

# Range Beef Cow Symposium XXI

*Wyoming hosts premiere beef cattle symposium.*

*Story by*

**TROY SMITH, KINDRA GORDON & SHAUNA ROSE HERMEL**

Seven hundred cattlemen were on hand Dec. 1-3, 2009, at the Casper Events Center in Casper, Wyo., for Range Beef Cow Symposium XXI. Hosted by the Cooperative Extension Service and animal science departments at four universities — the University of Wyoming, University of Nebraska, South Dakota State University and Colorado State University, the biennial symposium offered real-world, workable solutions on subjects of nutrition, marketing, health, reproduction, consumer demand and industry issues.

Online coverage of Range Beef Cow Symposium XXI is available in the newsroom at [www.rangebeefcow.com](http://www.rangebeefcow.com). Posted to the web site are synopses of the presentations, as well as PowerPoints, proceedings, and supporting materials as provided by the speakers. While not yet posted at press time, audio files will be added as well.

The University of Nebraska will make available for ordering video coverage of each session. To request information on ordering, call 402-472-3035.

Following is a sampling of the coverage provided at [www.rangebeefcow.com](http://www.rangebeefcow.com).

## **Cattlemen Urged to Stay Watchful of Pending Legislation**

Federal estate tax, cap-and-trade and health care reform were among the touchy subjects addressed by Wyoming Congresswoman Cynthia Lummis during the opening session of the 2009 Range Beef Cow Symposium. Speaking to her audience via computer link from Washington, D.C., Lummis advised beef cattle producers to remain watchful and wary of those legislative issues and others likely to affect their businesses.

While stair-step measures were advanced by the Bush administration to reduce the estate tax rate and move toward total repeal in 2010, the so-called “death tax” is scheduled to return in 2011. It will come back in full force, Lummis explained, taxing estates at up to 55% of value. However, Lummis expects pre-emptive action to come before

Congress in 2010. She expects lawmakers to act on a proposal calling for the exemption of estates valued at up to \$3.5 million and a maximum rate of 45%.

Noting her opposition to the cap-and-trade bill passed by the House of Representatives, Lummis called it the largest tax increase ever proposed. The measure would set limits on greenhouse gas (notably carbon dioxide) emissions by U.S. industries and levy penalties on those entities that exceed limits.

“But if countries like China, India and Russia do nothing, it will have no significant effect on global emissions,” Lummis stated. “It’s a very bad piece of legislation.”

Nearly as bad, according to Lummis, is the proposed health care reform bill, which could force small “mom-and-pop” businesses, as well as farmers and ranchers, to participate in a government-run health care program.

Lummis said she is watching and monitoring other developments likely to have negative effects on beef producers. Among them is a proposal that would ban several commonly used antibiotics, including penicillin and tetracyclines, for treatment of animals. Noting many lawmakers’ withering confidence in USDA’s handling of its animal identification program, she expects a push to make the program mandatory.

“I will work to keep it voluntary,” stated Lummis, who also promised to seek funding for research and development of an effective brucellosis vaccine.

Lummis warned public lands ranchers to expect further efforts to reduce and even eliminate livestock grazing on public lands. The congresswoman also said she is looking into situations where extremist environmental groups launch lawsuits aimed at taking away ranchers’ grazing rights and then seek government reimbursement to pay costs of litigation.

Also likely to surface are efforts to ban transportation of horses

to slaughter, which could prevent shipment of horses to processing plants in Canada or Mexico, and

proposals for designating certain public lands areas for wild horses.

“I wish I had something good to report on the horse slaughter issue,” Lummis lamented. “Things are not going the

right direction for managing wild or domestic horses, and it’s likely to get worse rather than better.”

— by Troy Smith

**Federal estate tax, cap-and-trade and health care reform were among the touchy subjects addressed by Wyoming Congresswoman Cynthia Lummis during the opening session of the 2009 Range Beef Cow Symposium.**

## **Wildlife Diseases Still a Concern**

Frank Galey, dean of the University of Wyoming College of Agriculture and Natural Resources, provided an update on animal disease issues during the opening session of the 2009 Range Beef Cow Symposium. Galey focused primarily on chronic wasting disease (CWD) and brucellosis, the threat each poses to wildlife or domestic livestock, and respective management efforts.

With regard to CWD, Galey said surveillance of Wyoming cervidae (deer and elk) continues, and some

new cases have been reported in the state. As with bovine spongiform encephalopathy (BSE) in cattle, the causative agent for CWD is an infectious protein particle (prion) that attacks the central nervous system of cervidae.

Calling the disease “tough to diagnose,” Galey said researchers have concentrated on developing new, more-sensitive testing procedures. Research studies also suggest that CWD is not transmissible to cattle.

Unfortunately, brucellosis is a bacterial disease that is transmissible between wildlife species and cattle, and may also be transmitted to humans. Historically, consumption of raw milk was the most common method of contracting undulant fever, as it is called in humans. Stopping the spread of the bacteria to humans is largely the reason milk pasteurization became a standard practice.

Galey, who also serves on the Wyoming Brucellosis Coordination Team, said the incidence of brucellosis among wildlife (chiefly elk and bison) is a significant economic concern because it can spread to cattle herds, causing late-term abortions. Despite certain environmental activist groups’ claims to the contrary, Galey said there is solid evidence that brucellosis is being transmitted from elk to cattle. He called immunization efforts only marginally effective.

“There are two vaccines, but they have been only 50% to 60% effective in cattle, and they don’t work that well for wildlife,” Galey stated. “Currently, management is the key to controlling the disease.”

Galey said the Brucellosis Coordination Team is trying to attract federal and state funding for research and development of a more effective vaccine and more and better diagnostic tools, since the disease can be difficult to detect. The group is also looking at the consequences of elk feeding on public lands. It is suspected that the increased concentration of elk on feed grounds leads to increased transmission of brucellosis. On the other hand, feeding elk probably helps keep elk off cattle feed grounds and away from ranchers’ stored hay supplies, and may help reduce transmission between species.

Galey also noted the need to remind consumers of the



Despite environmental activist groups’ claims to the contrary, there is solid evidence that brucellosis is being transmitted from elk to cattle, University of Wyoming Dean Frank Galey said.

potential threat to human health. Some proponents of an “all natural” diet have advocated consumption of nonpasteurized milk, but that does increase the risk of contracting undulant fever.

— *by Troy Smith*

### **International Trade Considerations**

Livestock Marketing Information Center (LMIC) Director Jim Robb offered a “big picture” view of the status of the U.S. beef export market during the opening session of the 21st Range Beef Cow Symposium.

To offer some perspective, Robb began by pointing out that by 2050 the world’s population is expected to increase by 33%, with India and China being the two most populous countries, respectively. Particularly with the anticipated growth in China, Robb stated, “As people’s incomes go higher, demand for animal protein also increases. So beef consumption has the potential to double by 2050.”



LMIC Director Jim Robb offered a “big picture” view of the status of the U.S. beef export market.

With this growth, Robb suggested the U.S. will be in a position for beef exports to grow. “The U.S. does not have the largest cattle herd in the world, but produces more beef than any other country,” he said.

**“We are very dependent on export markets for variety meats and inedibles like hides and tallow.”**

— *Jim Robb*

In 2009, U.S. beef exports added \$1 billion to the American economy. With that said, Robb emphasized that “International trade is important to the beef industry.” He shared that beef byproducts such as tallow, greases, variety meats, hides and skins are almost all exported and have as much dollar

value as the traditional red meat cuts that are exported. “We are very dependent on export markets for variety meats and inedibles like hides and tallow,” he said.

Robb acknowledged there are several hurdles that the beef industry must overcome to tap that international trade potential. Specifically, he said, “We’ve had three major market shocks this decade that were not expected.” He named the

Sept. 11 terrorist attacks, the BSE incident that halted trade, and the international credit crisis last fall that threw the global economy into recession.

Robb pointed out how all three of these events created substantial drops in beef prices and export markets. Specifically, he said, “We took \$6 per hundredweight out of the cattle market last fall because we had five weeks when exports weren’t moving.

The international credit crisis hit the beef industry immediately.”

“It will take years to climb out,” Robb said of these three incidents. But, he added, “The good news is we are starting to make some progress again with the export market.”

He went on to say, “Economies are

*(Continued on page 28)*

**Range Beef Cow Symposium XXI** *(from page 27)*

improving worldwide. ... In fact, the U.S. recession is over, but we're not going to grow very fast in the U.S."

Looking ahead, Robb says U.S. beef exports will have a slight decline in 2009 from the previous year's levels due to the recession. "For the next couple years I don't see a lot of growth on a tonnage

basis," he said. "We may see value increases, but the cow herd is shrinking in the U.S." That means the volume isn't there to increase exports, he explained.

Also contributing to the struggling export market right now are issues such as volatile exchange rates and phytosanitary bans over concerns like H1N1.

"With H1N1 fears we haven't exported as much pork, so we need to consume it domestically, and that has hurt the beef market, too," Robb said.

He also cited the premiums for cattle under 21 months of age for export to Japan as an issue that affects exports, as does Europe's hormone ban. Robb said these

issues will likely continue in the future, as will global consumer demands for traceability, country-of-origin labeling and even convenient beef products.

The U.S. beef industry will need to take these factors into consideration, Robb said, as it works to continue building beef exports that ultimately bring value back to the American beef industry.

"Building foreign demand takes a lot of effort," Robb concluded. "Just because you do a good job of producing beef, doesn't mean people will buy it. Supply doesn't create demand. You've got to go out and work to create it, and it's a long, slow process."

— by Kindra Gordon

**Factors Affecting Consumer Demand**

Economists and market analysts spend a lot of time talking about factors affecting the *supply* of beef. They often talk about how prices cattle producers receive, and consumers pay, change as a result of shifts in supply, James Mintert told cattlemen at the 2009 Range Beef Cow Symposium. The underlying assumption of this type of analysis is that, in the short run, beef demand is relatively stable. However, from a longer-term perspective, beef demand has not been stable. In fact, it has declined precipitously over the last three decades.



"Even when budgets are tight, consumers are willing to pay for convenience," said James Mintert, Purdue University agricultural economist.

As a result, the Purdue University agricultural economist focused his presentation on the factors responsible for the shifts in demand and provided some insight as to how the beef industry can go about improving domestic *demand* for beef in the years ahead.

Mintert's remarks were based upon findings from a major research study that he, along with Ted Schroeder of Kansas State University and Glynn Tonsor of Michigan State University, recently completed with support from the Cattlemen's Beef Board and many state beef councils.

Consumers' income and their

willingness to spend that income are determinants of beef demand, Mintert said. For most of the last three decades, consumers have reduced their savings rate over time, which has made more dollars available for consumption.

“But, following the upheaval in the equity and real estate markets, consumers have really pulled back and increased their savings rates,” Mintert noted, “and this change in savings rates is hurting consumer demand for a number of products, including beef.”

Looking ahead, Mintert said he expects consumers to keep their savings rate higher than was typical in recent years, and this will continue to have a dampening effect on beef demand in 2010. He went on to say that, despite the weakness in the U.S. economy, it's still very important for the industry to focus on several key long-run factors influencing consumer demand for beef as the industry seeks to find ways to increase domestic beef demand.

**“But, following the upheaval in the equity and real estate markets, consumers have really pulled back and increased their savings rates, and this change in savings rates is hurting consumer demand for a number of products, including beef.”**

— *James Mintert*

The Purdue agricultural economist pointed out several ways the industry can take advantage of improved knowledge of these factors to boost beef demand in the long run.

Mintert cited several key drivers of beef demand. In particular, he pointed out that consumers clearly value convenience and are receptive to credible, positive information about beef consumption as it relates to human health and nutrition. Finally, he pointed out, food safety is still an important issue to U.S. consumers and remains an issue on which the industry needs to continue focusing attention and resources.

“Consumers expect food to be safe,” Mintert said, pointing out that for each 10% increase in beef food recalls, their demand model revealed a 0.2% decline in beef demand. Fortunately, in most time frames the number of recalls is relatively small, but when the number of recalls increases sharply, it can have a significant effect on beef demand. For example, a sharp increase in beef food safety recalls in 2007 compared to 2006 pushed domestic demand down by about 2.6%.

“That confirms the need for the beef

industry to be proactive on food safety issues,” he said.

Consumers also respond to receipt of information about health and nutrition as it relates to beef consumption, Mintert said. Publication of information focusing on the linkage among beef consumption, cholesterol and heart disease continues

to have a negative effect on beef demand. For every 10% increase in published articles in medical journals focusing on this relationship, the demand model picked up a 0.2% decline in beef demand.

However, Mintert said, the demand model also revealed that consumers respond to publication of positive

information. For example, consumers responded to the receipt of positive information about beef consumption during the height of the Atkins Diet's popularity. And increased consumer awareness regarding beef as a good source of dietary protein, iron and zinc also has

*(Continued on page 30)*



**Range Beef Cow Symposium XXI** (from page 29)

been positive. Results from the demand model revealed that a 10% increase in publication of positive articles referencing zinc, iron, protein and diet translates to a 0.25% increase in demand.

“The real message is that consumers respond to the receipt of credible information as it relates to beef consumption, health and nutrition,” Mintert added. “To take advantage of this, the beef industry needs to identify more positive messages emphasizing beef’s nutritional properties and communicate that information to consumers.”

Consumers also value convenience. Mintert noted that their demand model indicated that as consumer demand for convenience went up, beef demand declined but poultry demand actually increased.

“One reason this occurred,” he explained, “is the poultry industry has been very aggressive in developing and introducing products that are convenient.”

As further evidence of consumer demand for convenience, Mintert pointed out that, even during the most severe recession of the last three decades, U.S. consumers were not willing to give up the convenience of eating at McDonalds and, as a result, McDonalds has continued to prosper despite the overall weakness in consumer expenditures.

“Convenience is incredibly important to today’s busy consumers. To be competitive in the future, the beef

industry needs to focus on developing and marketing new convenient beef products,” Mintert added. “Even when budgets are tight, consumers are willing to pay for convenience.”

— by *Troy Smith*

**‘Meating’ Global Demand**

Global opportunities exist for fulfilling beef demand, said Clint Peck as he addressed beef producers at the 21st Range Beef Cow Symposium. “This whole demand thing is a slug fest for the consumer’s dollar, both domestically and internationally. We are duking it out against other countries and other proteins.”

Peck, who is director of Beef Quality Assurance (BQA) with Montana State University, credited American beef producers with doing a better job today of producing a consistent beef product. And, he said, Americans should be proud of their competitive advantage, which he identified as the ability to turn cereal grains like corn into beef protein.

“We should be proud of that and use it to our advantage,” he said. “Do what you do best, and trade for the rest.” He pointed out that Australia and South American countries may have the corner on grass-fed beef, but America is tops when it comes to grain-fed beef.

Challenges to market access for beef exports still exist and will need to be addressed, Peck noted.

“The consumer is driving our beef industry now; they’re telling us what they



“Do what you do best, and trade for the rest,” Montana State University’s Clint Peck quipped.

want,” he said. This means food safety, convenience, traceability, animal welfare issues, phytosanitary concerns and high-quality beef products must all remain top of mind, both with regard to domestic and international consumers.

Peck suggested cow-calf producers understand BQA and become certified and that they measure and monitor inputs and outputs so they can continue producing the world’s highest-quality beef and meeting consumer demand.

— by *Kindra Gordon*

**Cattle Outlook**

Cattle-Fax economist Brett Stuart painted a global picture that will be increasingly important to the U.S. beef industry as he addressed symposium participants.

“We’ve got a lot of things going on around the world that affect our beef industry,” Stuart said. During the last two years, American beef producers have been affected by the financial disruptions on Wall Street and internationally. But, he reported, the global stock market is correcting, which is an indication that the economy is recovering and the recession is over.

Here in the U.S., the recovery is still lagging. Stuart explained that the Dow Jones is up 52% over the last six to eight months, but it is still down 20% from January 2008, and unemployment has remained high, retail sales are weak and consumers are still concerned.

“So, we are far from over here in the U.S.,” Stuart said.

U.S. beef demand has also seen a declining trend, and the beef cow inventory is the smallest herd on hand since 1963. And, inventory numbers do not show signs of expansion occurring.

Stuart explained that a healthy industry is one that is growing, but, he added, “Considering demand right now, being on the tight side of supplies is where we need to be right now; it’s actually a good thing.”

(Continued on page 34)

## Range Beef Cow Symposium XXI *(from page 30)*

For beef producers, the optimistic news lies in global food demand. He shared that projections call for the world population to grow — and the fact that beef and dairy production will need to double by the year 2050 to feed the world.

“Global beef consumption is expected to increase by 8.5 million metric tons by 2018.

That is only nine years away,” Stuart said. “If we want to tap that export market, we need to be committed to the international consumer.”

Today, the U.S. exports only 7% of its beef production. Stuart said the U.S. will need to continue gaining international market access by resolving trade issues such

as traceability, hormone and BSE bans, and other consumer concerns. “All of these things limit our ability to trade,” he noted.

In the future, beef promotion will also be important. Currently, Australia is outspending the U.S. 7-to-1 on beef promotion to foreign countries, Stuart said.

— by *Kindra Gordon*



“Global beef consumption is expected to increase by 8.5 million metric tons by 2018. That is only nine years away,” Brett Stuart of Cattle-Fax reported.

### Range-based Heifer Development

How big should replacement heifers be at breeding time? The rate of postweaning growth among heifer calves has long been considered an important factor affecting age at puberty. Research conducted during the late 1960s and through the early 1980s indicated puberty occurs at a genetically predetermined size, and only when heifers reached an appropriate weight could high pregnancy rates be achieved.



Heifers developed on the same type of feedstuffs they are likely to receive after maturity appear to be better adapted to their environment, said UNL's Rick Funston.

Based on that research, it has long been recommended that heifers be developed to reach 60% to 65% of expected mature weight before breeding.

However, according to University of Nebraska-Lincoln (UNL) Reproductive Physiologist Rick Funston, subsequent research suggests reconsideration of target weight guidelines. Funston said rising feed costs have prompted consideration of development systems

*(Continued on page 36)*

**Range Beef Cow Symposium XXI** (from page 34)

utilizing low-cost feedstuffs, including range or grazed crop residues, and target weights ranging from 51% to 57% of expected mature weight.

Funston said traditional guidelines were appropriate when they were established, but genetics and selection for replacement females have changed over time. Current research has shown that feeding heifers to traditional target weights increased development costs relative to more extensive development systems where heifers were developed to lower target weights. Funston cited research suggesting growth from birth to weaning may be more critical than postweaning gain, and age at the beginning of breeding season is more critical than body weight.

According to Funston, heifers developed on the same type of feedstuffs they are likely to receive after maturity appear to be better adapted to their environment. They are likely to be more efficient and stay in the herd longer than heifers developed under a more intensive system. In addition to lower maintenance requirements and increased longevity, the heifers' offspring may also be better adapted, perhaps due to fetal programming.

In addition, when heifers are developed to lower target weights, at a lower cost, but do not become pregnant during a relatively short breeding season, the open heifers may represent a profit center when sold as feeder cattle.

"Heifers may be developed to lighter weights without negative effects on profitability or productivity," Funston said. "But a key point to remember is that heifers must continue to grow throughout their first pregnancy to be productive, so they must be managed accordingly."

— *by Troy Smith*

**Custom Heifer Development Strategies**

To the cow-calf producer, the replacement heifer represents a mixed



"For the best pregnancy rates, we avoid getting heifers too fat too fast," heifer development specialist Patsy Houghton said, citing a goal of 1.0 lb. to 1.5 lb. of gain per day.

blessing. She is a vehicle for genetic improvement of the cow herd and its future profitability. But, because she is nonproductive for the first 2½ years of her life, she's also a drain on the producer's cash flow. She's definitely an inconvenience, but selection and development of the replacement heifer is necessary to the continued success of a cow herd.

"Heifer development is a way to make a difference in a rancher's bottom line — in a hurry," said Heartland Cattle Co. owner/manager Patsy Houghton. "But professional heifer development is about more than feeding heifers."

Since 1990, Houghton's professional heifer development and research center near McCook, Neb., has turned out more than 71,000 heifers bred by artificial insemination (AI). But Houghton said she and her crew are interested in more than getting heifers pregnant. They want to develop replacements with longevity.

Houghton said a heifer development professional should provide a "problem-solving" service, helping fine-tune heifer selection through application of tools, including reproductive tract scoring to identify poor replacement prospects prior to breeding. Proper nutritional development is best achieved through a high-roughage ration, she added.

"For the best pregnancy rates, we avoid getting heifers too fat too fast," Houghton said, citing a goal of 1.0 pound to 1.5 pounds of gain per day. "We like to increase the plane of nutrition late in

**"Heifer development is a way to make a difference in a rancher's bottom line — in a hurry."**

— *Patsy Houghton*

the development period, just prior to breeding, for best results."

Estrus synchronization prior to AI results in an earlier average conception date within a defined breeding season, Houghton explained. The heifers' calves are then of more uniform age, size and weight. Selection of proven AI sires can address goals for calving ease and calf performance.

In addition to enhancing calf value and retention of young cows, Houghton said professional heifer development can help simplify management and optimize use of ranch resources.

"It can remove from the ranch a group of animals that must be managed separately, and free up resources for more efficient use by mature cows," she explained. "A rancher has to decide if (he or she) can afford to develop heifers on land and other resources that won't return a saleable product for 2½ years."

— *by Troy Smith*

