



The Grazer's Gazette

A Newsletter about Livestock, Pastures and Rangeland
Edited by John M. Harper, Livestock & Natural Resources Advisor, Mendocino & Lake Counties

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John Harper's Livestock & Natural Resources Blog Updates February 10, 2010 — March 16, 2010

From time to time The Grazer's Gazette will reprint articles from John Harper's on-line blogs and postings to Facebook and Twitter. If you are not already on John's email distribution list and would like to get this information when it is posted, please contact the UC Cooperative Extension at 707-463-4495 or email cemendocino@ucdavis.edu with your current email address. Also, be sure to notify us of email or address changes so that you continue to receive timely information.

Key Facts Disagree with CBS Evening News Segment on Antibiotics Aired on February 10, 2010 February 12, 2010

For those of you who watched the CBS Evening News Segement on antibiotic use in livestock on February 10th, you might appreciate the following comments forwarded on to me from Dr. Jim Oltjen at UC Davis. The actual comments are from **H. Scott Hurd DVM, PhD** who is the Former Deputy Undersecretary Food Safety, USDA and the Director of WHO(World Health Organization) Collaborating Center for Risk Assessment and Hazard Identification in Foods of Animal Origin, College of Veterinary Medicine, Iowa State University in Ames, Iowa. I hope this helps when you talk to your urban friends and family.



CBS: Antibiotics in Denmark are used sparingly and only when animals are sick.

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HURD: That is true. So sparingly in fact that farmers and veterinarians are not even allowed to use antibiotics to prevent common illnesses they know are coming. They must wait until pigs suffer and die. According to the World Health Organization (WHO), the Danish Pilot Program resulted in an increase in diarrhea in pigs and a 25 percent increase in deaths. In fact, many small farmers were driven out of business due to this ban. The number of farms went from 25,000 in 1995 to less than 10,000 in 2005. What appeared to be a ban on antibiotic use in healthy pigs actually pointed out the benefits of its use in helping pigs grow healthy.

Ironically, once a pig does become visibly sick, the government allows farmers to use antibiotics that are similar to those used in humans. In fact, uses of these antibiotics have risen dramatically since the ban. One of these, tetracycline, is what American teenagers with acne often take for up to six months to treat their condition.

CBS: The experiment to stop widespread use of antibiotics was launched 12 years ago, when European studies showed a link between animals that were consuming antibiotic feed everyday and people developing antibiotic-resistant infections from handling or eating that meat.

HURD: No studies ever showed such a linkage. The government records clearly show it was a precautionary action due to the possibility of risk.

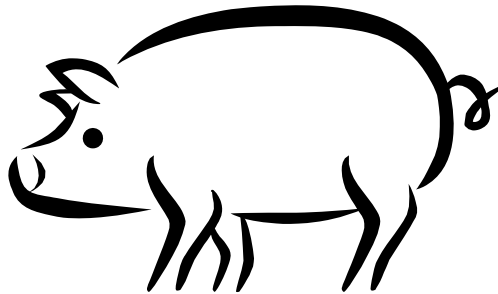
It should be noted that Denmark is a very small country (about one-third the size of Iowa), which produces fewer pigs than the state of Iowa. So clearly, their "experiment" was not on a national (U.S.) scale in terms of size.

Interestingly, farmers in Denmark are using zinc to prevent post-weaning diarrhea, which again was documented by the WHO. Recent data published by Danish scientists show that the use of zinc may actually be selecting for MRSA, which would be another unintended consequence of the ban on antimicrobial growth promoters.

CBS: Since the ban, the Danish pork industry has grown by 43 percent – making it one of the top exporters of pork in the world. All of Europe followed suit in 2006. But the American Pork Industry doesn't want to.

HURD: In 1997, the Danish pork production was 21,180,000 head. In 2008, the industry had grown to 27,078,000, but about 5 million pigs were exported to other European countries to be fed for market. That means that net growth in the industry was approximately 5 percent, not the 43 percent reported by CBS.

DANMAP 2008 – the Danish Government's own report – states that since 1998, the first year of the ban, active kilograms of antimicrobials used to treat animals increased 110 percent while animal production has only increased 5 percent.



Because Denmark exports more than 85 percent of the pork it produces, it may be important for the government and producers to position the ban as a success, regardless of the apparent negative consequences.

CBS: Without growth-promoting antibiotics, it only costs \$5 more for every 100 pounds of pork brought to market in this country.

HURD: According to a recent analysis by Iowa State University, a U.S. ban would increase costs by approximately \$6 per animal in the first year. The total cost of a ban to all U.S. pork producers, spread across a ten-year period, could be in excess of \$1.1 billion and lead to a 2 percent hike in consumer pork prices.

Even though the ban raised pork prices and put small producers out of business, cost is not really the issue. The focus should be on public health. Did the ban in Denmark improve public health? Neither the World Health Organization nor I find any evidence that it did.

CBS: Dr. Ellen Silbergeld said, "I think the Danish and European experience indicate that there will be real and measurable public health benefits," she said.

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"There'll be improvements in food safety and actually in the prevalence of drug resistant infections in people."

HURD: The World Health Organization (WHO) has stated there was no evidence of improved public health (WHO, 2002, pp. 27-29). In fact, resistant rates in human Salmonella cases have increased, and Denmark is currently experiencing their largest outbreak of methicillin-resistant Staph Aureus (MRSA) in its history. Denmark has seen a largest increase in human MRSA cases since it banned antibiotic growth promotion in animal agriculture.

CBS: According to one study, when different countries introduced certain antibiotics on farms, a surge occurred in people contracting antibiotic resistant intestinal infections one to two years later. One infection, Campylobacter, increased 20 percent in Denmark and 70 percent in Spain.

HURD: The example of resistant Campylobacter does not relate to the use of antibiotics for growth promotion or even of any antibiotics in feed. The type of antibiotic, fluoroquinolones, was used to treat sick animals, and in the United States required a veterinary prescription. In pigs, they were delivered by giving the animals a shot.

The antibiotics that have been used in feed in the U.S. are old— most have been used for more than 40 years. In addition, risk assessments have shown that they do not pose a risk to human health. In fact, FDA surveillance shows that resistance to these antibiotics in pork products is steady to declining. (NARMS)

CBS: After the ban, a Danish study confirmed that removing antibiotics from farms drastically reduced antibiotic-resistant bacteria in animals and food.

HURD: The only resistance that decreased was in Enterococcus spp., which is not a food-borne pathogen (DANMAP 2008).

The total tonnage of antibiotic used in Denmark decreased after the ban. However, please note that the amount of product used to TREAT SICK pigs increased 100 percent. It doubled. Why? Because the prior usage, that was labeled "growth promotion,"

was actually preventing illness. It was doing some good. Therefore, it cannot be termed "non-therapeutic."

Now, the key point is that the type of drug used to TREAT sick pigs was different than what had been preventing disease. These treatment drugs are very similar to those used to treat human illness. So, just what did the World Health Organization say about these events and data?

"It is probable, however, that termination of antimicrobial growth promoters had an indirect effect on resistance to tetracycline resistance among Salmonella Typhimurium because of an increase in therapeutic tetracycline use in food animals."

"Increased tetracycline resistance among Salmonella may result in additional human Salmonella infections... since persons who take tetracycline for other reasons are at increased risk of becoming infected with tetracycline-resistant Salmonella."

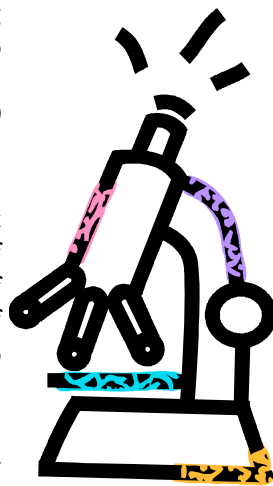
So, based on this, there might be MORE risk now than before the ban because of an increase in treatments. Also, resistance in human food-borne pathogens, such as Salmonella and Campylobacter has not decreased at all.

CBS: Danish scientists believe if the U.S. doesn't stop pumping its farm animals with antibiotics, drug-resistant diseases in people will only spread. "It's not going to be a time bomb that goes off like this," said Dr. Frank Aarestrup, of the Danish Food Institute at the University of Denmark. "It's something that's slowly getting more and more complicated, more difficult for us to actually treat infections."

HURD: That's simply not an accurate description of what America's pork producers do at all. This is evidenced by the grassroots initiative of Pork Quality Assurance Plus®. The program helps guide farmers through the proper and judicious way to handle and use antibiotics responsibly. It's a program that's been in place for more than 20 years.

Also, as one of the primary government officials responsible for promoting the idea of a ban on antibiotic growth promoters, Dr. Aarestrup's

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professional credibility depends on positioning the ban as a success. Drug resistance in food-borne disease is not the major concern with human-resistance issues. Less than 1 percent of food-borne illnesses require antibiotic therapy. The human-health crisis with resistance is focused on pathogens that are often hospital-acquired. Thus, bans, such as what Denmark implemented, will not address those issues.

CBS: It costs very little to convert a farm to antibiotic-free. And it doesn't cost consumers much more either. The example was given showing that antibiotic-free pork production would only cost farmers \$5 more per hundredweight or 5 cents per pound, so why not just do it to improve human health?

HURD: U.S. economists have shown that if those same antibiotic bans occurred in California, it would add \$5 to the cost of every pig. Because I spent three months working in Denmark, I can assure you these effects are real and still present. For this reason, I hope U.S. decision makers will balance this information with the goal of "protecting finite resources while feeding a growing population."

Antibiotics that prevent animal illness are good for us all. A recent study by Dr. Randy Singer at the University of Minnesota has shown that the consumption of subclinically ill poultry could increase the total number of human illness days. Any attempt to ban antibiotic use in livestock won't improve human health, and indeed may result in an increase of food-borne disease. One published risk assessment (Cox, et al.) concluded that there would be 4,500 more cases of food-borne illness if one antibiotic were banned for each one person that may have an extended illness due to use of that antibiotic.

CBS: The FDA has for the first time come out against using certain antibiotics to promote growth in livestock.

HURD: The U.S. Food and Drug Administration (FDA) may be attempting to exercise the European form of the precautionary principle—an overarching view that says, if it looks bad, don't do it. However, current FDA regulations state that each bug-drug combination (bacteria-antibiotic) must be evaluated on a case-by-case basis (Guidance 152). This approach is consistent with a scientific approach to decision making.

Don't Blame Cows for Climate Change

February 18, 2010

The following article was released in January through the College of Agricultural and Environmental Sciences at UC Davis. It is worth a read by livestock producers and for sharing with their urban friends and family.



Despite oft-repeated claims by sources ranging from the United Nations to music star Paul McCartney, it is simply not true that consuming less meat and dairy products will help stop climate change, says a University of California authority on farming and greenhouse gases.

UC Davis air quality specialist Frank Mitloehner says that McCartney and the chair of the U.N.'s Intergovernmental Panel on Climate Change ignored science when they launched a European campaign called "Less Meat = Less Heat." The launch came on the eve of the major international climate summit in Copenhagen in December.

McCartney and others, such as the promoters of "meatless Mondays," seem to be well-intentioned but not well-schooled in the complex relationships among human activities, animal digestion, food production and atmospheric chemistry, says Mitloehner.

"Smarter animal farming, not less farming, will equal less heat," Mitloehner said. "Producing less meat and milk will only mean more hunger in poor countries."

Mitloehner traces much of the public confusion over meat and milk's role in climate change to two sentences in a 2006 United Nations report, titled "Livestock's Long Shadow." Printed only in the report's executive summary and nowhere in the body of the report, the sentences read: "The livestock sector is a major player, responsible for 18 percent of greenhouse gas emissions measured in CO₂e (carbon dioxide equivalents). This is a higher share than transport."

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These statements are not accurate, yet their wide distribution through news media have put us on the wrong path toward solutions, Mitloehner says.

"We certainly can reduce our greenhouse-gas production, but not by consuming less meat and milk. Rather, in developed countries, we should focus on cutting our use of oil and coal for electricity, heating and vehicle fuels."

Mitloehner said leading authorities agree that, in the U.S., raising cattle and pigs for food accounts for about 3 percent of all greenhouse gas emissions, while transportation creates an estimated 26 percent.

"In developing countries, we should adopt more efficient, Western-style farming practices, to make more food with less greenhouse gas production," Mitloehner continued. In this he agrees with the conclusion of "Livestock's Long Shadow," which calls for "replacing current suboptimal production with advanced production methods -- at every step from feed production, through livestock production and processing, to distribution and marketing."

"The developed world's efforts should focus not on reducing meat and milk consumption," said Mitloehner, "but rather on increasing efficient meat production in developing countries, where growing populations need more nutritious food."

Mitloehner particularly objects to the U.N.'s statement that livestock account for more greenhouse gases than transportation, when there is no generally accepted global breakdown of gas production by industrial sector.

He notes that "Livestock's Long Shadow" produced its numbers for the livestock sector by adding up emissions from farm to table, including the gases produced by growing animal feed; animals' digestive emissions; and processing meat and milk into foods. But its transportation analysis did not similarly add up emissions from well to wheel; instead, it considered only emissions from fossil fuels burned while driving.

"This lopsided 'analysis' is a classical apples-and-oranges analogy that truly confused the issue," Mitloehner said.

Most of Mitloehner's analysis is presented in a recent study titled "Clearing the Air: Livestock's Contributions to Climate Change," published in October in the peer-reviewed journal *Advances in Agronomy*. Co-authors of the paper are UC Davis researchers Maurice Piteskey and Kimberly Stackhouse.

"Clearing the Air" is a synthesis of research by the UC Davis authors and many other institutions, including the U.N. Food and Agriculture Organization, U.S. Environmental Protection Agency, U.S. Department of Agriculture, California Environmental Protection Agency and the California Air Resources Board. Writing the synthesis was supported by a \$26,000 research grant from the Beef Checkoff Program, which funds research and other activities, including promotion and consumer education, through fees on beef producers in the U.S.

Since 2002, Mitloehner has received \$5 million in research funding, with 5 percent of the total from agricultural commodities groups, such as beef producers.



World Meat Supply Needs To Double by 2050

February 24, 2010

The following came to me from Dr. Jim Oltjen and heralds some good news for those in the livestock industry.

The world needs to double its output of meat by 2050 to meet growing demand, the U.N. Food & Agriculture Organization (FAO) said in a new "State of Food & Agriculture" report issued last Thursday.

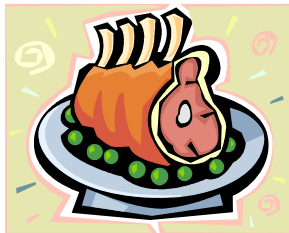
Globally, the livestock sector now produces 228 million metric tons of meat. To meet rising demand, this will need to double in 40 years, putting added pressure on industry and governments to find answers to problems impeding one of the "fastest-growing" parts of agriculture, according to FAO.

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"Rising incomes, population growth and urbanization are the driving forces behind a growing demand for meat products in developing countries, and they will continue to be important. To meet rising demand, global annual meat production is expected to expand from 228 mmt currently to 463 mmt by 2050, with the cattle population estimated to grow from 1.5 billion to 2.6 billion and that of goats and sheep from 1.7 billion to 2.7 billion," according to FAO estimates.

"Livestock contributes 40% of the global value of agricultural production and supports the livelihoods and food security of almost 1 billion people. Globally, livestock contributes 15% of total food energy and 25% of dietary protein. Products from livestock provide essential micronutrients that are not easily obtained from other plant food products," FAO said in its report published in Rome, Italy.



Range Livestock Production, Food, and the Future: A Perspective

February 26, 2010

As a member of the Society for Range Management, I receive both the *Journal of Rangeland Ecology & Management* and *Rangelands*. The latter is dedicated to getting scientifically correct information in a user friendly, non-technical format out to a wide-range of individuals including educators, students, rangeland owners and managers, researchers, and policy leaders. Recently a very good article, written by author Jerry Holechek of New Mexico State University, appeared in *Rangelands* that should definitely be shared to a much wider audience. The following press release provides a brief summary and most importantly there is a link to Jerry's full article. I encourage everyone to give it a read and share with your friends and neighbors.

Rangeland Conservation Key to Weathering Changes in Food Production

Released: 2/25/2010 3:00 PM EST
Source: Allen Press Publishing Services

Newswise — During the past century, food production in the United States has achieved a remarkable degree of efficiency and the cost of food has remained low, but some of the conditions that made such a system possible are changing. Rising human population, water shortages, and depletion of fossil fuels all threaten current food production systems. In short, the era of cheap food may well be coming to an end.

A recent article in the journal *Rangelands*, a publication of the Society for Range Management, explores changing conditions likely to affect U.S. food production, particularly on American rangelands. Decades of cheap oil have led to cheap grain, which has been fed to cattle in an increasingly consolidated animal production system. As fossil fuels become more scarce and prices increase, range operators that rely less on cheap oil and cheap grain may be able to adapt to changes.

Other forces that are likely to influence meat production are growing demand for humanely raised animals; potentially inflationary monetary policies that may stimulate U.S. meat exports; and renewed appreciation for the nation's rangelands. Grasslands used for raising livestock have been devalued by conditions of the past few decades.

"Both privately and publicly owned rangeland came to be viewed by political leaders and the public as disposable resources because it was thought that our meat could be efficiently produced with harvested feed or imported," writes author Jerry Holechek of New Mexico State University. "As a rational hedge against the possibility of technological lag or failure, I most strongly believe everything possible should be done to conserve and enhance our rangelands and farmlands so they will meet the basic needs of a world with ever more people (70 million per year), but with shrinking energy, water, and agricultural land resources."

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Historically, other factors have influenced the American farm economy as well, including:

- Gains in technological efficiency.
- Global climate patterns.
- U.S. policy toward the monetary supply and interest rates.
- Conversion of U.S. grain into ethanol.

Though many questions about the future of agriculture remain unanswered, it is important to discuss such questions and prepare for coming changes that will affect our ability to produce food for a growing population.

Full text of the article, "Range Livestock Production, Food, and the Future: A Perspective," is available at <http://www2.allenpress.com/pdf/1551-501X-31.6.pdf>

About *Rangelands*

Rangelands is a full-color publication of the Society for Range Management published six times per year. Each issue of *Rangelands* features scientific articles, book reviews, and society news. Additionally, readers may find youth, technology, and policy departments. The journal provides a forum for readers to get scientifically correct information in a user friendly, non-technical format. *Rangelands* is intended for a wide-range of individuals including educators, students, rangeland owners and managers, researchers, and policy leaders. The journal is available online at www.srmjournals.org. To learn more about the society, please visit www.rangelands.org.



On-Line Quality Assurance Program Available from American Sheep Industry Association March 16, 2010

This is a similar program to what the California Cattlemen's Association offers its members. It deals with proper injection and handling of the animals. Get certified today!



SSQA Training Accessible Online

You can now become Sheep Safety and Quality Assurance (SSQA) Level 1 certified from the comfort of your own home. The American Sheep Industry Association (ASI) just released the newly developed online version of this training, and it is available at www.sheepusa.org by clicking on "Online Education."

"The American sheep industry has a long history of producing a quality product," commented Glen Fisher, ASI president. "The SSQA course is a valuable tool for producers to use to demonstrate their commitment to this goal."

Consumers are increasingly concerned about the safety of the food they eat as well as the quality of the product they buy. The SSQA program has been developed to ensure that consumer products generated by the U.S. sheep industry are safe and of the highest possible quality.

The Level 1 training is designed to educate producers on the basics of assuring safety and quality in American lamb products, to describe and define the safety and quality guidelines and to assure that producers understand the concepts and reasoning behind the development of the guidelines and the importance of their implementation.

At the conclusion of the training, participants complete the assessment and mail the results to ASI to be added to the growing list of producers who believe that producing safe and high quality lamb is of the utmost importance.

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