

For the Record

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Straight talk about antibiotic use in food animal production presented by ALPHARMA Inc., Animal Health

IT'S THE FOOD ECONOMY, ...

One of the attack points that's emerged against use of antibiotics in food production suggests producers could get more bang for their buck by simply managing animals less intensively. Or, better still, just cleaning their barns. [These are myths](#) that grow out of a misunderstanding about the realities of animal production. Yet it has successfully created a Catch 22 around antibiotics: If it's true, producers are dupes, being manipulated by drug companies. If producers argue it's not true—that antibiotics are indeed worth their investment—then they're accused of being overly mercenary, concerned only with profit.

Of course, the economics of food produc-

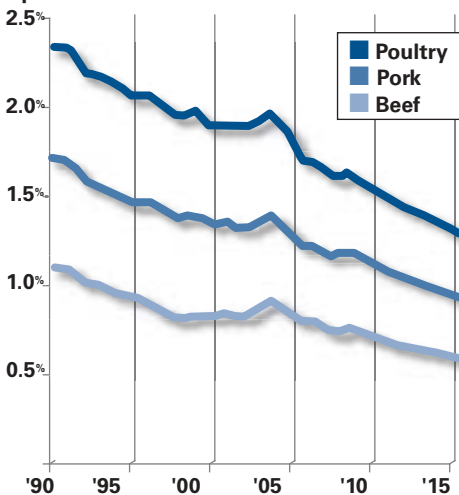


tion in today's environment is far from that black and white. How can a producer educate consumers that it's in *their* best interest when efficiency holds down food costs? See inside.

WHAT HAPPENS WHEN ECONOMIC EFFICIENCY PASSES THROUGH TO CONSUMERS

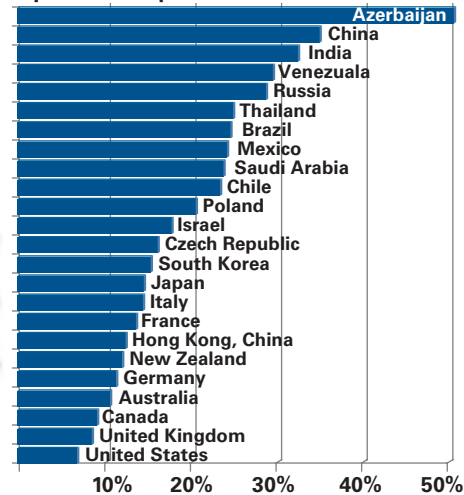
Media sensationalism about the “food crisis,” coupled with real food inflation in the last half of 2008, may have tempted consumers to take for granted the economic miracle U.S. farmers continue to perform, by holding down the cost of food and the percent of income U.S. consumers must devote to feeding themselves.

Percent of U.S. personal income spent on meat



Source: USDA Agricultural Projections to 2017, USDA Economic Research Service

Percent of country's personal consumption expenditures spent on food eaten at home



Also in this issue

- Critics argue free market economics don't do enough to encourage 'sustainable' agriculture. Translation: They want to subsidize inefficiency to impose their vision of what you should eat.
- Efficiency brought about by antibiotics doesn't just protect consumers' food budgets. It also helps guard the environment.

For the record...

Economics of antibiotic use in food production is a difficult issue to argue. Consumers must be educated to understand cost efficiencies ultimately benefit them, not just farmers.

THE ARGUMENTS OVER FREEDOM

Here's a measure of the gulf we must cross in communicating about the economics of food production: A small country in the Western Hemisphere is today's poster child for "local, sustainable" food production. Critics of the U.S. food system praise it for turning its back on oil-intensive farming typical of the U.S. It involves a large share of its citizens in growing their

own food, locally. About 80 percent of farming is organic, and an estimated 90 percent of its capital city's produce is now grown in local "urban farms" and gardens.

"Our efforts will demonstrate to other countries that conventional, chemical-dependent agriculture is not the only way to feed a country," the president of the country's organic farming association said while accepting an annual Swedish award for alternate science. The executive director of **Food First**, a California activist group opposing free trade in agriculture, pronounced, "The whole world should learn from Cuba."

Yup. **Cuba**. Where the amount of food available per person is the lowest of any country in Latin America. Where consumption of grain, tubers and meat falls far below levels of 50 years ago. Where city dwellers scratch out vegetables in back lots, even as vast tracts of rural land lie empty. Where agriculture contributes less than 10 percent to the gross domestic product, but consumes roughly 20 percent

of the working population's labor. Where **economic repression** is surpassed only by Zimbabwe and North Korea, according to the Heritage Foundation.

FREE MARKETS DON'T LIE

Our own organic and "all natural" food faddists who praise Cuba have somehow convinced a portion of consumers and the media that forbidding use of efficiency improving technology like antibiotics will save resources. The truth is the exact opposite. When you consider all inputs, old-school farming is vastly **wasteful of resources** compared to the resource-sparing nature of modern technology. Using antibiotics does not increase demand for natural resources; using antibiotics preserves natural resources. For instance:

■ A **2006 study** by Scotland's Cranfield University modeled the environmental burdens and resource use involved in producing ten commodities. It showed organic poultry meat and egg production actually increased overall energy



FOOD IS JUST TOO CHEAP? Many who advocate for a low-tech food system argue the system's problems arise because food is simply too cheap. They argue that if organic and low-tech practices priced meat out of the reach of average consumers, the resulting decline in consumption would help save the environment and leave more grain to feed the poor.

ANTIBIOTIC USE DECISIONS ARE NOT JUST ABOUT THE DOLLAR

Texas A&M recently reported a research project that surveyed 325 cattle feedlot veterinarians regarding their moral beliefs about antimicrobial use—therapeutic, subtherapeutic and in mass treatment.

The study found the veterinarians' willingness to treat cattle because they believed treatment would improve their health and outcome was influenced more strongly by a sense of moral obligation than by a belief it was an economically important decision. Although a moral imperative outweighed the economic consideration most strongly for acutely sick cattle—as you might expect from veterinarians who take an oath to relieve animal suffering—it's also interesting to note the moral belief outranked economic consideration for "sub-therapeutic" use of antibiotics, as well.

Those veterinarians who believed they had a moral obligation to treat cattle were more likely to believe antibiotics improved cattle health, well-



being and profitability, regardless of whether the cattle were acutely ill, chronically ill or simply at risk of becoming ill. That finding can be interpreted, according to the study authors, as implying those who believed antimicrobials were efficacious thus believed it would be immoral to withhold them, regardless of whether it was for use in obviously sick animals or as mass prevention in animals considered simply at risk of becoming ill.

Source: McIntosh WMA, Schulz S, Dean W. Feedlot Veterinarians' Moral and Instrumental Beliefs Regarding Antimicrobial Use in Feedlot Cattle. J. Community Appl. Soc. Psychol. 2008 In Press.

TO FEED

demands versus conventional production by 30 percent and 15 percent, respectively, because the lower energy demands of organic feed were cancelled out by the poorer bird performance. The contribution to global warming was 45 percent higher for organic poultry.

■ Using an economic model from Iowa State, a 2008 study calculated the land needed to finish a pound of beef on grain using growth promotants, compared to using only grain or using only grass with no growth promotants. It showed growth promotants decrease land demands by two thirds and cut greenhouse gases by 40 percent compared to organic.

■ A 2003 Cornell study calculated if the U.S. banned beef feedlots from using ionophores, as Europe did, the estimated amount of waste nitrogen going into the environment would increase by almost 11,000 tons annually. Feeding those antibiotics to all lactating U.S. dairy cows would cut another estimated 74,000 tons of nitrogen per year.

Modern farm technology, according to agricultural economist Thomas Elam, permits today's farmer to grow one consumer's meat, milk and eggs on **less than half the land** it required in 1961. This not only benefits the environment, but also frees individuals from the drudgery of unfortunates like Cubans who farm not because they want to, but because the alternative is starvation.

Our freely operating markets reflect that reality in the price differential. This may explain why low-tech food elites often call for mandatory elimination of antibiotics. They don't want efficiency. Instead, they want to artificially increase the price of food so we're forced to "adjust our expectations" and adapt their enforced vision of what our diets, lifestyles and occupations should be.

THE PLANET-SPARING BENEFITS OF ANTIBIOTICS

Stephen Page, director of the Australian R&D consulting firm Advanced Veterinary Therapeutics and faculty member of University of Sydney's Veterinary School, spent more than a year reviewing over 2,000 published scientific studies from around the world about the efficiency benefits of low-level antibiotic use in livestock and poultry. **His conclusion:** Their efficiency doesn't just improve the producer's bottom line. Every pound of feed and forage spared because animals perform better makes an impact on the environment, as well. Here are some of those advantages the research has identified for common low-level antibiotics.

Note: The benefits Page lists here reflect findings from the research and should not be interpreted as approved label claims in the U.S. or other countries.

Source: Page SW. *The Role Of Enteric Antibiotics In Livestock Production.* Canberra, Australia: Avcare Limited, 2003.

	AVILAMYCIN	BACITRACIN	BAMBERMYCIN	LASALOCID	MONENSIN	NARASIN	SALINOMYCIN	KITASAMYCIN	OLEANDOMYCIN	TYLOSIN	VIRGINIAMYCIN
REDUCES POTENTIAL ENVIRONMENTAL POLLUTANTS/GREENHOUSE GASES											
Reduces methane emissions			■	■	■	■	■			■	■
Reduces nitrogen excretion	■	■	■	■	■	■	■			■	■
Reduces phosphorus output				■	■	■	■				■
SAVES NATURAL RESOURCES BY IMPROVING ANIMAL EFFICIENCY											
Increases rate of weight gain	■	■	■	■	■	■	■	■	■	■	■
Lowers feed required for each pound of gain	■	■	■	■	■	■	■	■	■	■	■
Reduces carcass waste	■		■								■
Increases output per sow							■				■
Saves pigs/improves growth							■				■
Increases milk per cow				■	■						■
Increases wool growth			■								■
CONTROLS DISEASE TO REDUCE SUFFERING AND INCREASE PRODUCTIVITY											
Poultry necrotic enteritis	■	■		■	■	■	■	■			■
Clostridial enteritis in pigs							■				■
Porcine illeitus	■	■			■		■			■	■
Swine dysentery							■				■
Acute cattle pneumonia				■	■	■	■				
Coccidiosis in calves and sheep				■	■	■	■				
Toxoplasmosis in ewes					■						
PREVENTS METABOLIC DISORDERS THAT REDUCE PRODUCTIVITY & THREATEN HEALTH											
Decreases lactic acidosis				■	■	■	■				■
Decreases laminitis				■	■	■	■				■
Decreases ketosis					■						
Decreases ruminal bloat				■	■						
OFFERS ADDITIONAL ENVIRONMENTAL BENEFITS											
Spares protein in digestion	■	■	■	■	■	■	■			■	■
Spares energy in digestion	■	■	■	■	■	■	■			■	■
Improves mineral absorption				■	■	■	■				■
Improves heat tolerance	■	■		■	■	■	■				■
Decreases boar taint in meat		■									■
Reduces transfer of antibiotic resistance		■	■								
Improves animal immune status		■								■	
Dries litter/aids foot health	■										■
Reduces fly survival in manure				■	■						

Principal Points
It's the Food Economy:
Why Efficient Production
Benefits Food Consumers
and the Environment
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- Many critics of today's food production system argue technology like antibiotics is not only economically unnecessary, but that the entire system should operate less intensively, more naturally.
- In fact, antibiotics and other performance enhancing tools help each of today's farmers free 152 fellow citizens from the necessity of raising their own food, allowing them to pursue other economic activity.
- Antibiotics do not increase the use of natural resources. In fact, they spare resources, which ultimately helps protect the environment.

For the Record, sponsored by a grant from ALPHARMA Inc., Animal Health, is designed to help unite the industry and provide a unified, rational message on behalf of producers whose freedom to use safe, effective, economical production methods is at stake. Working together, we can set the record straight on antibiotics.

Questions or comments? E-mail Steve Kopperud at skopperud@poldir.com or editor Mike Smith at CustomMedia@Food360.com. Read past issues or link to more information on this issue at www.AntibioticTruths.com.

THE GLOBAL REALITY

DR. TRAVIS HILL, D.V.M., MANAGER TRIANGLE RANCH, PADUCAH, TEXAS

Are economics alone a sufficient defense for using antimicrobials to enhance performance? As a veterinarian, I am loathe to defend antimicrobial use solely for profit; however, I think it is appropriate to remember that in a free market system, the price of commodities always gravitates towards their cost of production. That means the cost of production for a food commodity is a good proxy for how many people around the world are able to purchase and consume that commodity (within political restraints, of course).

Some may not understand how relatively expensive, high-quality proteins, such as U.S. beef, play a role in world hunger. But they do. If less beef is produced or if U.S. demand increases, for example, beef is imported—as has happened in recent years. That shifts the protein buying decisions in those export countries and others because

their preferred protein sources become more expensive. Most world population projections estimate dramatic population growth globally, and subsequent dramatic increase in protein demand. Inability to meet that demand will result in malnutrition/and or starvation.

Although we certainly don't want to encourage practices that are scientifically proven to put human or animal populations at risk of infection to antimicrobial-resistant pathogens, we absolutely cannot afford to err on the side of caution if we know that doing so would effectively, albeit indirectly, result in worsening the world hunger situation.



TEN TIPS TO BETTER COMMUNICATE THE ECONOMICS MESSAGE

“Antibiotics make animals cheaper to grow” will be a losing argument unless you can drive home why that ultimately matters to consumers. How? Apply these 10 tips from the [Public Media Center](#), a liberal media consultant that strategizes communication for many activist groups:

1 COMMUNICATE VALUES. Using antibiotics to provide affordable food is important, but so is guarding the basic freedom and self-determination threatened by excessive food nannies.

2 BE AGAINST SOMETHING. It seems illogical, but people are often most comfortable being against, not for, something—especially something they see as evil. So, be against world hunger. Be against elitism in the food system. Be against depriving poor children of affordable meat, milk and eggs.

3 TARGET THE UNDECIDED. The victory will go to those who can convince the “soft middle” they're on the right side by supporting affordable food.

4 ACT LIKE A WINNER. Everyone loves a winner, PMC believes. So, position modern ag as winning the war against global hunger, spreading prosperity to all, and raising living standards.

5 OPPOSE THE OPPOSITION. Don't be timid about pointing fingers at those who deserve it. Illustrate their ulterior motives; explain their hypocrisy.

6 EMPOWER THE PEOPLE. In a culture where average people feel little control over their world, offering them the power to choose high quality diets or information to make better decisions about phony natural food sales pitches gains favor.

7 TARGET OPINION LEADERS. Advocacy and “social marketing” typically don't have budgets for mass media campaigns, so you have to find and leverage your message with the influencers first.

8 BE EXTREME, but responsible. People are often convinced by little more than the passion of your argument. The reality is responsible extremists gain more traction than reasonable moderates.

9 KEEP UP THE PRESSURE. Consensus is seldom permanent, so advocacy must be an ongoing process.

10 DIVERSIFY. Even if it's a single issue, you have to apply multiple independent advocacy campaigns.