

Swine HEALTH REPORT

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ID/INFO EXPO 2002 REPORT

Producers Seek Traceback by Group, Lot ID

Pork producers favor a national identification program that would truly be a "group effort."

"Pork production is unique in that most market animals are raised, maintained and sold in groups," according to Dr. Fred Cunningham, a Moyock, N.C., veterinarian and pork producer. He told the audience at the National Institute for Animal Agriculture's ID/INFO EXPO 2002 in Chicago that group records from weaning to market are a common method to benchmark and monitor performance parameters and implement management strategies.

He also pointed out, however, that the performance of gilts, sows and boars generally is recorded on an individual basis to enhance



management of the breeding herd.

In addition, very few adult breeding swine leave the herd unless they are destined for slaughter.

"It should be recognized that group premises identification and individual animal identification are both viable identification methods in an effective national system," he said. "Pork producers should utilize both components to achieve their identification objectives in a cost efficient manner."

Dr. Mark Engle, who is director of swine health programs for the National Pork Board and vice chair of the NIAA's Animal Identification and Information Systems Committee, pointed out that the swine industry has had mandatory ID since 1988.

Identification practices employed by pork producers today include:

- Individual animal identification for all breeding stock in interstate commerce.
- Individual identification of all adult breeding swine at commin-

gling or slaughter.

- Premises identification of feeder swine in interstate commerce to the premises on which the swine originated.

- All market swine delivered to federally inspected plants are identified at the time of slaughter back to the owner with a tattoo.

- Feeder swine movements across state lines yet within a production system do not require ID but must have a valid production health plane approved by both states and the records must be maintained by premise for three years.

Three main issues make a reliable, coordinated system of swine identification important; domestic and emerging disease management, food safety traceback and feedback about pork value along the food chain.

Dr. Cunningham said pork producers have been active supporters of swine identification necessary to meet the health and regulatory needs of the industry. The push to eradicate pseudorabies (PRV) taught the industry the need for identification in breeding herds, while the industry adoption of the Lean Value concept required individual slap tattoos of each market hog.

"Significant checkoff dollars and producer volunteer time has been committed to these efforts," Dr. Cunningham said. The "Tag-along-Tag" project and the Meat Juice Screening project for PRV were two industry pilot projects

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Group, not individual ID needed

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supported by pork producers to advance identification and disease management.

"Through these programs, it became evident that back tags are not adequate identification for culled breeding animals, and that market swine surveillance is important in eradication programs for diseases like PRV," Dr. Cunningham continued. "Premise identification at market is necessary for efficient

disease surveillance."

Pork producers, in collaboration with beef producers, have sponsored the Industry-Wide Cooperative Meat Identification Standards Committee (ICMISC).

This committee was established to represent the meat industry in identifying and prioritizing significant information/data required for appropriate coding, standardization and tracking in order to create a vertically integrated information system to enable product characteristic tracking and traceback from the consumer through the meat marketing channel to the producer.

DeeVon Bailey, a Utah State University agricultural economist, reminded pork producers at the National Pork Forum last March that identification and traceback has been a high priority in Europe and other parts of the world.

He described the European system as one that provides TTA: traceability, transparency and assurance. The ID program is a qualification to market animals, not a way to add value, he pointed out.

Bailey said ID is evolving at different rates in different countries, but is "moving toward a mandated requirement around the world."

He described the U.S. pork industry as having a good score for the assurance part of the formula, but lagging on the traceability (the ability to track animals back to the source) and transparency (disclosure of feeding and husbandry practices, etc.).

The pork industry must improve the traceback and transparency aspects of its business, he added, or risk losing some important market opportunities.

Dr. Engle said that swine identification in the U.S. is working relatively well today, but could be enhanced by improvements in culled breeding stock identification,

and tracing pigs back to their last premise or location rather than to an owner or P.O. box at the time of delivery to the plant.

"The Tag-along-Tag project taught us that breeding stock identification could be better," he pointed out. That project was developed jointly by pork producers, industry and government officials and was facilitated by Livestock Conservation Institute, the predecessor to NIAA.

Rather than waiting to tag sows as they go to market, Dr. Engle suggested that pork producers might be better served to install a unique ID to replacement breeding stock as they are introduced to a facility. These animals typically are being handled for blood testing and other management tasks at the time of introduction to the herd.

The continued ability to trace culled breeding stock has been cited by swine health officials as a key in finishing the job of PRV eradication from U.S. herds.

Identification of market hogs to their last premise could be coupled with a swine operation's production records to provide full traceback capability in most cases, Dr. Engle pointed out. If production records are not adequate, a lot and group identification could track groups of hogs through a system.

Dr. Cunningham pointed out that recent outbreaks of diseases such as the foot-and-mouth outbreak in the United Kingdom have increased the industry's awareness of the need for identification and traceback.

"Pork producers need a flexible identification system that will meet animal health, regulatory and food safety requirements," he said. "Due to the nature of pork production, group identification through premises identification is adequate to achieve these objectives."

Individual identification methods are used in many breeding herds since it is cost effective. However, individual identification of market swine is neither necessary nor economical at this time, he concluded.



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ID/INFO EXPO 2002

NIAA's National Food Animal ID Task Force Goes to Work

A special task force has been formed to facilitate the advancement of animal identification in the United States. The National Food Animal Identification Task Force was established in April by the National Institute for Animal Agriculture (NIAA). It held its first teleconference meeting in May. Task Force members then gathered in Chicago in June, where six working groups met and discussed at length various aspects of a national ID plan.

The task force presented its preliminary report in July during NIAA's ID/INFO EXPO 2002 in Chicago, a conference and trade show devoted to the issue of animal identification and information systems. Feedback was collected from the symposium.

The ID task force will meet again and consider any revisions before presenting its final recommendations for a national plan at the U.S. Animal Health Association meeting scheduled Oct. 17-24 in St. Louis, Mo.

Task force mission. Neil Hammerschmidt, chief operating officer of the Wisconsin Livestock Identification Consortium and chair of NIAA's Animal Identification and Information Systems Committee, said the mission of the task force is "to ensure the United States has an adequate animal identification system that supports the financial viability of animal agriculture."

This stakeholder-based ID task force has the challenge to collectively develop a national animal identification plan that provides the essential elements of a national program that can be implemented

timely and cost effectively.

Hammerschmidt said the task force is a unified effort involving industry and government. More than 30 industry organizations and a few government agencies have

accepted NIAA's invitation to participate on the task force. Approximately 100 individuals are serving on the various working groups.

Several animal ID working groups and entities have made

significant progress during the past year. "The intent of this task force is not to duplicate such efforts, but to incorporate them into a broad plan that provides greater opportunity for a national program," Hammerschmidt said.

National Food Animal ID Task Force Charge:

1. Determine the immediate needs for animal identification and acknowledge possible long-term requirements.

2. Define a minimal identification system that can successfully address the issues needing immediate action while accounting for flexibility to expand its capabilities to meet anticipated needs of the future.

3. Coordinate efforts among various industry working groups/committees working on animal identification issues.

4. Develop a draft plan for review and discussion at NIAA ID Symposium and finalize plan for presentation at USAHA 2002 Annual Meeting.

5. Finalize an implementation plan in December 2002.



Drivers of Animal ID Beyond the Farm Gate

"It just makes sense that all of our food products become traceable. Traceability is part of a protection package expected by consumers when purchasing a product. Consumer confidence is restored if a recall occurs and the contaminated products can be isolated. Consumers can purchase similar products with other brands. Thus, the entire category is not boycotted because of fear."

—Dr. Karen Penner, food scientist
Kansas State University

"Our identification system is not sufficient to meet current and future animal health and disease control needs. A new or upgraded system is necessary. This new system must be adaptable to multiple species and needs. While developing a new ID system, however, we still need to improve the effectiveness of our current system. We should phase in the new system over time."

—Dr. Robert Hillman
Idaho Department of Agriculture

Trust is one of the most important things we sell. Japan and other foreign buyers of U.S. meat products want proof of our production and processing practices. Worldwide, consumers have an increased awareness and desire to know where food comes from, how it was processed and who produced it. They want to be able to trust in that product. Source verification is very key to this.

—Phil Seng, CEO
U.S. Meat Export Federation

Lagoon BMPs Help Control Mosquitoes That Can Transmit West Nile Virus

As concern over West Nile encephalitis continues to grow, live-stock and poultry producers may be able to reduce populations of mosquitoes that may carry the virus. One species, *Culex quinquefasciatus*, shows a preference for breeding in waste lagoons, said North Carolina State University Extension entomologist Mike Stringham.

While it is not known whether the *Culex* mosquito plays a major role in transmitting West Nile virus, "the prudent decision is to assume that the risk is great enough to be sure mosquito-control Best Management Practices are in place for lagoons," he said.

Two factors, vegetation and the characteristics of the effluent in the lagoon, make the difference between a lagoon that produces few mosquitoes and one with a teeming population of *Culex quinquefasciatus*.

Previous North Carolina State University research demonstrated that mosquitoes can be all but eliminated from animal waste lagoons with good vegetative control and reduction of floating debris. "The nitrogen, organic matter and oxygen content of lagoon water also discourage mosquito breeding when they are above or below a specific range," he said.

Managing vegetation around the lagoon is critical, since mats of floating plant material and other debris provide hiding places and food for the developing larvae. Heavy, unmowed vegetation that hangs into the water along a

lagoon's shoreline provides additional cover for mosquito larvae. It also serves to trap floating plant material, manure and trash that further enhances the habitat for mosquito breeding.

"It is particularly critical to follow mosquito control BMPs from mid-July through late October, when the transmission of encephalitis viruses is most likely," Stringham said.

Those practices include:

- Eliminate weedy growth along lagoon shorelines. A well maintained grass groundcover is much better than a mixed stand of broadleaf weeds. Grasses are easier to maintain and less prone to hang into the water. Tall fescue, bermuda, centipede and carpetgrass are examples of grasses that may be used to stabilize lagoon banks.

- Mow bank vegetation frequently. Weekly or biweekly mowing will eliminate rank growth and reduce the volume of clipped plant material left floating in the water after mowing.

- Regularly clear floating debris from the lagoon surface.

The amount of total Kjeldahl nitrogen (TKN), the chemical oxygen demand (COD) and total organic carbon (TOC) will dramatically affect the suitability of a waste lagoon for the larvae

of the *Culex* mosquito. TKN values for lagoon water of less than 50 mg per liter or greater than 500 mg per liter (4.2 pounds per 1,000 gallons) kills early stage mosquito larvae. TOC values that fall outside the range of 100 to 1,000 mg per liter are also effective, as are COD values of less than 400 mg per liter and

greater than 2,000 mg per liter.

"There is a catch, however," Stringham pointed out. "Effluent values that are in the appropriate range for mosquito control may not be effective if bank vegetation and floating debris are neglected."

Total nitrogen appears to be the most important characteristic of lagoon water when it comes to controlling mosquitoes. High TKN values alone will dramatically reduce larval survival even when TOC and COD values are ideal for mosquito production. Stringham advises growers to test lagoon water in May or June to evaluate its suitability for mosquito production.

Populations of mosquito larvae and pupae in lagoons may become high from time to time in spite of the best prevention efforts. The appropriate use of insecticides will bring an infestation under control within 1 to 3 days. Check with entomologists in your state to find approved larvicides, insect growth regulators or other compounds.

Because mosquito breeding occurs in a zone about 10 feet wide from the shoreline outward, it is not necessary to treat the entire surface area of the lagoon. Calculate treatment needs based on a 10-foot-wide band around the circumference of the lagoon.

Animal facilities may be treated to control adult mosquitoes using either pyrethrin fogs or permethrin surface sprays. Fogging should be done at dusk and requires that the building be closed for 15 to 30 minutes for effective knockdown. Surface sprays should be applied to mosquito resting sites. These generally include interior wall surfaces (especially corners), under building eaves and other surfaces in locations protected from high volume air movement.

West Nile likely will be in the headlines for some time to come. "Awareness and appropriate precautions will go a long way towards minimizing the impact of this disease," Stringham concluded.



Florida to Decide on Gestation Crate Ban

Constitutional amendment would phase out sow stalls for pregnant pigs

Florida voters will consider whether to "limit cruel and inhumane confinement of pigs during pregnancy" when they consider Amendment 10 on Nov. 5. The so-called Florida Anti-Cruelty Amendment was placed on the ballot after petitioners collected more than 689,000 signatures to qualify the measure for the 2002 general election ballot.

The official ballot title is "Animal Cruelty Amendment: Limiting Cruel and Inhumane Confinement of Pigs During Pregnancy." The initiative summary says the measure would ensure that "no person shall confine a pig during pregnancy in a cage, crate or other enclosure, or tether a pregnant pig, on a farm so that the pig is prevented from turning around freely, except for veterinary purposes and during the pre-birthing period."

The Humane Society of the United States said it supports this citizen initiative as part of a larger Halt Hog Factories campaign, which it describes as a movement to "combat large-scale industrial hog operations and to promote more sustainable and humane farming

practices." The organization also pointed out that the Miami-based Burger King fast-food chain has announced that it will begin buying pork from producers who use alternatives to gestation crates.

Frankie Hall, assistant director of ag policy for the Florida Farm Bureau and state executive of the Florida Pork Producers Association, points out that the amendment will have little effect on the state's few remaining pork producers. "We have only about nine commercial pork operations, and only two of those farms use gestation crates," he said. "Those farms combined have a total of only about 700 sows in crates."

Hall says the state's pork producers have not tried to defend gestation crates as a good management practice, but instead have tried to focus media attention on whether the use of a citizen initiative is appropriate forum for regulating animal welfare.

"We continue to try to educate

people, but we really don't have time to teach everyone about production agriculture," he said. "There have been a number of editorials coming out against the amendment saying it is not an appropriate constitutional issue."

The American Association of



Swine Veterinarians submitted a resolution in July that was passed by the American Veterinary Medical Association House of Delegates. It stated that gestation crates are appropriate for sow housing when managed properly.

Minnesota Introduces Early Warning System

The University of Minnesota Veterinary Diagnostic Laboratory has introduced a new early warning diagnostic system that gives veterinarians more time to vaccinate against spreading diseases.

The system, introduced at the recent Leman Swine Conference, will allow veterinarians to electronically submit diagnostic information and easily access, through a Web

site, the analysis of their data and how it relates to the potential spread of a disease. After veterinarians submit their information to the system, the diagnostic laboratories will then quickly provide guidance, via downloadable electronic maps, about the spread pattern of diseases such as pseudorabies, erysipelas or PRRS, in addition to future threats as they are discovered.

Veterinarians will have received permission from herd owners to submit information to the system.

Only those participating herds will then be included in the early warning program to avoid any

breach of confidentiality.

The early warning diagnostic system was developed by a team headed by Dr. Jim Collins. The system is in the final field-testing phase with participating veterinarians and herd owners. New information about the program as it progresses will be posted at www.mvdl.umn.edu.

Pfizer Animal Health and PIC USA both supported the development of the early warning system. "This system will provide exciting new opportunities for disease prevention in the swine industry," said Dr. Steve Sornsen, director of veterinary services for Pfizer Animal Health.

Monitoring Locates PRV In Pennsylvania

The U.S. swine herd made it through June 30 with no infected herds, but continued monitoring of slaughter hogs turned up a pseudorabies (PRV) infected herd in July.

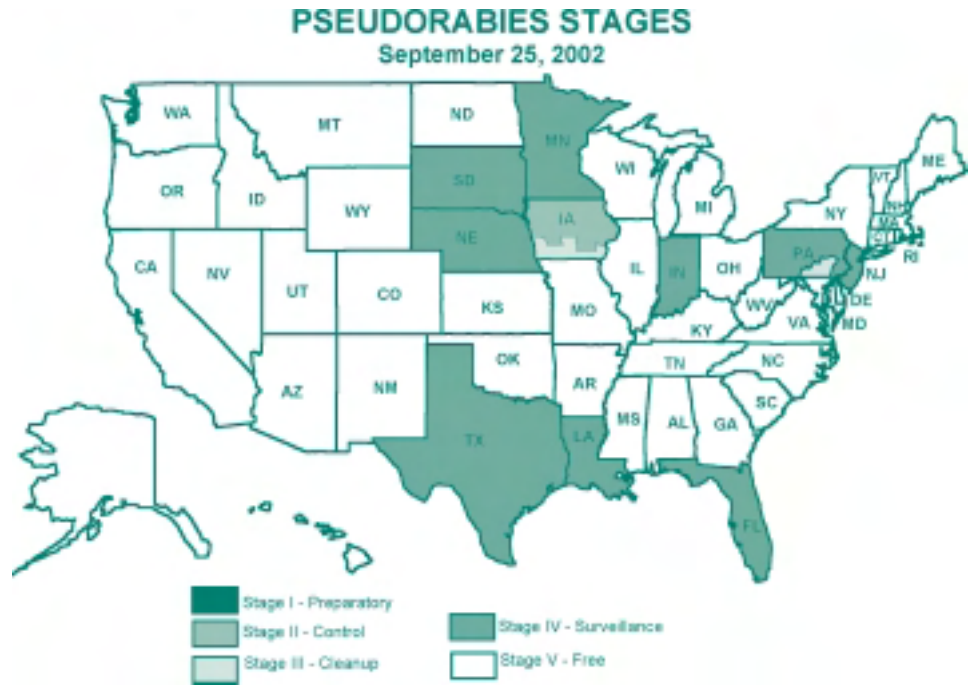
Following a positive slaughter trace, a 700-head Berks County, Pa, breeding herd was confirmed with the disease. Three off-site nurseries and five finishing units floors in several different counties that received pigs from the breeding herd also were infected, according to state animal health officials.

All infected farms were promptly depopulated and thoroughly cleaned and disinfected.

"Funding from the accelerated pseudorabies eradication program (APEP) was a major factor in facilitating prompt disposition of these herds," said Dr. Phil DeBok, Pennsylvania Department of Agriculture.

Dr. DeBok said that, although circle testing around the infected herds has been negative, another slaughter trace uncovered two additional infected small herds approximately five miles from the Berks County breeding herd. These two small herds were in the process of being depopulated at press time. "The relationship, if any, with the larger infected breeding herd has not yet been determined," he said.

As a result of these positive cases, the pseudorabies status of Lancaster, Berks, Lebanon, York, Franklin, Adams and Fulton counties has been downgraded to stage III, with the rest of the state downgraded to stage IV. If there are no additional cases and once the required follow-up testing is completed, state officials are hopeful that the state can attain stage IV status by early 2003.



PRV Progress State by State (Stage and Number of Infected Herds)

STATE	STAGE*	9/30/01	12/31/01	3/31/01	6/30/02
Florida	IV	0	0	0	0
Indiana	IV	0	0	0	0
Iowa	II/III	9	2	0	0
Louisiana	IV	0	0	0	0
Minnesota	IV	0	0	0	0
Nebraska	IV	3	0	0	0
New Jersey	IV	0	0	0	0
South Dakota	IV	0	0	0	0
Texas	IV	0	0	0	0
TOTALS		12	2	0	0

*Stage V states not listed. Bold states report no cases of PRV for at least nine months. Source: USDA

Feral Swine: Next Disease Frontier

Christopher Columbus brought eight head of swine to the West Indies in 1493 on his second voyage across the Atlantic. Some of those hogs ended up running wild in Florida, and 500 years later, there are about three million descendants of these and other "pioneer pigs" running loose in 32 states.

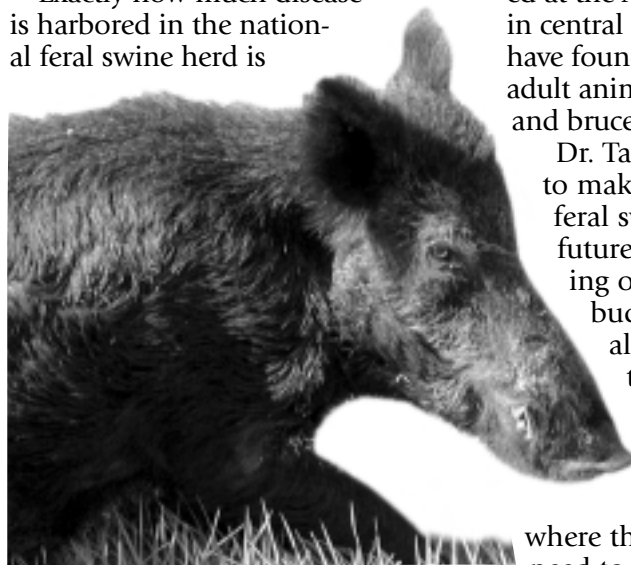
Some of those feral swine—and there are no official estimates of exactly how many—are harboring diseases such as pseudorabies and brucellosis. Any contact with domestic swine could put years of disease-control efforts at risk.

"We need to address the feral swine issue in order to prevent the U.S. domestic herd from being exposed to swine brucellosis and PRV," said Dr. Arnold Taft, USDA-APHIS-VS.

He pointed out that the Office International des Epizootics (OIE) requires countries to install measures that prevent transmission of disease from feral, or wild swine, to the domestic industry. Such a pro-

gram needs to have a national budget that provides funds for research on population dynamics and disease management, he said, plus provide aid to state programs.

Exactly how much disease is harbored in the national feral swine herd is



difficult to pin down. In a feral hog control study of 589 feral hogs removed from a coastal plain habitat in South Carolina, researchers found

that 13.9 percent were positive for swine brucellosis and 9.7 percent tested positive for PRV. Some populations have a much higher incidence. In tracking feral hogs harvested at the Avon Park Bombing Range in central Florida, wildlife officials have found that up to two-thirds of adult animals tested positive for PRV and brucellosis in any given year.

Dr. Taft said he expects the U.S. to make the first steps toward a feral swine program in the near future. USDA is exploring funding options. "An adequate budget would allow us to allocate money to states so they could operate a feral swine program," he said.

"We need to know how many feral pigs there are in the U.S. and where they are located. We also need to expand research to learn more about how to control or eliminate disease from feral swine, and come up with ways to keep the feral population from multiplying."

APP Theft Spurs Pork Producers to Review Biosecurity Procedures

The National Pork Board is reminding producers and veterinarians to carefully review biosecurity procedures following the reported theft of an infectious agent from a Michigan State University laboratory.

MSU officials said a suspect has been identified and that evidence suggests the bacterial cultures have been destroyed.

Officials reported the theft of the bacterium *Actinobacillus pleuropneumoniae* (APP) on Sept. 13. It was taken from a campus research facility. The stolen materials were part of a university project to develop swine vaccines.

Dr. Beth Alexander, MSU university physician, said the material did not pose a threat to human health.

The National Pork Board pointed

out, however, that the agent can cause acute pneumonia in swine.

"APP can be a cause of a serious respiratory disease in pigs," said Dr. Beth Lautner, vice president of science and technology at the National Pork Board. "It has been found internationally in swine herds including the U.S. since the mid- to late 1970s."

The organism formerly was called *Haemophilus pleuropneumoniae* or HPP. To minimize its impact, it is important to rapidly diagnose the disease and institute appropriate treatment, Dr. Lautner said.

Veterinary diagnostic laboratories have a variety of diagnostic tools to make a rapid, definitive diagnosis. Typically, the disease can be treated

with injectable antibiotics.

Pork producers are being asked to review their biosecurity and security plans at their farms using some new tools funded by checkoff dollars.

The Biosecurity Guide and Security Guide are available at www.porkboard.org. Producers without Internet access can call 800-456-PORK for copies.

Producers also should report any suspicious activity or people around their farms or community to local law enforcement officials. They also should contact their veterinarian about any unusual health situation in pigs such as cough, fever, reduced appetite, acute pneumonia, encephalitis or sudden death. In some cases, frothy and bloodstained nasal discharge can also be seen.

Officials said no disease has been linked to the theft at this time.

AHI Survey: Antibiotic Use Decreasing

A survey of Animal Health Institute members shows that the volume of antibiotics used in animals in the U.S. steadily declined over the past three years. In 2001, 21.8 million pounds of antibiotics were sold, dropping from 23.7 million pounds in 2000 and 24 million in 1999.

The survey data include antibiotics used for both farm and companion animals.

Dr. Herman Goossens of the University of Antwerp presented the findings at the recent Inter-science Conference on Antimicrobial Agents and Chemotherapy.

It is the world's premier scientific meeting on infectious diseases and

antimicrobial agents.

"Veterinarians and livestock and poultry producers are constantly evaluating their use of antibiotics as part of the judicious use of these products," said AHI President and CEO Alexander S. Mathews. "While meat production between 1999 and 2001 rose 1.1 million pounds, use of antibiotics is not rising. The amount of antibiotics used per pound of meat produced is going down."

Mathews said the trend is due to judicious use of antibiotics and continuing improvements in production practices that reduce the need for antibiotics; continued improvements in production and preventative care practices; and the ongoing efforts of various public health and consumer advocacy groups to raise awareness of the issue.

Therapeutic use of antibiotics to treat, control and prevent disease

continues to comprise more than 80 percent of total use, despite claims that a majority of antibiotics are fed unnecessarily to healthy animals.

Mathews pointed out that the European ban of antibiotics for use in growth promotion has sparked significant increases in the use of more modern antibiotics, and those in classes used in human medicine.

Denmark, frequently cited as a model of responsible antibiotic use, has seen a 96 percent increase in the use of therapeutic drugs for animals since 1996. "The striking increase in animal disease and the need for therapeutic intervention works against the interests of public health," he said.

Mathews added that AHI is continuing in its efforts to provide the most accurate assessment possible of the types of veterinary antibiotics being used and their specific applications.

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