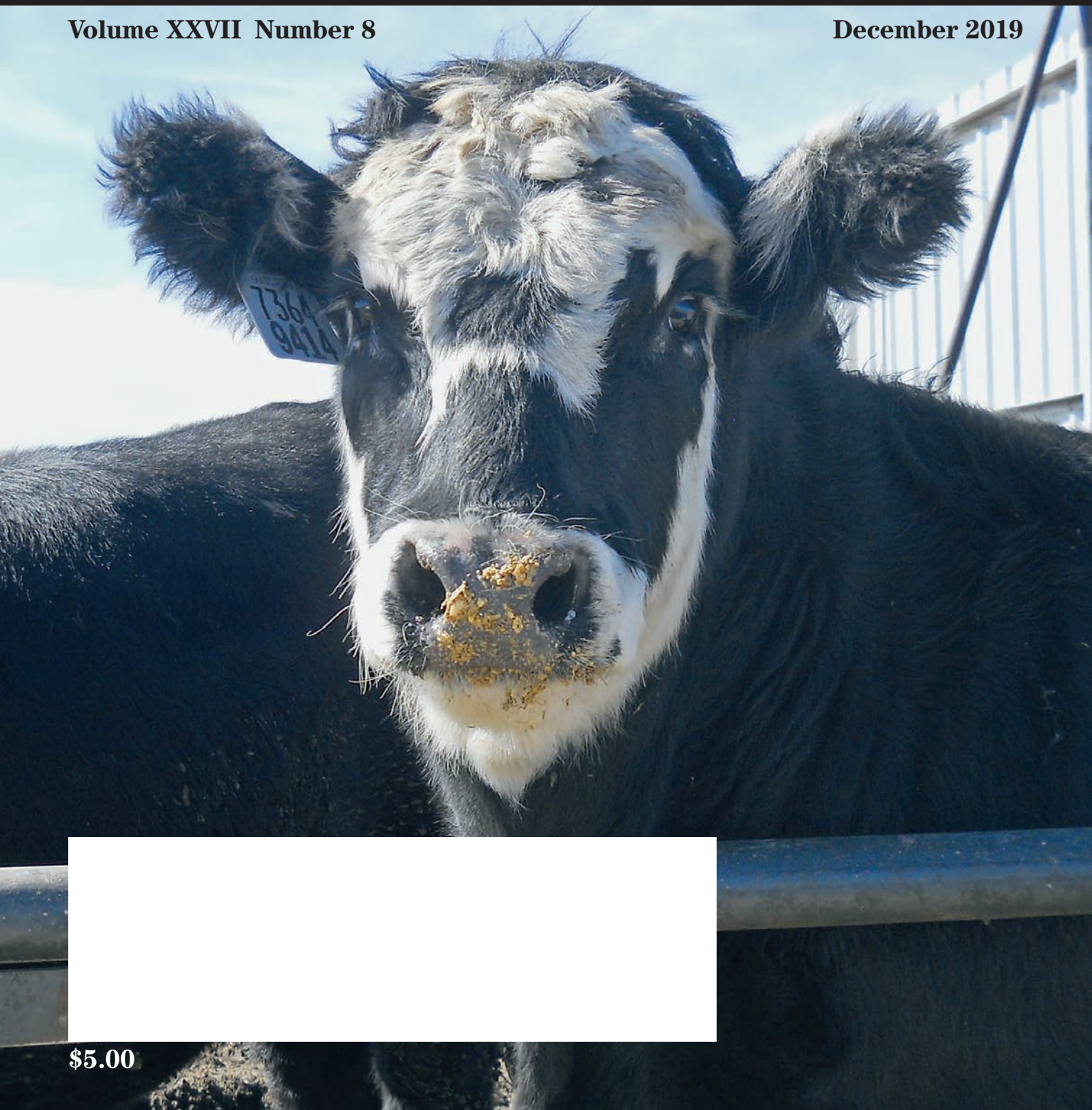
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Volume XXVII Number 8

December 2019



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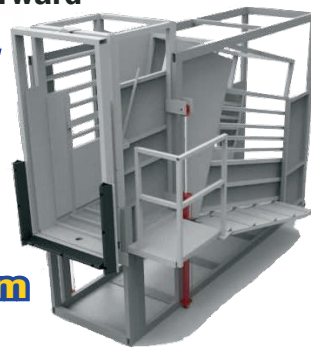
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The Gift of Education

“What you put into life is what you get out of it.”

I'm not a big Clint Eastwood fan, but I think he hit the nail on the head with this quote. The same could be said for business. What you invest in your business, whether it's hard work or new technology, you should get a similar return. If you're looking for a way to invest in your operation, I highly suggest continuing your education.

This time of year, opportunities abound for cattlemen to learn new skills and knowledge that can be applied to their businesses. A variety of state and national livestock organizations recently met or will be meeting soon. These gatherings offer the opportunity for cattlemen to mingle with their peers, attend seminars on topics ranging from risk management to selecting feed ingredients, and voice their input on policy. Several of these meetings are listed in the calendar section of www.feedlotmagazine.com

The Cattlemen's College at the

Cattle Industry Convention & NCBA Trade Show in San Antonio, Texas, is one such opportunity. The topics lined up for this two-day event are amazing and diverse. There are different tracks, where you can focus on a theme for all the sessions. Those tracks include: Building and Protecting Your Business; Let's Talk Bulls; Maintaining a Healthy Herd; Trends in Genetic Selection; Here's the Beef; and Practical Nutrition Management.

Or you can skip around to specific classes that interest you. There's a session on estate and succession planning; one on sustainability, breeding soundness evaluations, and how to intervene when preven-

“What you put into life is what you get out of it.”
— Clint Eastwood

tion strategies aren't perfect. Are you looking to be more efficient through technology? There's a session on that, too.

We hear a lot about consumer expectations and animal welfare. In fact, consumer expectations are behind a few of the topics in this issue. At the Cattlemen's College, one session will address what is important to consumers regarding animal care. You can read about the details and register online here: <https://convention.ncba.org/events-meetings/cattlemens-college>.

Wouldn't that be a great employee Christmas gift? The opportunity to enjoy a trip away from the ranch or feedyard for a few days enjoying San Antonio, plus learn some practical knowledge in the process? Or maybe it's a trip for you and your spouse. Either way, it's an investment in your operation.

This is also the time of year that many organizations experience a change in leadership. *Feed•Lot* sat



down with five newly appointed or incoming presidents/chairmen to get their thoughts on the future of the industry, both amid opportunities and challenges. Interestingly enough, they all had different perspectives on those topics. Read more about their visions starting on page 16.

This issue of *Feed•Lot* offers several topics that can offer tips to invest in your operation. Rancher Joe Leathers of the 6666 Ranch in Guthrie, Texas, says he learned through the lean years that individual animal ID could help him out year round. He shares his thoughts on that topic as well as using the technology to develop a disease traceability program. That story is on page 6. Are you using metaphylaxis in your operation? West Texas A&M University researcher John Richeson says there are certain algorithms that can reduce the number of cattle you treat on a given pen. Read about that on page 10.

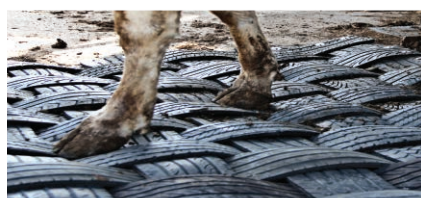
Everyone's heard “work smarter, not harder.” Want to make your smart phone even smarter for your operation? There's a story on page 14 that discusses various apps that could make a difference for you. The holidays and end of year can be a stressful time for all of us. Personnel expert Don Tyler talks about dealing with stress in the workplace on page 12.

In closing, we want to wish all of you a wonderful holiday season. We know cattlemen don't really get holidays, but we hope you can spend time with family and those most important to you. Merry Christmas and Happy New Year from all of us at *Feed•Lot*!

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A RARE OPPORTUNITY

6666 Ranch Manager Joe Leathers discusses the need for unification on a disease traceability program

BY ABBIE BURNETT



It's been 16 years since the "cow that stole Christmas" shut down exports from North America and cost the beef industry an estimated \$9 billion. Those were the days when terrorists also threatened to infect U.S. herds with anthrax.

All these years later and still no national traceability program? Four Sixes Ranch manager Joe Leathers let some exasperation show while addressing the Feeding Quality Forum in Amarillo earlier this year.

"How can we afford not to have a disease traceability program as an insurance policy?" he asked. "Are we going to have another disease outbreak? Yeah. That's realistic."

Leathers put traceability to the test during the 2011 drought when he secured leases for nine ranches in five states north and west of his base in Guthrie, Texas. Moving up to 5,000 cows across state lines meant reading metal clips and culling. It took four summer-dawn roundups that had to end by mid-morning to avoid greater heat and stress.

"I figured out real quick, this is not efficient," he recalled. "It's not good on the cattle. It's not good on

your labor."

That's when the Four Sixes team began using electronic identification (EID) tags that permitted collecting and loading the cattle in a single day. Tag numbers downloaded to a computer, he printed and delivered them to the vet barn, where interstate shipping papers were soon in hand.

Use of those tags has become a management tool that easily pays its way, with implications for all who ask for incentives, he added.

Rather than scan each animal down an alley chute, the UHF tag reader records individual cattle by group. Leathers can call up details on any cow from his phone, including location, breeding and vaccination history.

He can see her calves' data or whole pens of feedyard and carcass grading performance, and generate

reports for potential buyers. Finding a sire group that made 35% Prime, he adjusted sire selection to create more of the best to highlight in those reports.

"Then I ask for a price substantially higher than what the market is," he told cattlemen. "You know what? I nearly always get what I ask for."

U.S.-produced beef sets the world standard for quality, and the industry makes use of production technology. But when it comes to using those tools for traceability? "We use very little," Leathers said.

The biggest obstacle he sees is a lack of standardization. UHF readers don't read all UHF tags the same way, and data storage options are varied but lack user choice as to national, state or third-party group.

"We've got to keep the flexibility as individual producers to make

our own decisions,” he said, noting a need for common-sense regulations that work for every size operation “at the speed of commerce.”

Leathers said even if traceability technology didn’t happen to pay its own way up front, there’s no room for debate.

“The consumer wants it. End of discussion,” he said. “Whether their concerns or their desires are realistic, it makes zero difference.”

More and more consumers simply want to know more about their food.

“Who is responsible for giving them what they want and need so that we can sell our product for a higher price? We are. Yet our industry is segmented in arguing and bickering,” Leathers noted.

He said cattlemen have been given a rare opportunity, one of the few times the federal government has said, “We want the producers to come up with a plan.”

Rather than take the reins in proactive leadership, Leathers said most industry organizations are merely reactive, from politics to foreign trade.

“If we don’t do anything, we lose our competitive advantage in the world with foreign trade,” he said. Leading means moving past a simple, “this won’t work.”

It also means getting past the October announcement that USDA has paused program development. That doesn’t mean the issues will go away, but it could mean more time for producer input.

“There is going to be a disease traceability program in our future in the United States. So get over it. It’s either going to be mandated or it’s going to be something designed

by producers and the industry,” Leathers said.

The 12-member Producer Traceability Council he co-chairs shared a few consensus points in May, but it’s still an open discussion.

Web information searches can find ways to join that conversation, and Leathers especially invites participation from all who can bring a positive and “common-sense approach... start it as an insurance policy and then let’s work as an industry to make us money.” **FL**



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Winter Effects on Cattle Performance

BY JIEHUA XIONG AND JANA GRAMKOW, PH.D.,
GREAT PLAINS LIVESTOCK CONSULTING, INC.

With another winter right around the corner, it is a good idea to revisit how cold temperatures and moisture can impact cattle performance so that you can be prepared to minimize the downside effects of winter weather conditions. Two of the biggest concerns we have for cattle in the feedlot are extreme cold and muddy pens.

The impact cold temperatures have on cattle is dependent on their lower critical temperature, which is the temperature at the lower end of their thermoneutral zone. At lower temperatures cattle must compensate by increasing heat production, and thus they have higher maintenance energy requirements. The lower critical temperature for cattle with dry winter coats is generally considered to be about 30 degrees Fahrenheit (including wind chill). Below this temperature, energy requirements of cattle increase approximately

1% for each degree the wind chill is below 30 degrees. Therefore, if the actual wind chill is 0 degrees, maintenance energy requirements have increased by 30%. Implementing a few cold weather management strategies can help reduce the impact of freezing temperatures.

Windbreaks are often an overlooked part of cold weather management. Wind chill is ultimately the temperature that affects cattle, so anything you can do to reduce the effects of wind is helpful. Cattle in a feedlot benefit from mounds, silos, etc., but if you have pens that are unprotected, think about how you can provide protection to those cattle. Something as simple as stockpiling hay or manure to provide a windbreak for outlying pens can pay big dividends.

We also suggest bedding cattle in sub-zero conditions when the ground is muddy or

snow covered. Laying on cold, wet ground quickly robs cattle of body heat and makes it more difficult for them to maintain core body temperature. According to Dr. Terry Mader, Emeriti Beef Specialist from the University of Nebraska, a bedded space of 20-40 square feet per animal can help minimize the adverse effects of cold and wet conditions. Frequent removal of excess manure and bedding will

Table 1. Potential Loss Caused by Mud at 21° to 39°F

Mud Depth	Loss of Gain
Dewclaw	7%
Shin	14%
Below Hock	21%
Hock	38%
Belly	35%

University of Nebraska,
Department of Animal Science



reduce moisture retention and help pens dry out more quickly. It is very important to keep feedlot pens in top condition throughout the winter to prevent cattle's hair coat from matting down.

Muddy pen conditions increase cattle maintenance requirements and decrease average daily gain, thus increasing cost of gain. Cattle expend more energy walking through mud and will make fewer trips to the feed bunk during muddy conditions which can cause variations in intake patterns. Couple muddy conditions with wet hair and cold temperatures, and maintenance requirements will be even greater, thereby making the energy left for gain even less. According to Dr. Mader, maintenance requirements could be over 50% greater for wet, muddy cattle than for dry, clean cattle during winter. Extension educators from the University of Nebraska found

that cattle standing in 4 to 8 inches of mud could have reduced gains by as much as 15%; a feedlot with mud that is belly deep could depress gain by 25%, resulting in a 56% increase in cost of gain (Table 1).

The extent to which mud affects cattle performance varies between different operations and scenarios. However, it is important for you to know that mud is one of the costliest weather hazards to cattle. Several preventative design and management options exist for minimizing the occurrence and extent of muddy pen conditions; however, very few 'easy fixes' exist for muddy conditions once they happen. Therefore, getting ahead of the winter mud challenge with good pen management is important.

If pens were muddy prior to the cold weather and the surface area is hard to walk on, then it is a good idea to smooth the surface of the pens with a blade, scraper, or drag. This will increase the number of times cattle will visit the waters and bunks, resulting in better efficiency and gains and may even reduce digestive upsets. Make sure that pen surfaces are cleaned periodically, with any manure or undigested organic matter removed from the pen. Scrape lots to maintain an ideal slope of 3-5%, fill holes using soil that will compact, reshape the mounds and valleys, and keep the back of the pen clean and open to encourage good drainage. Good drainage is critical to minimize mud, basically the goal is to remove moisture out of pens as quickly as possible. When it comes to snow, the rule of thumb is that ten inches of snow equates to one inch of water when it melts. Remove accumulated snow out of the pen before it melts, and use snow fences or seasonal barriers to prevent blowing snow from entering pens. Attention should also be paid to the piled snow at the bottom of the pens or in the drainage ditches, it may create a dam that limits drainage. As mentioned earlier, there is

not much we can do once muddy conditions occur. One option to try during muddy conditions is to move cattle to temporary lots or corn stalk fields if they are available. This will allow the muddy pen to be maintained and dry.

Lastly, if it snows, feed bunks should be blown or scooped out so that the feed does not freeze in the bunks when the snow melts. It will also improve intakes if the cattle are not trying to eat feed that is placed in snow or frozen down. With erratic weather patterns, intakes are bound to be variable, and it is very important to feed the cattle within 15 minutes of the same time each day. This will minimize the chances of the cattle bloating and reduce the swings in intake.

Keeping cattle dry and clean is key to minimizing the effects of adverse weather conditions this winter. Good pen maintenance and cold weather preparation are crucial to ensure this. If you have any questions on ways to maintain pens this winter, please contact one of our consultants.

For more information on this or any nutrition-related topic, contact Great Plains Livestock Consultants at www.gplc-inc.com

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INNOVATIONS IN HEALTH DIAGNOSTICS

Cattle are great at camouflaging when they are sick. It's part of their survival instinct. But what if you could detect illness before a calf showed clinical signs?

That's just what animal scientist John Richeson is working on at West Texas A&M University. He presented on innovations in health diagnostics at the 2019 Feeding Quality Forum in Amarillo, focused on what could be "the most complicated mammalian disease in the world."

"Bovine respiratory disease (BRD) is very complicated because it's multifactorial," Richeson said. "There are many viruses and bacteria involved."

For years, many loads of cattle received at feedyards have been given metaphylaxis. That means each animal in a group of high-risk calves gets an antimicrobial shot

on arrival in hopes of controlling a BRD outbreak.

Richeson suggests a more targeted approach.

Although every animal is treated, "We know that not every animal needs or benefits from that antimicrobial," he said. "Targeted metaphylaxis is using certain metrics to try to predict whether an animal is going to be at greater risk for BRD, so we can make individual animal decisions chuteside very rapidly."

He outlined six things feeders can look for to identify high-risk calves at receiving.

1. Bulls vs. steers: Bulls are 3.32 times more prone to get BRD

2. Existing ear tag: An ear tag is evidence that the animal has been handled at least once prior to arrival and may have been vaccinated, dewormed or pre-conditioned, making it less likely to get BRD

3. Body weight relative to cohorts: Lighter calves in a truckload have an increased risk of BRD

4. Rectal temperature: Higher than 39.7 degrees Celsius (103.5° F) may indicate higher risk individuals

5. Lung auscultations: Listening to calves' lung sounds, manually or with technology

6. Biomarker-assisted variables: Including blood tests for leukocyte (white blood cell) and other profiles or nasal swab analysis

An epidemiological calculation suggests the average number to



treat regarding metaphylaxis is about five.

"That means I have to give antimicrobial metaphylaxis to five animals going through my processing chute to make a positive outcome in one animal," Richeson said. Take a 100-head truckload and that is only 20 animals that would benefit from metaphylaxis. But which 20 animals is unknown.

Such mass treatment has proven effective and economical for cattle feeders. But consumers have sent "clear signals" that they want antibiotic-free or at least reduced use of antimicrobials in beef production. Why not try to "give what the consumers are asking for?"

Richeson's research also uses diagnostic technology to determine which animals are sick by assessing their physical, eating/drinking and spatial behaviors.

"All of the technological options for BRD diagnosis have the advantage of monitoring cattle continuously, 24 hours a day, seven days a week," he said. It could be an accelerometer in an ear tag, an ankle bracelet or feeding behavior system that's always on.

"Early results suggest technologies being tested right now are able to find cattle that are clinically ill, or before they are clinically ill, one to two days before the average pen rider," Richeson said.

One indication is the time spent ruminating, "a direct proxy for feed intake" because the more they eat, the more they ruminate. Sick animals are not much different than sick people—neither wants to eat when they don't feel good.

"We need a lot more research," Richeson said. "Not only to understand effective algorithms and when the animal should be flagged by technology, but also to understand the return on investment."

If there is a return to be made, then early adopters could set the pace for the industry. Especially feedyards inclined to receiving high-risk cattle for BRD.

"The system has got to be simple," he said. "Simple really works in our feedlots. So anything that we implement has to be very easy to use, very rapid and cannot slow down processing or pen riding."

Some feedyards are beta testing technologies for companies, but whether that leads to adoption across the industry will depend on the return on investment and the value of diagnosing BRD early.

"Let's say the average is 50% morbidity in high-risk cattle," Richeson said. "The 50% of healthy calves may have benefited from metaphylaxis in the chute, but there are 25% that would have been healthy regardless. So there are instant savings in drug costs to the producer by utilizing targeted metaphylaxis."

Quality grade at the packing-house diminishes greatly if an animal gets sick just once. BRD-affected animals have highly activated immune systems, he explained. Any feed consumed is put toward the inflammatory response and resolving infection, whereas a healthy animal puts feed resources toward growth and producing a high-quality carcass.

"A pen of cattle that are affected with BRD are behind their healthy pen-mates," Richeson said. "We can



Richeson's research suggests across a pen of cattle, one in five benefits from metaphylaxis.

feed those cattle longer and try to recoup that lost performance. But a respiratory infection likely also affects marbling or fat deposition and probably reduces the quality grade potential, regardless of adding more days on feed."

To do more for your cattle and maintain their high-quality genetic potential, consider management to minimize the need for their immune response. **FL**

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Vaccinate Yourself Against Stress

I'm concerned about you. No one needs to remind us of the stresses all producers are facing at this unique point in time. "This too shall pass..." can be a comforting lament, but the duration of these challenges takes a toll.

Experienced counselors report that when people have gone through difficulties for a long period of time, they often say that it was not the depth of the difficulty, but the duration. How long it lasted, not how bad it got. The longer that a stressor exists, the more we need to take action to minimize negative effects on our health and wellbeing.

Stress starts small and continues to build if left unresolved. What was once a distraction that kept us from sleeping eventually becomes depression, and then a reduced will to continue. Like handling an illness in livestock, we can either keep treating the symptoms or address the root cause of the disorder.

Stress Triggers

Let's look at some common origins of stress:

- Not being able to do quality work or finish a job due to conditions or time constraints
- Unavoidable circumstances continuing to force changes in crucial plans
- A loss of joy in doing daily activities
- Conditions that continually undermine our sense of control
- Situations that impact our ability to care for or address the needs of our family and employees
- Ongoing unpredictability

Most people can manage two significant stressors at a time but adding a third one is more than they

can handle. Significant stressors would include a serious medical issue, financial challenges, death of someone close, loneliness, loss of esteem within the community, substance abuse or relationship challenges.

Behaviors to Avoid

To help prevent stress from building, avoid these behaviors:

- Raising your voice as a common habit
- Consistently working too fast
- Lengthy or consistent isolation
- Shirking daily personal hygiene
- Missing most family events and activities
- Taking physical risks or short-cutting safety procedures
- Increasing use of alcohol or medications to help cope
- Chronic sacrifice of your personal wellbeing for small rewards

Stress Reducers

Engage in these activities to ease your stress:

- Talk with people who understand your situation.
- Regular physical intimacy and contact
- Recreation and breaks away from the stressful environment
- Prayer or meditation—especially in an outdoor or other comforting, calm environment
- Hobbies that provide relaxation, personal development or happiness
- Do something for others

Interacting with animals or pets can also be very effective stress reducers. In fact, research shows that dairymen who experience high-stress situations often report that the most calming thing they do to help deal with the stress was to, "...just go out and walk around with the cows."

Action Steps

Consider these strategies to help you or others prevent stress:

- Do something for those in your family, especially something you know they personally enjoy.
- Talk about what is stressful.
- Do something just for fun, for a couple minutes each day.
- Smile often, and make others smile.
- Adjust your diet to be sure to eat healthy during the day—fruit drinks and snacks, protein, water, etc. For example, think about feeding an animal that you are trying to maximize their performance—what would you feed them?
- Take a minute to talk to neighbors and friends when you see them.
- Do self-improvement—read, exercise, journal, new experiences, etc.
- Keep facilities and equipment neat and orderly.
- Identify and celebrate your successes, even minor ones, with others on your team and your family.

When individuals are feeling depressed or under stress, research shows the first step is getting adequate, quality sleep. Most people in stressful situations report only getting 3 or 4 hours of sleep. When they change their daily habits to get closer to 8 hours of sleep, their depression and stress levels go down significantly, or completely disappear.

You may feel these strategies are nearly impossible to do. Initially choose one or two from each category above, perhaps based on the input of your family, and do them for 3 weeks. They'll see the difference and encourage you to continue.

For Management and Executive Coaching assistance, conference speaker or help with your employee and family business challenges, Don can be reached at don@dontyler.com, www.dontyler.com or by calling 765-490-0353.





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THAT TECH IN YOUR HAND

As the use of handheld technology has increased over the past couple decades, the phrase “There’s an app for that” has become more than a catchy cliché, it’s an essential part of agriculture.

From smart phones, to tablets, to iWatches, farmers rely on digital device applications to manage daily operations, communicate with business associates, keep records and plan for the future.

“Finding an app to do what you need one to do is easier than ever,” says Texas A&M AgriLife Extension Wilson County Agriculture/Natural Resources Agent Bryan Davis, who

has spent the better part of the past 5-6 years working with producers to expand their knowledge of digital possibilities. “There are around 2 million apps available with new ones being developed all the time.”

Ag-based apps predict weather, report markets, define cropping strategies, and even help determine the correct dose of livestock medications.

Apps are available for iOS (Apple) and android devices. Davis says a person’s preference for one over the other is like that for a Chevy or a Ford. Some apps are best used on a smart phone. Others

are designed for a tablet or laptop.

“It’s as simple as choosing a tool to communicate and downloading an app,” says Davis. Apps are available for purchase through the App Store or iTunes for Apple devices and Google Play for android models. Other apps are free, often from a product or organization website. Some offer a 15-30 day free trial to make sure the app works for you before purchase.

Davis says like anything on the Internet, it is important to know where the app is coming from before downloading. Make sure it comes from a source you trust.



Weather and news

"If there's one app a farmer should have on their phone, it's a weather app," says Davis.

Apps like Weather Underground or The Weather Channel, or a link to your local TV station, provide severe weather alerts and warnings (sometimes by text), instant updates, and radar tracking of storms and showers as well as longer-term predictions and trends.

News outlets provide news and markets along with weather. Most news outlet apps are free.

Crop Management

Scouting for crop pests is a whole new ballgame with phone apps that provide instant identification as well as tips on treating problems.

The University of Missouri's ID Weeds offers photo identification of weeds. BASF Weed ID offers a similar function, so does LeafSnap Tree. BRIT gives detailed information on 129 plant species commonly found in Texas. AquaPlant can help with whatever is growing in your pond.

ScoutPro Corn identifies weeds, insects and diseases in the cornfield.

Apps can offer instructions on mixing pesticides. AquaCide, Spray Lite, Calibrate My Sprayer and the Clemson Mix Guide are all sites Davis recommends.

Most equipment manufacturers and pesticide companies offer online support. "Anyone using a boom sprayer with a T-jet nozzle can download the app with a calibration guide and mixing guide to adjust the nozzle," says Davis. "It greatly speeds up the process and helps with the math."

There are apps that provide field mapping, record keeping, field and spray records, even ones that measure fields and distances. Some producers use the app to record information in the field and send it to themselves for use in the office. Look for ArcGIS Explorer, Google Earth or Field Area Measure.

AcrGIS Explorer measures the most current aerial image with measurements of distance and area to determine exactly how many acres are under an irrigation pivot. It comes with a drawing tool to make map notations.

Top record keeping apps include Field Records, Quickbooks and Farm Logs.

Windfinder offers wind speed tracking, handy for fertilizer application. It breaks down the forecast into 3 hour increments over 5 days.

AG-PHD offers multiple apps to measure fertilizer removal, harvest loss and a planting population calculator along with other crop information.

Livestock management

For livestock producers there is a Cow Poop Analyzer courtesy of Texas A&M. Just submit a photo to the experts to assess digestibility and protein consumption. Likewise, a pasture photo will assess available protein.

The Mississippi State Cattle Calculator encompasses several different performance options. It's only one app that offers calculators for calving gestation length, average daily gain, medication dosage, even trailer stock density.

"As cattle get bigger and bigger, you can't just rely on past experience for the number of head to fit on a trailer," says Davis. "With this you can enter the trailer dimensions and average weight of the animals. It will tell you how many will fit."

The CVP vet app (Compendium of Veterinary Products), sponsored by Bayer, gives product specifications, including calculating the necessary withdrawal times before slaughter. You can even get a copy of the container label if yours is no longer readable.

For wildlife management, apps offer advice and information on grazing management and predator control. There are apps with calculators for pond stocking rates.

Tips on using apps

Davis reminds producers to frequently update apps as new, improved versions are always on the horizon. And apps tend to come and go, so be sure to back up vital records.

"I'm always trying new apps with producers," says Davis. "You can download an app, keep it for a few weeks to try it out, then keep it or delete it."

He uses the Gas Buddy app when he's on the road meeting with producers.

Davis says for many, the most underused function on the smartphone or tablet is the camera. There are many apps that allow the user to send a photo of an animal, plant, fungus or disease to an expert for identification and advice. Likewise, a photo sent to yourself can be a handy way to make yourself a note.

He adds the user needs to be aware of the battery drain of some apps, and regularly close apps instead of leaving them open and unused. That's a battery drain that could be a factor if you're in the field for an extended time. Free apps are more likely to come with pop-up ads that use additional power. **FL**

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LEADERSHIP LOOKS TO THE FUTURE

The industry faces many challenges and opportunities in 2020. Some are the same across the country; others are regionally based. *Feed•Lot* asked six industry leaders three questions on where the cattle industry is headed next year.

- 1.** What do you see as key issues the industry faces in 2020?
- 2.** Do you have a platform or specific topics you want to address while in office?
- 3.** If you had to give someone advice who is getting into the industry for the first time, what would it be?

We hope you enjoy their responses and see the visions they share for the coming year.

MARTY SMITH

National Cattlemen's Beef Association

1. Key Issues

All of our key issues come back to expanding demand for beef both domestically and in our foreign markets. That includes continuing to push for better access to growth markets like China and getting the U.S. - Mexico - Canada Agreement (USMCA) ratified.

It also means making sure that fake meat can't be marketed in ways that confuse consumers or make claims that simply aren't true, like claims that they're healthier or more nutritious than beef.

And finally, that means that we will continue to point out that beef production is more sustainable than ever and ultimately good for the environment, especially in terms of conservation, carbon sequestration, and species preservation.

2. Platform or specific topics

NCBA is a member-driven

organization, so our dues-paying members ultimately set our policy positions and decide our top policy priorities.

That said, as President of NCBA, I plan for us to be more proactive in telling our positive stories. I want for us as an organization and an industry to play more offense when it comes to explaining how we're good for the environment, how beef is one of the most healthy, nutritious foods in the world, and how we lead the world in animal welfare. We can't afford to just sit back and defensively respond to our critics; we have to be more forceful in making sure that consumers know all about our good stories.

3. Advice

My family's ranch has been in operation since 1850 and cattle had been raised on that land for close to 500 years but that doesn't mean there are not opportunities to join the cattle industry! You don't need to come from several generations of producers - the opportunities are there if you work hard.

Cattlemen and women are some of the greatest people in the world and you will find that getting started

in this industry is as easy as attending a NCBA event hosted by your state affiliate (<https://www.ncba.org/stateaffiliates.aspx>)

DAWN ANDERSON

Idaho Cattle Association

1. Key Issues

Key issues going into 2020 revolve around our industry's ability to do business. The ongoing issues have been sage grouse, which try as we might, we haven't been able to put to bed, public lands grazing and trade. More recently is the challenge some of our neighboring states have in regards to their brand departments. We have open lines of communication with these states and are keeping our membership informed of new processes/requirements.

2. Platform or specific topics

ICA historically has a vigorous set of resolutions and policy that guide us through the various challenges we take on for our industry and I plan on continuing to engage our membership in conversations with key players with our industry partners.

3. Advice

Get involved. Whether it be on a local, state or national level, get involved. Success in this industry is primarily based on relationships and passion and there is nothing like being part of a group that promotes and protects our industry. Joining a cattle association doesn't mean you have to take on a leadership role to make a difference. Conversations are an important part of the process as is sharing your thoughts and concerns with

those who are setting policy that will affect your business.

KEN HERTZ

Nebraska Cattlemen

1. Key Issues

The top issue would be the lawsuit against the Beef Checkoff. The results could have far reaching consequences. Research shows the checkoff returns more than \$11 to the industry for every dollar invested. The checkoff fills an important role for the beef industry in funding promotion and research. The second most important issue would be the beef industry response to fake meat and how it is labeled. Consumers have a right to choose, but there is a need for truth in labeling.

2. Platform or specific topics

One usually doesn't have to look for issues, they find you. That being said, I would like to improve the communication and knowledge flow between local affiliates and the state office. There is a lot of work done on behalf of members that needs to be communicated and lots of concerns of members that state officers need to be aware of.

3. Advice

I would give the same advice given to me years ago by an elderly

rancher, "Hang on to the cow's tail and she will pull you through." If you love the industry and have a passion for livestock, we need you in this business.

PAUL DEFOOR

Texas Cattle Feeders Association

1. Key Issues

We are blessed in this country with the highest standards of living that have ever been experienced by any society. We must be students of how we achieved that if we are to keep it and keep improving it.

The industry must continue to make strong, simple and direct rebuttals to myths about beef production, which are driving the development of less healthy alternatives. Concerns about the "carbon footprint" of cattle are chief among those myths. The simple truth is that cattle merely return carbon to the atmosphere where it originated literally only months prior. There is no 'net new' carbon emitted by cattle into the atmosphere. Cattle, plants, and the carbon returned by cattle are in a healthy, steady-state, long-term relationship with one another; and we humans are the benefactors. It is just that simple.

Industry associations such as TCFA are critical in dispelling misconceptions and bringing to bear the full collective resolve of its members around these basic truths. We must ensure that the political process and its outcomes reflect those realities.

2. Platform or specific topics

While the industry must continue to advocate about current issues including atmospheric carbon, alternative proteins, trade, and technologies that affect efficiency, we must also focus on the viability of the Texas cattle feeding region over the long haul and provide leadership in critical areas that will contribute to that future.

Farming choices and water use will be among the most critical of factors. There is tremendous untapped potential to further integrate farming and grazing in the region to create greater returns per acre for landowners while drawing more cattle to the region to graze. We can do this while also allowing for a material recharge of the groundwater that is so critical to our future.

3. Advice

Don't be dissuaded by Beef's detractors; they've been there as far back as the colonial days, ►



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LEADERSHIP... *from previous page*

yet the product has endured as few other products have. Beef producers in the United States can be proud of the business they're in and the product they produce. Be assured that we are part of the solution for the environment and a growing world population. Said another way, cattle and modern beef production are good for the people and the environment. However, we can't be content to sustain; we have to advance and continue to improve. That's what got us here.

MIKE WEEKS

Oklahoma Cattlemen

1. Key Issues

I believe that "Fake meat" will still be a term to be reckoned with in 2020. It is not an issue that will go away, so we as producers must continue to educate the consumer about the health benefits and the husbandry practices that we put into place to insure a quality, nutritious and safe product on their families tables just as we do for our own families. Big names in food service will continue to add plant-based products to compete with beef but we as producers know nothing compares to our superior product. We must be on the forefront of this and tell our particular story and stand behind the cattlemen's organizations that are in the trenches fighting for us on the legislative front making sure the term "Beef" only applies to our product derived from cattle production on our family farms and ranches.

2. Platform or specific topics

Currently I have the privilege to serve on the Oklahoma Cattlemen's Association's Oklahoma Beef Labeling Task Force. The task force is made up of cattlemen and cattlemen from across the state from different segments of our beef community. The idea behind this group is to find a way to add

value to our state's slaughter cow market, as Oklahoma is ranked second in the nation in beef cow numbers. Other states that have programs similar in nature were evaluated and we began to try to build our own model using some of the framework that those states had began with. Both food service and retail options were looked at with our task force choosing the direction of food service to best fit our program. By adding value to our member's slaughter cows it will be a win for the producer as well as the consumer as they will receive a quality product raised right in our home state. This program is still a long way from taking shape, but I look forward to continuing work on this project and see a bright future ahead for beef producers in Oklahoma. I believe we as producers must look for every angle possible to add value to our product and niche markets like this could bring exciting new facets to the beef industry.

3. Advice

I would highly recommend to any new producer to get involved in their cattlemen's associations on a local, state and national level. These organizations are instrumental in helping educate and inform producers on topics relative to what is going on in beef industry. I can attest that these organizations have really played a large role in my willingness to serve in leadership of OCA. The Oklahoma Cattlemen's Association has an excellent program for young producers to apply and attend called the Cattlemen's Leadership Academy (CLA). As an alumni of the CLA, I cannot say enough great things about it. CLA consists of four sessions that each focus on a different segment of the beef industry and the things that my association does for its members. It is truly an eye-opening experience and is also a great way to network with fellow young producers. But I believe the most important piece

of advice I could give is just simply BE INVOLVED!

HARRY MOSER

Kansas Livestock Association

1. Key Issues

Key issues facing our industry now and in the coming year I feel first of all would be getting trade deals signed and moving forward. The USMCA needs to be approved by Congress. We also need to explore other potential trade avenues for our beef market. Additionally, the labeling matter that surrounds "fake meat" has come to the forefront. A bill introduced by Kansas Congressman Roger Marshall called the Real MEAT Act of 2019 is a step in the right direction to safeguard our nutritious and delicious product. Almonds don't produce milk; combining several plant based protein sources into a patty that might look like a hamburger is not meat. We must not allow this attempt to take the good name of meat and use it to portray something that is not truly meat.

2. Platform or specific topics

I do not have a platform. We have a great organization. My intent is to see to it that we do the very best for our membership by representing them and to deal with any issues that we face in Kansas. I have a desire to see our membership continue to grow and will work hard to achieve that.

3. Advice

Do your homework as you get into the industry. Learn as much as you can about every aspect of the beef business, from cow/calf to feeding to the final product. There is a great deal of knowledge out there to tap into these days. Find people with integrity and honesty and glean what you can from their wisdom. Get involved in your local, state and national beef associations. Make your voice heard. **FL**



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SUPER CUBES

The science of extrusion brings forth a nutrient dense breeder cube

BY JILL J. DUNKEL

Innovation

Innovation brings about new opportunities and ideas, and now a feed company is utilizing technology from the plastics industry to produce a nutrient-packed breeder cube. Through an extremely high pressure, densification process, nutrients are reconfigured into a cube that is more nutritionally dense than its predecessor. The “super” cube means producers have to handle less quantity and feed fewer pounds to deliver the same amount of nutrition to their cattle.

“We’re always looking for new ways to bring more value to cattle producers through reduced cost or better performance,” stated Ronne Castlebury, Ph.D., vice president of sales and nutrition for Livestock Nutrition Center (LNC).

The process, known as extrusion, concentrates the amount of nutrients in the same look and feel of a traditional breeder cube. Extruded feeds are very common in the pet food industry. The

technology is used in some horse feeds and on a more limited basis in livestock feeds. The densification process allows for a wider variety of high value feed ingredients. Conventional cube processing is largely restricted to ingredients that allow for acceptable cube quality factors. This means limited use of ingredients that are high in fat and starch, Castlebury explained.

As such, standard breeder cubes typically contain 20% crude protein and 2 to 3% crude fat. By using extrusion technology, breeder cubes can be produced that are 28% crude protein and at least 8% crude fat.

“The additional fat is a valuable source of supplemental energy during late gestation and early lactation when nutrient supply can be limiting,” Castlebury said. LNC’s extruded breeder cube is marketed under the name Range-Max 28. Castlebury explained that the extruded cubes provide the energy needed to maintain body

condition for efficient breed back in cows. The cube is also a valuable supplementation product for stockers and growing cattle, enhancing the utilization of forage. It has 40% more protein and approximately 300% more fat than a typical 20% range cube.

With the density of nutrition in the cubes, cattlemen can feed less. For example, if a cow’s nutrient requirement dictated feeding 5lbs of a 20% cube, a producer would only need to feed 3.6lbs of the extruded cube to get the same amount of protein. Plus with a higher fat content, the energy supplied to the cow is significantly increased, Castlebury explained.

Fewer pounds of feed required means fewer sacks to handle, or more pounds in the feed box. That equates into savings in freight, handling and labor costs. The extruded cubes do cost more per pound than a traditional cube, however with reduced pounds and saving

in handling, there is the potential for more than a 10% savings with the product.

There is also a learning curve in order for cattlemen to capitalize on the savings. Simply put, cattle just don't need as much feed as a rancher is used to feeding. Some routinely put out "X number of sacks" or "so many pounds" in a pasture. A little math helps them recalculate what is actually needed for their herds.

"While there is some education needed, it's easy to understand because it's in the same form factor as traditional cubes," explained Castlebury.

Livestock Nutrition Center built an extrusion plant in Quanah, Texas, and is excited about the opportunities the technology offers. Castlebury said they are continually looking to develop forage supplementation products using new technologies. **FL**

BQA Transportation Training

Beef Quality Assurance (BQA) Transportation is the latest certification needed for beef cattle haulers and producers who deliver cattle to major packing plants.

The BQA Transportation program focuses on transporter safety, delivering cattle in a timely manner, cattle fitness of transport, cattle handling, and emergency preparedness just to name a few topics.

"This certification program will be a required part of business for any cattle hauler or producer who directly delivers cattle to a major packing plant," said Heidi Carroll, SDSU Extension Livestock Stewardship Field Specialist.

To help transporters become BQA Transportation certified, a multi-state workshop will be offered by South Dakota State University Extension, Iowa State University Extension and Outreach,

and University of Minnesota Extension on Tuesday, Dec. 10, from 1:00 p.m. to 4:00 p.m. at Sioux Falls Regional Livestock near Worthing, S.D. The workshop will include a classroom presentation and trailer walk-through discussion.

"January 1, 2020 is the deadline most major packers have set. They will not accept cattle from transporters who are not BQA Transportation certified," Carroll said. "Transporters include both farmer feeders and commercial truckers, essentially any individual hauling directly to a harvest facility."

Those hauling cattle to a packing plant may either attend the workshop or go online at www.bqa.org to complete the BQA Transportation curriculum. For more information, visit the National BQA website (<https://www.bqa.org/events>). **FL**

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A Novel Look at Feed Additives for Beef Cattle

BY DR. AIMEE HAFLA
BEEF NUTRITIONIST, AGRIKING

Increasing consumer pressure to reduce or eliminate the use of antibiotics continues to motivate livestock producers to evaluate novel feed additives that offer health and production benefits, but do not require veterinary oversight. However, sorting through the growing selection of products and ingredients can leave even a

well-versed nutritionist confused. The following discussion is not a comprehensive list of all currently available feed additives, but instead a brief description of some available technologies and the potential benefits they offer.

Ionophores

Ionophores are possibly the

most commonly used feed additive in the beef cattle industry, with 90.5% of feedlots with 1000+ animals using an ionophore. Ionophores are classified as an antibiotic by the FDA and their primary mode of action is to disrupt the movement of ions across the membranes of certain bacteria found in the rumen. This results in a shift toward the type of bacterial populations that produce propionate, which is the most favorable volatile fatty acid in relation to animal performance. Additionally, ionophores prevent and control the occurrence of coccidiosis, which can be particularly problematic for young cattle. A combined analysis containing the results of 169 feedlot trials found that the use of Monensin sodium (Rumensin) improved feed conversion of feedlot cattle by 6.4% (through decreased dry matter consumption of 3.1% and improved ADG of 2.5%). Even though ionophores are classified as antibiotics, they are not considered medically important to humans, and therefore can be purchased and used with no veterinary oversight.



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Probiotics

Probiotics (Direct-Fed Microbials) are live and viable, naturally occurring microorganisms that provide a health benefit to the host that consumes them and primarily include bacteria and yeasts, or a mix of these organisms. Active live yeasts have shown promise in dairy cattle diets, resulting in increased milk production and dry matter intake. Research conducted with feedlot cattle indicates that live yeast improves diet digestibility and may stabilize rumen pH by mitigating excessive lactic acid production, ideally this will result in improved nutrient utilization. Several studies have documented

health benefits of feeding yeast in receiving cattle, which include a reduction in cattle pulled for repeat treatments and an increase in appetite. Current research is focusing on the potential use of yeast products to reduce the occurrence of liver abscesses in feedlot cattle.

The use of bacteria based probiotics in beef cattle began as a pre-harvest food safety measure, by reducing fecal shedding of pathogens, such as E.coli. Typically, bacteria are discussed as either "lactic acid producing" or "lactic acid utilizing", with some falling into "other categories". Bacteria that produce lactic acid in the rumen may help mitigate low rumen pH by facilitating the growth of the bacteria that use lactic acid. Lactic acid utilizing bacteria help prevent the accumulation of lactic acid. Furthermore, the physical presence or "peppering" of beneficial bacteria on the walls of the lower gut may prevent the attachment and growth of pathogens. Additional research on various strains of probiotic bacteria have also focused on stimulating the immune system, with the intent of reducing the occurrence and impact of respiratory illness, however impacts on health and performance

have been variable. Both yeast and bacterial cells require continuous supply (daily) in the feedstuffs to reach beneficial concentrations and persist in the rumen.

Prebiotics

Prebiotics are non-digestible substrates that provide nutrition to the beneficial gut bacteria or protect against pathogenic organisms. Yeast culture components, which include yeast cell wall parts have a different mode of action compared to active live yeast. Mannan and fructo-oligosaccharides, found in

yeast fractions, attract and bind pathogens so they can be flushed from the digestive tract without causing disease. These compounds, sometimes referred to as "refined functional carbohydrates", can be very effective at binding gram negative bacteria, such as Salmonella and E. coli.

Often, yeast culture components will be combined with whole live yeast in one product, and those types of products make up a significant proportion of the research trials evaluating "direct-fed ►

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A Novel Look... from previous page

microbials". It is likely that the effectiveness of yeast-based direct-fed microbials originate from both the yeast organism and the prebiotic component.

Enzymes are specialized proteins that speed up chemical reactions, such as breaking down organic compounds in feed into substances which are more readily usable by the animal or microbes. Different enzymes work on specific substrates, for example amylolytic enzymes degrade starches and

fibrolytic enzymes degrade fiber. The purpose of supplementing enzymes to ruminant livestock is to enhance the digestibility of feedstuffs. The digestibility of forage cell walls can limit nutrient uptake, especially if rumen conditions are not optimal for fiber digestion. Starch availability in corn is significantly impacted by processing, moisture, and proline content but can be enhanced by supplementation with a starch digesting enzyme. Responses to enzyme supplementation in beef

cattle consuming high-grain diets can vary, depending on the activity of the enzyme and base-line digestibility of the diet. Evaluation of diet digestibility and that of individual ingredients is necessary when considering the use of a feed enzyme product.

Essential Oils

Essential oils are bioactive metabolites produced by plants as a means of defense, rather than for growth or reproduction. Some common essential oils include cinnamaldehyde (cinnamon extract) and capsicum annum (hot pepper extract). Various essential oils have been found to alter rumen microbial populations, impact rumen fermentation, and to have broad antimicrobial properties when evaluated with in vitro (test tube) trials. Specifically, essential oils appear to have similar ruminal effects as ionophores, shifting fermentation toward propionate and decreasing ammonia concentration and methane production. However evidence supporting the use of essential oils in feedlot cattle raised in commercial production systems is limited and research documenting improvements in performance are highly variable. More robust research has been conducted in nonruminants, where





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cinnamaldehyde appeared to act as an immune enhancer and capsicum was found to improve blood flow in the GI tract. More research is necessary to determine what combinations and dosages of essential oils (might) provide notable benefits to beef cattle producers.

Due to the variability in environmental conditions, diets, stress, and physiological status of cattle in a feedlot, it is reasonable to assume that a product containing a blend of probiotics, prebiotics, and/or enzymes, may best capture the benefits of the various modes of action. For example, a combination pro and prebiotic product synbiotic may provide the animal with beneficial microorganisms, while also providing substrates to stimulate the growth of the native commensal microorganisms. Talk with your nutritionist about which types of feed additives may be most beneficial to your operation. **FL**

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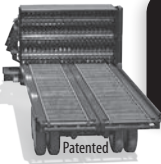
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