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News Release

Congressional and Public Affairs (202) 720-9113; FAX: (202) 690-0460 Steven Cohen

FSIS Seeks Additional Comment On Sanitation Procedures

WASHINGTON, March 31, 2004—USDA's Food Safety and Inspection Service (FSIS) today announced it is seeking additional information related to its Jan. 12, *Federal Register* notice announcing a series of interim final rules to further protect the meat supply against Bovine Spongiform Encephalopathy (BSE)

After the diagnosis of a positive case of BSE on Dec. 23, 2003, USDA announced the prohibition of the use of specified risk materials for human food. SRMs are tissues designated as being of higher risk for containing the infective agent that causes BSE. FSIS is seeking public comment on methods used to prevent cross-contamination of carcasses with SRMs in order to further strengthen the measures it currently requires of establishments.

The deadline for receiving comments is April 12, 2004, the original comment deadline for the interim final rules. Comments should be directed to: FSIS Docket Clerk, Docket #03-025IF, Room 102, Cotton Annex, 300 12th and C Street, SW, Washington, DC 20250-3700.

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NOTE: Access news releases and other information at the FSIS web site at http://www.fsis.usda.gov.

For Further Information, Contact:

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FACT SHEET - April 2, 2004

"FSIS SEEKS ADDITIONAL COMMENT ON SANITATION PROCEDURES"

- In ongoing efforts to protect the safety of the public food supply, FSIS is seeking public comment on methods used to prevent cross-contamination of carcasses with SRM in order to further strengthen the measures it currently requires of establishments.
- With good cause, FSIS is amending the Federal meat inspection regulations to designate certain animal origin products as "specified risk materials. (SRM)." See attachment 1, SRM list.
- Appropriately, the Agency is declaring that SRM are inedible and prohibiting their use for human food.
- The Report on Measures Relating to BSE in the United States relates, "While
 the removal of SRM will significantly reduce risk, it must be recognized that
 contamination of carcass with SRM (specifically CNS) also should be
 avoided."
- Prion Busters, Inc. is a large group of concerned livestock veterinarians and other scientists who intend to assist USDA's ongoing efforts to stop contamination and cross-contamination of carcasses with SRMs by implementing a safe and reliable, non-toxic enzymatic infectious prion decontamination process.
- Made possible only by USDA funding, in March, 2004, using the unique enzymatic decontamination method, Prion Busters, Inc. and USDA/WS have taken USDA administrative management advice and repeated 2003 USDA funded studies of safe BSE destruction below ELISA detection levels, 'and now repeated' with USDA/WS on CWD infectious prion at Colorado State University Veterinary Diagnostic Laboratory. Those preliminary tests are successfully completed and CWD prion was repeatedly destroyed below Bio-Rad ELISA detectable levels.
- Prion Busters, Inc. proposes additional fast-paced research in collaboration with USDA/WS and Colorado State University, Department of Animal Sciences leading to additional safety measures wherein non-toxic enzymatic decontamination utilizing a steam-cleaning combined high-pressure vacuum suction method creates a 'firewall-dirty/clean line" in meat processing plants, especially usable in small and very small establishments.
- This method renders SRMs contained and decontaminated of prions below ELISA detection levels.
- Prion Busters, Inc. proposes other high pressure steam applications and vacuum suction research wherein a non-toxic enzymatic decontamination process is applied to decontaminate carcasses and limit potential crosscontamination by SRMs; thereby, assisting USDA in further strengthening the measures it currently prescribes for protection of the US food supply.
- Prion Busters, Inc. proposes fast-paced research leading to additional safety measures wherein non-toxic enzymatic decontamination can be utilized to safely inactivate infectious prions onsite, in SRM, on transport, on

- equipment, and on surfaces in and around meat processing establishments thereby reducing potential cross-contamination of infectious prions.
- Prion Busters, Inc. has a plan to create a firewall between hoofed livestock and meat wherein the area can be enzymatically decontaminated using steam applications after a defined number of mature cattle are processed.
- In the unlikely event of a positive ELISA for CWD, BSE, or Scrapie the enzymatic decontamination process poses multiple fire-walls for SRM containment of potentially cross-contaminated carcasses.
- Prion Busters, Inc. proposes that such a process will stop radical downstream contamination of meat supplies in the unlikely event of contamination occurring at any point in meat processing.
- Prion Busters Inc. proposes rapidly-performed research on a Quality Control cross-check method wherein ELISA testing with valid internal controls and certain method therein can be used to prove the enzymatic degradation of infectious prions of BSE and CWD below current nanogram levels; below pico or perhaps to attogram levels.
- Prion Busters, Inc. proposes the inclusion of an enzymatic decontamination process into all SRM at the meat processing plant at the point of SRM creation rendering SRM infectious prion free.
- The Prion Busters, Inc. auto-catalytic enzymes do not enter the food chain.
- Prion Busters, Inc. proposes that this research will be safe to all participants, readily available with standard equipment, and the follow-on process is economical to packing plants and rendering plants of all sizes, especially the small and very small meat processing companies.
- Prion Busters, Inc. proposes the funding of such research through the USDA-New Technology (NTD) granting system, now in place beginning with Phase I of submitted materials.
- Biodigesters use unsafe toxic chemicals, are costly at \$900,000 per unit, and are 'huge' and costly at 25 cents per pound (\$500/ton of SRM) to operate, though less costly than 75 cents per pound (\$1500 per ton) for unsafe incineration.
- Prion Busters, Inc. has a non-toxic, safe enzymatic decontamination process
 that costs less than \$400 per ton to operate, includes a polyclonal and
 multiple monoclonal ELISA quality control test to be conducted by Prion
 Busters' group of federally accredited veterinarians, and uses a nonpathogenic surrogate prion marker for process efficacy. Setup costs are 50%
 lower than 'biodigestor' costs. See attachment 2.

Respectfully,

Dr. Don Höglund DVM, MS

Prion Busters, Inc.

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ATTACHMENT 1

Department of Agriculture- FSIS Docket No. 03-025IF

Summary – Interim Final Rule and request for comments.

Prohibition of the Use of Specified Risk Materials for Human Food and Requirements for the Disposition of Non-Ambulatory Disabled Cattle

AGENCY: Food Safety and Inspection Service, USDA.

ACTION: Interim final rule and request for comments.

SUMMARY: The Food Safety and Inspection Service (FSIS) is amending the Federal meat inspection regulations to designate the brain, skull, eyes, trigeminal ganglia, spinal cord, vertebral column (excluding the vertebrae of the tail, the transverse processes of the thoracic and lumbar vertebrae, and the wings of the sacrum), and dorsal root ganglia (DRG) of cattle 30 months of age and older, and the tonsils and distal ileum of the small intestine of all cattle, as ``specified risk materials'' (SRMs). The Agency is declaring that SRMs are inedible and prohibiting their use for human food. In addition, FSIS is requiring that all non-ambulatory disabled cattle presented for slaughter be condemned. The Agency is requiring that federally-inspected establishments that slaughter cattle and federally-inspected establishments that process the carcasses or parts of cattle develop, implement, and maintain written procedures for the removal, segregation, and disposition of SRMs. Establishments must incorporate these procedures into their HACCP plans or in their Sanitation SOPs or other prerequisite program. FSIS is taking this action in response to the diagnosis on December 23, 2003, by the U.S. Department of Agriculture of a positive case of bovine spongiform encephalopathy (BSE) in an adult Holstein cow in the State of Washington. This action will minimize human exposure to materials that scientific studies have demonstrated as containing the BSE agent in cattle infected with the disease. Infectivity has never been demonstrated in the muscle tissue of cattle experimentally or naturally infected with BSE at any stage of the disease.

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[Federal Register: January 12, 2004 (Volume 69, Number 7)]
[Rules and Regulations]
[Page 1861-1874]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID: fr12ja04-25]
[[Page 1861]]
Part V
Department of Agriculture
Food Safety and Inspection Service
9 CFR Part 301, 309, et al.
Prohibition of the Use of Specified Risk Materials for Human Food and
Requirements for the Disposition of Non-Ambulatory Disabled Cattle;
Meat Produced by Advanced Meat/Bone Separation Machinery and Meat
Recovery (AMR) Systems; Prohibition of the Use of Certain Stunning
Devices Used To Immobilize Cattle During Slaughter; Bovine Spongiform
Encephalopathy Surveillance Program; Interim Final Rules and Notice
[[Page 1862]]
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DEPARTMENT OF AGRICULTURE
Food Safety and Inspection Service
9 CFR Parts 309, 310, 311, 318, and 319
[Docket No. 03-025IF]
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UNITED STATES DEPARTMENT OF AGRICULTURE FOOD SAFETY AND INSPECTION SERVICE

WASHINGTON, DC

FSIS NOTICE 4-04 1/9/04

Awareness Meeting Regarding New Regulations That Prohibit Non-Ambulatory Disabled Cattle and the Use of Certain Materials From Cattle for Human Food

FSIS will issue three regulations and a notice in the Federal Register on January 12, 2004, in response to the diagnosis by USDA of a positive case of BSE in an adult Holstein cow in the State of Washington. These regulations and the notice will minimize human exposure to materials that scientific studies have demonstrated as containing the BSE agent in cattle infected with the disease.

The regulations prohibit the slaughter of non-ambulatory disabled cattle and identify a list of materials, including Specified Risk Materials (SRMs), that may present a risk for transmitting Bovine Spongiform Encephalopathy (BSE) and are now inedible:

- · For all cattle:
 - The tonsils are an SRM
 - The small intestine -- the distal ileum is the SRM
- For cattle 30 months of age and older:
 - The head skull, eyes, brain, and trigeminal ganglia are the SRMs
 - The vertebral column spinal cord and dorsal root ganglia (DRG) are the SRMs

Upon receipt of this FSIS notice, at establishments that slaughter cattle or establishments that process bone-in parts of cattle carcasses, inspection program personnel are to inform plant management through an awareness meeting about the new regulations and policies, inform them that the regulations are available on the FSIS website at http://www.fsis.usda.gov/oa/news/2004/bseregs.htm, provide them a copy of applicable checklists (see attachments), and inform them that as of Monday January 12, 2004, regulatory requirements will be in effect that prohibit the slaughter of non-ambulatory disabled cattle and that require establishments to ensure the removal, segregation, and disposition of SRMs. Inspection program personnel are to inform plant management that if an establishment slaughters non-ambulatory disabled cattle or fails to ensure the removal, segregation, and disposition of SRMs, inspection program personnel will take a regulatory control action as set out in 9 CFR 500.2(a)(3), conditions preclude FSIS from determining that product is not adulterated.

At the first weekly scheduled PBIS meeting after receipt of this FSIS notice, inspection program personnel are to review the applicable checklist with the plant management to ensure that the

establishment understands what is required under the new regulations. Because the new regulations and policies are for the most part food safety related for beef products, inspection program personnel also are to inform the establishment that it is to reassess its hazard analysis to determine what steps, if any, are necessary to ensure that its products are free of materials that present the risk of transmitting BSE infectivity. Also at this meeting, inspection program personnel are to inform plant management that by the time of the second weekly PBIS-scheduled meeting, inspection program personnel will begin to verify that the establishment has incorporated the appropriate procedures and controls into Hazard Analysis and Critical Control Point (HACCP) plans, Sanitation Standard Operating Procedures (Sanitation SOPs), or prerequisite programs as required by the new regulations. Inspection program personnel also are to inform plant management that if it does not address procedures and controls in its HACCP plans, Sanitation SOPs, or prerequisite programs, a Notice of Intended Enforcement Action will be issued.

In a **memorandum of interview**, inspection program personnel are to document who was present at the initial awareness meeting, the date and time of the meeting, what was discussed, and any documents that were shared with management. Inspection program personnel are to maintain a copy of the memorandum in the official government file and provide a copy to the plant management.

In the interim period prior to the second weekly scheduled PBIS meeting, while the establishment is reassessing the HACCP plan(s), if inspection program personnel identify noncompliance it will be documented as 06D01 using the "product based" trend indicator.

At the second weekly scheduled PBIS meeting, inspection program personnel are to verify that the establishment has addressed, in writing, the necessary procedures and controls within the HACCP plan, Sanitation SOPs, or prerequisite program.

After the second weekly scheduled PBIS meeting, inspection program personnel will verify that the requirements are being met utilizing the HACCP or the Sanitation SOPs procedure and document noncompliance accordingly.

/s/ Philip S. Derfler

Assistant Administrator
Office Policy and Program Development

Mgt, TRA, ABB, TSC, Import Offices	DISTRIBUTION: Inspection Offices; T/A Inspectors; Plant Mgt; T/A Plant Mgt; TRA; ABB; TSC; Import Offices	NOTICE EXPIRES: 2/01/05	OPI: OPPD
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Checklist for New Regulations Regarding Non-Ambulatory Disabled Cattle and Stunning

Is the establishment aware:

- that non-ambulatory disabled livestock, including cattle, are now defined in 9 CFR 309.2(b) as livestock that cannot rise from a recumbent position or that cannot walk, including, but not limited to, those with broken appendages, severed tendons or ligaments, nerve paralysis, fractured vertebral column or metabolic conditions?
- that the new regulations state that non-ambulatory disabled cattle are to be condemned and disposed of in accordance with 9 CFR 309.13?
- that cattle, regardless of whether they are non-ambulatory disabled, can no longer be slaughtered under the emergency slaughter provisions of the regulations, in modified 9 CFR 311.27?
- that captive bolt stunners that deliberately inject compressed air (air injection stunning) into the cranium at the end of the penetration cycle shall not be used to stun cattle (see 9 CFR 3313.15(b) (2)(ii))?
- that the heads from cattle 30 months of age or older are to be condemned unless the establishment can ensure that the stunning does not result in brain leakage onto the head?
- that cattle selected by APHIS for BSE Surveillance testing that are not non-ambulatory disabled are slaughtered but will be held and are not "inspected and passed" until the results of the test are received and are negative?

Has the establishment addressed:

- What is being done to ensure that these cattle do not enter the establishment?
- What is being done to ensure that these cattle are humanely handled and killed in a timely fashion, and removed from the premises to prevent insanitary conditions?

Checklist for New Regulations Regarding Specified Risk Materials (SRMs) in Slaughter Operations

Is the establishment aware:

- that the regulations at 9 CFR 310.22(a) designate the following materials as SRMs and prohibit their use for human food:
 - 1. the brain, skull, eyes, trigeminal ganglia, spinal cord, vertebral column (excluding the vertebrae of the tail, the transverse processes of the thoracic and lumbar vertebrae, and the wings of the sacrum), and dorsal root ganglia (DRG) of cattle 30 months of age and older, and
 - 2. the tonsils and the distal ileum (distal ileum is a SRM, but to ensure effective removal of the distal ileum, the establishment is required to remove the entire small intestine from all cattle)?
- that if it does not segregate cattle 30 months of age and older from younger cattle it is to handle all cattle as if they were 30 months of age and older?
- that it is recommended if old and young cattle are slaughtered and intended to be segregated, that
 the young cattle are slaughtered before old cattle or that the equipment used on the cattle 30
 months of age and older is sanitized and there is no cross-contamination of carcasses less than 30
 months of age.

Has the establishment addressed:

- How it will ensure appropriate segregation and disposal of the small intestine and tonsils of all cattle?
- How it will determine age of cattle, such as by records or dentition?
- How it will segregate cattle 30 months of age and older from cattle younger than 30 months.
- How it is removing, segregating, and disposing of SRMs to ensure that there is no cross-contamination with edible product? (NOTE: For example, the vertebral columns from cattle 30 months of age and older do not have to be removed during the slaughter operation. However, if they are not removed in the slaughter operation, procedures must be put in place to ensure that the vertebral columns are adequately identified as being from cattle 30 months of age and older and the documentation transfers with the vertebral columns until they are appropriately disposed of as inedible.)

Checklist for New Regulations Affecting Boning Operations for Bone-in Parts, Including Bones, of Cattle Carcasses

Is the establishment aware:

- that the new regulations (9 CFR 310.22) prohibit the use of the skulls and vertebral columns from cattle 30 months of age and older (except for the vertebrae of the tail, the transverse processes of the thoracic and lumbar vertebrae, and the wings of the sacrum)? (NOTE: Parts of carcasses 30 months of age and older can enter the boning operation, post-slaughter and post-chill, for the removal of the SRMs).
- that if it does not have documentation about the age of the cattle from which vertebral columns are derived, it is to handle all skulls and vertebral columns as if they were from cattle 30 months of age and older?
- that the traditional T-bone or porterhouse steaks and bone-in rib roasts can no longer come from cattle 30 months of age and older (i.e., a portion of the vertebral column bone defining these cuts of meat must now be removed, resulting in a semi-boneless cut of meat)?

Has the establishment addressed:

- How it receives documentation from the slaughter operation regarding the age of cattle from which the skulls and vertebral columns are derived?
- How it will segregate the skull and prohibited sections of the vertebral column from cattle 30
 months of age and older (i.e., the bones that contain central nervous system-type tissues) from all
 other bones?

Checklist for New Regulations Affecting Beef Used in Advanced Meat Recovery (AMR) Systems

Is the establishment aware:

- that the new regulations (9 CFR 318.24) prohibit the use of the skulls or vertebral columns (excluding the vertebrae of the tail, the transverse processes of the thoracic and lumbar vertebrae, and the wings of the sacrum bones) of cattle 30 months of age or older from use in an AMR system?
- that the new regulations (9 CFR 318.24) prohibit product derived from AMR systems from the bones of cattle of any age from containing any central nervous system-type tissues (i.e., brain and trigeminal ganglia from the skull, or spinal cord and DRG from the vertebral column)?
- that the new regulations (9 CFR 319.5) prohibit the use of Mechanically Separated (Beef) and that these labels will be rescinded?
- that there are additional new non-food safety related regulatory requirements
 (9 CFR 318.24) related to the production of AMR for bone solids (calcium) and bone marrow (iron)?

Has the establishment addressed:

- how it segregates skulls and vertebral columns from cattle 30 months of age and older from skulls and vertebral columns from cattle younger than 30 months?
- how it will prevent product derived from AMR systems from containing brain, trigeminal ganglia, spinal cord, or DRG?

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ATTACHMENT 2

Biosecurity News - April 1, 2004

Journal of the American Veterinary Medical Association

The breakdown on biodigesters

Alternative for the disposal of TSE-infected animals, other animal waste gains popularity

In just six hours, a giant pressure cooker-like machine can turn a 1,200-pound cow carcass into a pathogen-free, aqueous solution of small peptides, amino acids, sugars, and soaps and a pile of powdered bone.

The machine, called a biodigester or tissue digester, has become popular with veterinary colleges and laboratories as a cheaper, more environmentally friendly alternative to incinerating animal carcasses

Biodigesters use alkaline hydrolysis to decompose animal carcasses and other potential hazardous wastes rapidly. Gordon Kaye and Peter Weber, medical researchers at Albany Medical College, developed the first biodigester in 1992, as an inexpensive way to dispose of laboratory animal remains containing low-level radioactivity.

The subsequent discovery that biodigesters destroy prions, coupled with a

decline in the use of incinerators, has buoyed their popularity. Incineration can destroy prions if the heat is high enough, according to experts, but many incinerators at veterinary colleges and laboratories have been decommissioned because they are aging and no longer meet Environmental Protection Agency standards.

Joseph H. Wilson, the president of WR2, the Indiana-based company that makes the biodigesters, said the company has sold more than 30 of the machines, which range in price, depending on their size. Machines designed to

"I think eventually, everybody will be going to this system or something similar."

-ROBERT L. HOCKMAN, ASSOCIATE DIRECTOR FOR FACILITIES, UNIVERSITY OF FLORIDA COLLEGE OF VETERINARY MEDICINI

dispose of rodents can cost as little as \$25,000, whereas machines that diç 51 several large animals at once can cost more than \$1 million. The company' clients include the veterinary colleges at University of Florida, Colorado State Ur versity, the University of Minnesota, Texas A&M, and the Department of Agriculate. Several other veterinary colleges have biodigesters on order or have expressed interest in getting one, Wilson said.

Though the machines are expensive to purchase, the cost of operating them is about a third of the cost of using a commercial incinerator, said Dr. Fobert Shull, the director of the Wisconsin Veterinary Diagnostic Laboratory, which houses the USDA's new mobile biodigester. The biodigester arrived at the laboratory, which is part of the National Animal Health Laboratory Network, last fall and became fully operational in mid-January.

For Dr. Shull's lab the cost of digesting animal carcasses is about 25 cents per pound versus 75 cents per pound for incineration. The biodigester may provide substantial savings for the state, which will likely cull and test hundreds of deer this year as it tries to stop the spread of chronic wasting disease.

Biodigestion also is a safe way to dispose of animals infected with other foreign animal diseases, such as bovine tuberculosis and brucellosis, Dr. Shull said.

Dr. Linn A. Wilbur, the USDA area veterinarian-in-charge of Wisconsin, said the \$900,000 biodigester in Wisconsin, which is built into an 18-wheeler, is a regional resource that the USDA could use to dispose of animal carcasses in an animal disease outbreak anywhere in the Midwest.

"If we have an emergency, we can take it out and move it to wherever we need it," Dr. Wilbur said.

In addition to being cost-effective, the biodigestion is less harmful to the environment and the health of staff than other methods, according to Robert L Hockman, the associate director for facilities at the University of Florida College of Veterinary Medicine. He explained that staff members responsible for animal disposal are not exposed to the fumes and ash created during incineration; in fact, with the biodigester, they have no direct contact with the remains. "It's much better for the environment, much cheaper (than incineration), and it's

news I biosecurity

(Above) A staff member at the University of Florida loads a cow carcass into the university's biodigester. After the tissue

digestion is complete, the liquid waste

is sent through a sanitary sewer, and

remains of the bones are sent to a land-

fill (Inset) The bone remains are reduced

to mineral ash, and they crumble when touched.

Photos courtesy of Joseph H.

better for the people who work with it," Hockman said.

The process begins by lowering a carcass into a large pressure cooker-like machine, using a crane, then adding caustic liquid and heating the carcass. After several hours, the carcass is reduced to a sterile, aqueous solution that can be sent through a sanitary sewer to a sewage treatment facility. The

only solid byproducts are the bones and teeth, which are reduced to mineral ash, and crumble when touched. The solid remains are biologically inactive and can be sent to a landfill, Dr. Shull said.

At Colorado State, the liquid waste is cooled until it becomes gooey and is put to use as fertilizer. Dr. Terry Nett, the associate dean for research at the veterinary college, explained that, because of the high nitrogen content of the liquid waste, the local sewage treatment facility had been charging the university extra for its disposal, so the university found an alternative.

"As it turns out, this is excellent material to add to compost piles," Dr. Nett said. Proponents of biodigesters say they expect the machines will replace incineration at most research and diagnostic facilities.

"I think eventually, everybody will be going to this system or something similar," Hockman said.

- BRIDGET M. KUEHN

news I AVMA news. . . from 1058

Education council schedules site visits

The AVMA Council on Education has scheduled site visits to five colleges or schools of veterinary medicine for the remainder of 2004.

Site visits are planned for the University of Prince Edward Island, Atlantic Veterinary College, Sept. 18-22; Purdue University School of Veterinary Medicine, Oct. 2-6; Western University of Health Sciences College of Veterinary Medicine, Oct. 16-20; Tufts University School of Veterinary Medicine, Nov. 6-10; and University of California-Davis School of Veterinary Medicine, Dec. 3-8.

The council welcomes written comments on these plans or the programs to be evaluated. Comments should be addressed to Dr. Donald G. Sirnmons, Director, AVMA Education and Research Division, AVMA, 1931 N. Meacham Road, Suite 100, Schaumburg, IL 60173-4360. Comments that are not signed by the person submitting them will not be considered.

news I veterinary organizations

assemblies

National Mastitis Council

Event: Annual meeting, Feb. 1-4, 2003, Charlotte, N.C.

Program: The preconference symposium, "Lactation Mastitis Therapy and Its Role in Mastitis Control and Milk Quality"; seven short courses, including one taught in Spanish; the general session program, "Mastitis and Milk Quality—Managing the Risks"; and technology transfer session poster presentations attracted more than 400 attendees.

Awards: Distinguished Service

Award: Dr. Andy P. Johnson, Clintonville, Wis., was honored for outstanding service to the NMC. Dr. Johnson is an international dairy consultant who specializes in cow comfort and milk quality. National Mastitis Research Foundation: Drs. Sarah Wagner, Ames, Iowa, and Ron Erskine, East Lansing, Mich., were awarded the third grant in the 12year history of the foundation. They were awarded \$15,000 to conduct a study, "The Effect of Delayed Antibiotic Therapy or No Antibiotic Therapy in a Clinical Mastitis Culturing and Treatment Program." Business: To underscore its global nature, the NMC has decided to begin operating under the name "NMC." Its new tagline--- "A global organization for mastitis control and milk quality"-clearly reflects the NMC's mission of being an international leader in information on mastitis and milk quality. The International Advisory Committee's efforts have been successful in getting individual members involved in the NMC. The NMC Web site, www.nmconline. ore, continues to grow and improve, particularly the members-only sec-