

Question 1

In assessing the center's work overall, meat industry experts single out two achievements for the highest praise -- the center's development of the means to genetically select and breed for desirable traits in cattle, and its identification of uterine capacity as key to breeding swine for larger litters. Are there additional accomplishments you would cite?

- A document listing USMARC's accomplishments is attached. We draw your attention to the following accomplishments:
 - Respiratory Disease in Cattle and Sheep
 - Breed Evaluation and Utilization
 - Pre-Harvest Pathogen Control
 - Improving feed efficiency
 - Minimizing the impact of livestock on the environment
 - Translational Physiological Factors Affecting Reproductive Efficiency

o Question 2

The center's publications, including its experimental protocols, refer to having the general aim of increasing the productivity of meat animals, and thus profitability of the meat industry. Is this still the center's primary mission?

- The mission of the Roman L. Hruska U.S. Meat Animal Research Center (USMARC) is developing scientific information and new technology to solve high priority problems concerning beef, sheep, and swine. USMARC's objectives are to increase production efficiency while maintaining a lean, high quality product; the results of this research ultimately benefits consumers through increased food safety, and also benefits the production and agri-business sectors of animal agriculture.
- USMARC does not focus its research solely on productivity, but on the efficiency of productivity as well.
- In addition, USMARC also has a strong food safety program. Its mission also includes producing safe food products for consumers. Please see the attached brochure listing USMARC's accomplishments in this area.

Question 3

Looking forward, what are your goals for the center?

- USMARC's mission is not expected to change in the near future (see Questions 8 and 9 for additional information).
- USMARC is at the forefront of scientific enterprises in the area of genomics of livestock species and pathogens (both animal pathogens and several foodborne pathogens). A goal for USMARC is to leverage the genomics program to better accomplish its mission.

Question 4

Please provide the following figures and dates:

the current annual budget:

- The FY 2014 ARS allocation for USMARC was \$22,751,504.

the number of ARS scientists now on staff at USMARC:

- 44 (does not include post docs)

the date when Sherrill Echternkamp retired from the center:

- January 3, 2013

the number of technicians and other assistants working at the center:

- 73 ARS employees (this number reflects permanent and temporary employees, and includes postdocs).

the current population of cows, pigs and sheep (or the 2014 average if there are large month-to-month swings).

- USMARC has 6900 cows, 2400 ewes and farrow around 950 litters of pigs per year.

Question 5

Our reporting shows that experiments at the center get their start in various ways, including your scientists learning about meat producer problems at meetings, directed funding from industry marketing programs, and orders from your bosses at the U.S.D.A. Are there other ways that center trials get started?

- As an organization, ARS holds a national program review and assessment of its research projects every five years. These comprehensive reviews take into account reviews of peer-reviewed literature on animal health and breeding, reports from scientific organizations, and attendance at professional society meetings where gaps in research are illuminated. The reviews also include a variety of customer and stakeholder perspectives on the scope and relevance of our research projects. Research projects are based on established objectives. Funding for research project comes from funds appropriated by Congress, and cooperative agreements and grants. Collaborative research and related grants play a role, but are approved after a review and must meet program objectives and also support the center's mission.

Question 6

In general, how much guidance and oversight of the center's activities is there from the U.S.D.A. regionally or in Washington?

- Oversight depends on the activity. The Plains Area office provides significant guidance and oversight as needed typically on a weekly basis. In addition, ARS Headquarters staff and our Office of National Programs also provide guidance and oversight. Oversight from both Area and HQ offices covers items such as USMARC's budget, personnel, facilities and research direction.

Question 7

U.S.D.A. officials say this oversight of the center's work does not extend to reviewing and approving individual experimental protocols. Is this correct?

- Yes.

Questions 8 and 9

Given that some harm necessarily comes to animals used in your trials, what in the broadest terms is the center's reason and justification for conducting the research it does?

- USMARC's projects support the center's goals as stated above in Question 2, and are conducted in a scientifically sound, responsible manner, and in accordance with federal regulations and procedures.

Why do you feel the center's work is important?

- There is a growing focus on our ability to meet the world's food needs by 2050. The predicted worldwide population of 9 billion people by then would require doubling the current food production level in the face of limited resources, including land and water. This is a daunting challenge. Food-related research is critical to mitigate the impact of this potential crisis.

Question 10

Some people say that some center trials have overstressed the biological limits of animals, achieving productivity gains that also create harmful complications such as increased pre-weaning mortality. How do you respond to this criticism?

- The result of any change in animal performance is often unknown at the beginning of a project. Over the course of a project, USMARC scientist monitor changes and biological interactions, and as information becomes available, they make other scientists and industry aware so that they can balance those interactions. It's the role of the Center to discover what changes occur and to make that information available to industry, so that they can make informed decisions based on scientific information.

Question 11

Some scientists say the center pays insufficient attention to the welfare of its animals. Do you have any comment on this?

- ARS disagrees with this statement. USMARC research projects are conducted in a scientifically sound, responsible and humane manner, and in accordance with federal regulations and procedures for animal care and use. Please see responses to Questions 27, 28 and 31.

Question 12

The Center reported in the Journal of Animal Science in 2014 (Vallett) that 12 to 13% of its piglets die before they are weaned, which compares poorly to the 5% rate that many producers achieve according to industry reports. Do you have any comment?

Reporter clarification: Please find attached the pork industry study on pre-weaning mortality, which reports in Table 9 a 5% rate for the top 10% of producers, and in Table 13 an 8% rate for the top quarter, which industry experts attribute to better management on the part of these producers.

- USMARC is building new facilities. This will improve the overall housing environment, which will have a positive impact on animal wellbeing. This will also translate to improved mortality rates, while noting our 12-13% mortality would place us in the top 1/3 of all herds.

Question 13

The swine industry is reporting increased numbers of deaths caused by overlay, or mothers crushing their piglets, which it attributes to the increasing size of pig litters. The center's records show that its overlay deaths also have risen, from 244 in 1985 to 1,159 last year. What steps does the center take to prevent the crushing death of its piglets?

- Increasing piglet survival in larger litters is a major focus of research at USMARC. USMARC is operating in farrowing facilities that were built in 1970. ARS determined that it needed new facilities to handle the larger animals—resulting from keeping sows through the weaning of their 4th litter, which is a change in focus of the center's research projects. These facilities are better designed to accommodate accessing and working with its pigs. Four new facilities are being built at USMARC. These new facilities will have a positive effect on a variety of animal health and wellness issues.

Question 14

Some scientists and beef producers describe the center's cattle twinning project as one of the largest genetic selection projects in history. Has this project been important, and what has been its reception in the beef industry?

- Aside from the scientific contributions documented in center publications on the twinning herd results, the project has been important to a small niche segment of the industry that adopted the practice of using twinning as evidenced in purchases of cattle from the MARC twinning herd over the years. See additional details in question 15 for information on the decision to end this study at USMARC plus the final dispersal of the herd.
- See further related information on herd dispersal in the answer to question #15.

Question 15

Some of these same people are also critical of the project, saying it went on – from 1981 to last year’s dissolution of the twinning herd – far too long given the steadfast reluctance of the beef industry to embrace the higher calf mortality rates, the infertility among mixed-gender females, and other major problems. Please respond.

- The decision to disband the twinning herd was made in 2010, and was implemented in a staged fashion to allow for completion of projects. The cow herd was discontinued in three stages:
 - the dispersal of older cows (5 to 8 years) 2/2011,
 - the dispersal of the fall herd in 5/2012, and
 - the dispersal of the spring herd in 1/2013.
- The decision to end the project was determined by diminished returns in the contributions to science and to aspects of applied production.

Question 16

The most recent published assessment of the twinning project in 2009 found that the calf mortality rate was about five times higher than those for single-born calves. Did the center consider this level of increased calf mortality acceptable, given the net gain in market weight?

Reporter clarification: "My reference to the market weight gain was merely to acknowledge the trial’s success in its goal of producing more calf weight, despite the higher mortality weight."

- The data shows that the twinning herd produced more calf weight per cow exposed than USMARC’s other commercial cattle populations.

Question 17

The center’s easy-care, pasture lambing production trial is also drawing criticism from some center scientists, university students assigned to work on the project, lamb producers and sheep researchers at other institutions. They say the experiment is illogically inconsistent with the domesticated nature of sheep, and their need for extensive human care during lambing. Please respond to this criticism.

- There are numerous national and international popular press articles written on easy-care programs, including several articles providing favorable reviews on USMARC’s program. In addition, easy care is not a concept that was originally developed at USMARC; the concept and implementation of breeding programs to achieve the goals of easy care have been around for decades. USMARC scientists conducted the study to gather further insight in the viability of this practice for producers.

Question 18 (see below)

Question 19

A handwritten notation on the 2004 experimental protocol for the project also precluded the lambs from receiving nursery care, but the note is dated a year after the protocol was approved. Did anyone approve this change, and does this method of changing a protocol comply with center policies?

- This change was made during a transition period from paper to electronic record keeping. However, based on a review of the existing material and discussions with USMARC scientists, the note was written on April 19, 2005, but the decision was reconsidered by the lead scientist and the sheep operations staff shortly thereafter and never implemented. The original addendum of March 17, 2004, was modified on May 12 2005, to include the following statement: “Lambs should only be moved to the nursery if they cannot be naturally reared by their dam (management should be adequate to leave triplets on ewes with good milk production).” Yes, we believe that the proper protocols were followed and complies with our policies.

Question 20

The experiment leader reported in 2005 a preliminary lamb mortality rate of between 29% and 39% in the easy-care project, and told this reporter he had no updated mortality rates for the project. How do you view this rate, in terms of the project’s overall goals and success, and what is the project’s current status?

- USMARC’s easy-care project is designed to create a population that can achieve the production goal of increased lambs weaned per ewe exposed under low input management conditions. To achieve that goal requires selecting for improvement in reproductive success and lamb survivability.
 - This involved creating a composite sheep population, that would be useful in U.S. plains and eastern production settings, and then selecting that population to meet that goal. This population is being compared to industry breeds.
 - Since the project is continuing, the overall success of this project cannot yet be assessed.
- USMARC’s project is currently comparing the performance of the composite sheep population to industry breeds and selection methods to achieve the above stated goals.
- Updated mortality rates: 2012 (23.5%) and 2013 (24.5%) and as discussed in question 24, results for 2014 are 23.5%.

Question 21

Center records show that more than 500 lambs died in May, 2014, with more than 4,000 dying in May since 2004, and center scientists say these are largely easy-care project lambs. Is this correct?

- On May 11, 2014, the Center suffered a significant loss of animals due to a violent storm that passed through Clay County. Around 174 lambs were lost due to that storm.
- The proportion of all lambs lost in the easy care population in the month of May as compared to other populations at USMARC is not a valid comparison. Other sheep populations at USMARC lamb in the winter while pasture populations lamb in May. As death loss in sheep is highest around lambing, comparing populations that do not lamb at the same time within a year is not valid.

Question 22

How many sheep were part of the easy care project in 2014, and how many lambs survived to weaning?

- There were 1,564 ewes exposed to breeding in the project in 2014. The lamb survival to weaning of their progeny, removing the losses due to the May 11th storm event, was 76.5% this year.

Question 18 and 23

These critics also say the decision to withhold assistance from the ewes and lambs is inhumane, causing large numbers of lamb deaths due to starvation, pneumonia and predation. Please respond to this criticism.

A sheep scientist who conducted his own easy-care pasture lambing trial at another institution says that neither he nor his institution would have approved the center's method. Rather, he said he took steps to protect his lambs by rescuing those that became vulnerable, and that this did not interfere with the trial because he marked the mothers of these rescued lambs as having failed in their cases to exhibit the desirable trait of strong maternal care. Please respond to this criticism.

- We do not have enough information about the experimental design of the scientist's experiment for which you allude; without having all of the facts, we cannot compare or offer our expert opinion on the two experiments in a scientifically sound way. Critical differences in the experiments may exist that cannot be evaluated in a side-by-side comparison, for example population size, breed, scientific method, controls, etc.

Question 24

Some center staff who worked with the easy-care lambs report that the trial's structure caused unnecessary deaths by having the lambs tagged, which caused separation from the ewes, and that DNA testing to ascertain the parentage has been available and used by researchers for as long as a decade. Please comment.

- USMARC scientists agree that during the critical period of lambing, leaving the animals undisturbed is the best management practice. They also agree that there was a DNA test available a decade ago, but that particular test was based on Microsatellite DNA markers (MS), which were prone to significant errors. There are numerous publications to support that (for example Clarke et al., 2014, discusses SNP-based DNA testing for parentage). Based on scientific evidence, USMARC scientists concluded that they needed a more robust parentage tool for a research project that required a very high accuracy of assignment of both male and female parents. Other scientific experts support this research need as well. In November of 2011, the International Sheep Genomics Consortium asked Dr. Mike Heaton to take the lead and develop such a panel. USMARC researchers had been developing a SNP-based DNA test for use in the Easy Care Project. This work, which was led by USMARC scientists, was published and included authorship with members of the International Sheep Genomics Consortium. This year USMARC researchers used this new SNP-based DNA test to assign parentage in the Easy care flocks.

Question 25

Officials at universities that conduct research with farm animals for production say they derive immense value from accreditation and auditing by the organization AAALAC, which helps them not only protect the welfare of their animals but also improve the scientific integrity of their research. Why has the center not obtained AAALAC oversight?

- ARS is respectful of the oversight that AAALAC provides to non-federal animal facilities. USMARC follows federal guidelines that are similar to those of AAALAC. USMARC will be indirectly interacting with AAALAC through UNL—see Question 26.

Question 26

A former center director, Robert Oltjen, in 1979 argued publicly that farm animal scientists didn't need external oversight, but rather that they could police themselves. Does this remain the center's view?

- Much has changed in agricultural science since 1979, USMARC does seek external expert consultation on animal handling, its facilities, and its management practices. UNL's recent AAALAC accreditation will provide a venue for outside expertise to evaluate our animal management and handling practices, since UNL owns a fraction of the animals housed at USMARC.

Questions 27 through 31

Question 27: These same university officials say they also derive immense value from having a robust institutional animal use and care committee review and approve their experiments, a procedure that since 2002 has been mandated by the USDA for all recipients of ARS funds. The center's committee, however, appears to play little, if any, role in reviewing and approving the center's experiments. Please comment on this.

- We believe that an outline of the responsible committees may be helpful to you:

ARS has its own IACUC (Institutional Animal Care and Use Committee) at Clay Center. This committee handles all actions at the Center. Internal ARS policy states that all labs using vertebrate animals should have an IACUC oversee its activities.

USMARC's IACUC is composed of 8 individuals—5 required—including 4 from the University of Nebraska and 1 private citizen. Chair is USMARC veterinarian (there is no prohibition on an attending veterinarian serving in this capacity).

UNL has a IACUC for the university, but that committee does not review USMARC actions. UNL has retained ownership of some animals at USMARC. UNL is now also accredited by the Association for Assessment & Accreditation of Laboratory Animal Care (AAALAC) thus their animals (and by extension all at Clay Center) also receive oversight from AAALAC on animal management practices and protocols.

The outline below explains how USMARC meet our Plan Reviews and how their committee is constituted.

Project Plan Review (experimental protocols):

Scientists develop research project plans.

Plans are informally discussed with lead scientists and research leaders.

Plans are also informally discussed with the IACUC Chair (attending USMARC veterinarian) and with animal management personnel.

If issues have been identified in prospective projects, those plans are discussed at USMARC weekly management meetings, which consist of both ARS and UNL leadership.

After discussion, plans are formally submitted (loaded to the USMARC internal Intranet site) and reviewed/approved, etc.

All approved plans are made available electronically for all USMARC employees to view.

IACUC Inspections:

Committee meets twice a year as required.

Facilities are inspected and a facility report developed (similar to minutes) twice a year.

Reports are sent to USMARC leadership and are then filed electronically and are available for review.

Recommendations in reports are acted on as required.

Question 28

For example, does the center's committee have two outside members, as specified by the ARS directive?

- USMARC is in compliance with the ARS policy.

Question 29

Does it meet regularly to review and approve experimental protocols and keep minutes of these meetings?

- Since 2004, the committee has moved to a program that holds biannual facility reviews, as required and has replaced regular meetings with processes described in Questions 27 and 31.

Question 30

Does the center's committee have a chair who is not also the center's staff veterinarian, to avoid having the veterinarian oversee her own work in caring for and protecting the animals?

- The attending veterinarian is the chair. There is no prohibition on this assignment. However, UNL has received its AAALAC- accreditation and, under the AAALAC rules of animal ownership, USMARC will need to meet their herd health and management program requirements since UNL still owns a portion of the animals at USMARC. The attending veterinarian met with the AAALAC subcommittee during the accreditation site visit and they validated USMARC's herd health program. This demonstrates USMARC is in compliance with guidelines. Going forward USMARC will have indirect AAALAC oversight of herd health through the accreditation of UNL.

Question 31

There is also little evidence that center staff who are listing on the experimental protocols as reviewing and approving the center's experiments are considering the welfare of the animals, or subjecting the protocol leaders to the kind of questioning about animal pain and suffering that universities subject their scientists. Please comment on this.

- We do not concur with that opinion. Every person at USMARC who signs off on an experimental outline considers animal welfare issues. For example: In one experimental design proposal, a feedlot manager expressed concern for sampling in the heat. The scientist responded regarding accommodating the concern. If a person registers a concern with the Center Director, any manager or IACUC member, whether verbally or in writing, the Center Director interacts immediately with the IACUC Chair and the scientist to reach a conclusion.

Question 32

Has the center ever rejected an experimental protocol because it posed undue harm to the experiment animals, and if so, please cite some examples.

- Good scientific inquiry builds safeguards into planning from the initial stages. It is rare that an experimental protocol would reach implementation only to be rejected. An idea can be rejected at a multiple stages of development for a variety of reasons based on the experimental design.
 - 1. Formative stages of an experiment:** USMARC's scientists interact frequently with each other and with management. Often there is considerable discussion regarding an experiment that is being considered before it is ready to enter into a formal process. In the past five years, several projects have simply been abandoned because they would not be approved. Example:
 - Resistance to Bloat: A project was discussed relative to bloat. This project would have required putting cattle out on alfalfa field without the use of bloat guard. It would have required veterinary intervention if an animal was observed beginning to bloat, since bloat can be fatal. After discussing this project, it was decided not to do it and it never reached the formal stage. They are now collaborating with researchers from NZ on a project where scientist in NZ are doing the grazing challenge work and the role at USMARC is to look for genomic regions for reduced susceptibility from samples they provide us.
 - 2. Pilot projects:**
 - USMARC had a project that required surgery for which, in the Experimental Outline pre-submittal discussion stage, it was determined that they did not fully understand the potential consequences. The project called for several animals, and before it was approved the decision was made to do a pilot study. Animal recovery was monitored, and only after our attending veterinarian was sure the procedure was adequate and they understood potential implications, did they conduct the project. The procedure being discussed has been used in studies at other institutions with their IACUC approval.
 - 3. Post approval:** Here's an example of a project termination when the protocol for a project is not working:
 - A project in collaboration with a Great Plains Veterinary Education Center veterinarian was terminated because surgery did not appear to be working (mid 2000's).
- As a result of the due diligence and extensive scientific interactions USMARC exercises in the early stages of an experiment's design, in the past five years, USMARC has never had a formally submitted experimental outline that has been rejected.

Question 33

Some center scientists say they have witnessed a number of grisly incidents, including a lung tissue extraction from a pig left alive and the death of a young cow caused by repeated mountings by six bulls, that they believe could have been avoided if the center had more rigorous animal welfare protections. Please respond.

Reporter's clarification: The incidents cited occurred in 1989 and 2005, respectively.

- In a general discussion on pig euthanasia with USMARC scientists, it is known that post mortem involuntary muscle twitching does occur and people not experienced with euthanasia processes may misinterpret that movement as the pig still being alive.
- We have no details on that particular cow incident. However, it is common industry practice to run multiple bulls in breeding pastures. USMARC scientists have a responsibility to report any animal wellbeing incidents to USMARC management immediately.

Question 34

Their criticism extends to the center's basic husbandry. Records show that of the more than 500,000 animals the center has housed since 1985, at least 6,500 have starved, 2,225 have died of exposure to the elements, and that mastitis, normally treatable, has killed over 625. Please respond to this.

- The numbers given above when examined in context presented would equate to 1.3 percent of all animals born in the 29 years having died for maternal abandonment/starvation reasons. In the case of exposure, 0.4 percent of animals would have been lost, and 0.13 percent of all animals born have been lost to mastitis. While any loss of an animal because of failure to receive adequate nutrition from its mother or from exposure or disease is too much, these are very small percentages over a 29-year period.

Question 35

According to Freedom of Information Act officials at the USDA, the center does not keep health treatment records for its sheep, as it does for the cattle and swine. Why this disparity?

- The USMARC database is designed to support the research enterprise, not as a management monitoring activity—UNL owned the sheep, not USMARC. Now that USMARC has taken ownership of most of the animals at the Center, they are revisiting data and management information needed to successfully run its livestock enterprises.

Question 36

Some Center employees say the center used to have as many as six scientists on U.S.D.A. staff who were also veterinarians, and that now there are none. Is this correct? Why doesn't the center have any veterinarian scientists?

- In 2005, the National Academy of Sciences noted an increasing shortage of available veterinarians trained in research (Ph.D.). Over the years attrition of existing veterinarians conducting research has occurred at USMARC. Replacing these positions has been challenging due to the shortage of available and qualified candidates. Additionally many current MARC research programs do not require a veterinarian background. USMARC scientists do interact with veterinarians at GPVEC and other institutions to provide additional expertise.

Questions 37 and 38

Is the single staff veterinarian employed at the center adequate to care for all of its animals? Do the professors and students with the University of Nebraska at the center provide any assistance in the day-to-day care of the center's animals?

- The Center has one ARS scientist on staff and one very experienced UNL Agricultural Research Technician that has been assigned for many years to assist in the animal health program and necropsies.
- Four of UNL's GPVEC veterinary staff help in weekend rotations and do contribute to our animal care program.
- Students on rotation or internships are not viewed as being part of the needed animal health or management work force.

Questions 39 and 41

Most of the surgical operations in the center's experiments appear to be conducted by scientists and technicians who do not have medical veterinarian degrees. Is this correct?

Please detail the steps taken by the center to ensure that its non-medical staff is adequately trained and monitored in performing animal surgery?

- Technical and scientific staff are trained by others who have expertise in those procedures.

Question 40

Records and interviews show that these personnel have struggled at times to perform even basic procedures. For example, Mr. Vallet in an Oct. 12, 2012, email expressed frustration about the suturing of pigs by a technician. How many pigs had to be euthanized or otherwise suffered as a result of this incident?

- Dr. Vallet examined the pigs that were the focus of the concern he raised in his email. One of the 30 pigs in the experiment did have a hernia and had to be euthanized. That was the only pig in that experiment that USMARC has identified as being euthanized. The same procedure was successfully performed in 2013 on 29 pigs without hernias.
- This event again demonstrates that many people are engaged in monitoring animal wellbeing, as Dr. Vallet was responding to an email from the animal care person involved in watching the animals in the project. Dr. Vallet's response to her concern was immediate.

Question 42

A number of employees say their attempts to bring incidents relating to animal mistreatment and other issues to the attention of center directors and outside officials including USDA area managers have been met with indifference, hostility and even threats of retribution, creating a culture of fear that inhibits whistleblowing. One veterinarian scientist at the center in the mid-2000s, for example, says he determined a sheep had died at least partly from neglect, was ordered to change that determination on the necropsy report, and that when he refused to do so the center had someone else change his report. Please comment on this.

- *Reporter clarification:*
 - *In or about 2000, Robert Elder, a scientist working at the center, says he was told by the center director to share the data from his as-yet unpublished E. coli prevalence study with a major beef producer, and with that company alone, which Mr. Elder considered an ethical breach that could give that company an unfair advantage, and that when he reported the incident to the USDA regional office in confidence as a whistleblower, the center director learned of his call and 1) berated him for calling the regional office, and 2) ordered him to release the information or be fired. Mr. Elder released and then shortly thereafter resigned.*
 - Current management of USMARC does not know of events from almost fifteen years ago.
 - *Dr. Keen cites a number of instances when he brought concerns about animal welfare at the center to the attention of both center and UNL officials, most recently in April, 2014, when he met with Kelly Heath at UNL. He says he was told by Dr. Heath that the issues he raised were so serious that UNL would undertake an investigation, and that Dr. Keen should consider himself a whistleblower. One month later, Dr. Keen says he was told he was being barred from the center. As an added question on this incident, did the center bar Dr. Keen in retaliation for contacting Dr. Heath?*
 - No concerns were ever brought by Dr. Keen to the attention of the current USMARC management team since 2010. Dr. Keen's April 2014 meetings with Mr. Heath appear to be a UNL issue since USMARC leadership is not aware of any concerns voiced by Dr. Keen. No person from ARS ordered Dr. Keen barred from the Center.

- *In or about 2012, the center’s manager of swine operations, Devin Gandy, emailed scientists to express concern that pigs weighing as much as 275 pounds were kept in pens just 4 feet by 4 four feet.” And he received back a note from the lead scientist defending the pens, criticizing him and saying, “A lot of time has been wasted addressing a non-issue,” which prompted his supervisor to write a note saying staff should have the right to raise animal welfare concerns. Dr. Shuna Jones sided with the scientist, saying the FASS Guidelines – which Mr. Gandy was citing the center says in all of its published reporters that it adheres to -- were just “recommendations” that could be overridden.*
- Current USMARC and ARS leadership welcome honest feedback on all possible issues involving animal care and wellbeing. Current USMARC leadership is not aware of issues cited related to Dr. Elder. Dr. Keen’s April 2014 meetings with Mr. Heath appear to be a UNL issue since USMARC leadership is not aware of any concerns voiced by Dr. Keen. No person from ARS ordered Dr. Keen barred from the Center. Technically Dr. Jones was correct in indicating FASS Guidelines were only recommendations. However, we take remarks such as Mr. Gandy’s seriously and USMARC leadership has recognized the challenges related to pen size for 3rd and 4th parity sows. Over the past two fiscal years, they have contracted to build 4 new swine facilities, which will result in improved swine wellbeing and health.

Question 43

Most recently, another veterinarian scientist, James Keen, said he reported a number of concerns about the treatment of animals at the center including several ongoing situations to the University of Nebraska in April, 2014, and was told by school officials that an investigation would be launched with him having whistleblower status, but that the following month he was told that the center had barred him from its premises. Was Dr. Keen in fact barred from the facility? Who made the decision to take this action? And was it taken in retaliation for his whistleblowing?

- No person from ARS ordered Dr. Keen barred from the Center.

Question 44

The shifting animal ownership at the center is troubling to some staff.

What year did the center have the University of Nebraska take ownership of the animals, and why?

- UNL had ownership of the animals at USMARC since the opening of the Center.

And why did the center decide last year to drop this arrangement and take ownership of the animals?

- The animal revenues do not cover operational costs. ARS assumed ownership of the animals to achieve fiscal management of the agricultural enterprise through that ownership. This was a joint decision with UNL.

Question 45

Key players in the meat industry say they are responding to public concern by taking dramatic steps to improve their treatment of farm animals, and that animal welfare is now of vital importance to the economic survival of their industry. And yet, some scientists at the center say the [center has spurned research focused solely on improving the welfare of farm animals](#). They cite, for instance, a decision earlier this year by Mr. Leymaster to reject a proposal by university veterinarian Katherine Whitman to look for ways to ease the pain and suffering of lambs during docking and castration, [saying the project did not meet the center's research goals](#). Please comment on this.

["center has spurned research focused solely on improving the welfare of farm animals"](#)

- “Spurned” is not an accurate description. ARS research is directed by the Office of National Programs. Appropriated dollars are directed to research programs by program areas. ARS has sites with programs whose mission and research focus is devoted to animal welfare, such as that in Indiana. Dr. Leymaster does not reject a project based on the area of research, but rather after ascertaining whether the project fits within the framework of an existing set of approved ARS objectives within Dr. Leymaster’s oversight. The project also has to be “doable,” in the context that it does not interfere with the experimental design of existing projects. Specifically regarding the research you cited, Dr. Leymaster made an assessment based on the funding structure of ARS, the resources available to do such research, and the lack of expertise needed to do the project to the level of quality needed to make it creditable. USMARC would also need expertise to assess the outcome. They do not currently have an animal behaviorist on staff at USMARC, neither is a stress physiologist, or other experts that collect the appropriate phenotypes for assessing the difference between treatments present at USMARC. Dr. Whitman is not trained in those areas.

["improving the welfare of farm animals"](#)

- USMARC does a great deal of research that benefits the welfare of animals. Some of that research also has aspects related to improving production or the efficiency of production. Production research and animal welfare research do not have to be mutually exclusive.

- Here are several examples of research USMARC has done not solely for the benefit of animal productivity or the efficiency of productivity, but also to improve animal wellbeing :
 - **Ovine Progressive Pneumonia (OPP) research:** This wasting disease caused by a lentivirus is prevalent in the United States and is not curable. Research at USMARC has led to a DNA test that can be used to identify animals for breeding that are less susceptible to the disease, as will be their progeny. This will impact the wellbeing of countless future sheep.
 - **Heat stress research:** Our web site contains information on the predicted likelihood of heat stress events. Any producer can go online to see a prediction for their targeted area - created using weather service forecasts – and then respond with appropriate mitigation strategies. This research will greatly improve the wellbeing of numerous animals in the future.
 - **Precision Management Research:** USMAARC has conducted research on strategies to monitor the feeding behavior of growing pigs. Monitoring feed intake behavior can help in the early identification of sick animals. Early identification is a key element in successful treatment.
 - **Immunicrit Research:** Research on methods of detecting early colostrum intake in swine has led to a simple animal side test that can be used to measure success or failure. Since failure leads to reduced fitness and in many cases death of the piglet, detecting failure would allow for appropriate mitigation strategies to be employed.
 - **Ventilation standards:** Recent research has been completed to change the ventilation standards for swine. Appropriate ventilation strategies produce a better environment and improve the wellbeing of animals housed in the facility.
- These research examples not only benefit animal productivity and efficiency of productivity, but they also add value and improve animal wellbeing.

Question 46

Records show that the industry-funded trials conducted at the center include a 2011 assessment of the public health risk from antibiotics, which included this statement in the experimental protocol: "The information will be used by the National Pork Board in response to proposed FDA regulations to limit the ability of swine producers to use antimicrobials in meat production." Please comment on the appearance that the center is shilling for the industry in its fight against another federal agency.

- While USMARC scientists are co-authors on this peer reviewed research, USMARC did not apply for or receive this grant from the National Pork Board (NPB). The NPB gave this grant to the University of Nebraska at Lincoln and USMARC scientists were collaborators, not investigators, on this research project.

Question 47

The center is currently collaborating on swine research with Smithfield Foods, which is owned by a Chinese concern, according to the center's website. Does this work fit with the center's mission to help the American swine industry? May 29, 2013

- Smithfield Foods is a major producer of swine for American consumption and has not moved its operations exclusively to China. The U.S. government cooperates on research with companies whose ownership may be in whole or in part from other countries if those companies are operating in the United States and supplying food products to U.S. consumers.

Question 48

And finally, records released by the U.S.D.A. show that the center's slaughterhouse and processing facility have been cited with increasing numbers of non-compliance violations, including 22 this year. Please comment on this.

- The FSIS Inspector reported that a review of previous records confirmed the facility did not have a trend of non-compliance. Most importantly, the Enforcement Investigations and Analysis Officer (EIAO) commented: "... the establishment is well maintained and does not pose a possibility of producing adulterated products during daily operations."
- The 5 Non-Compliance Records during the 2014 audit had 23 individual components. To date, 2 NRs comprised of 4 components were addressed satisfactorily. Of the remaining 3, 11 of the individual components have been satisfactorily addressed and 8 are under appeal.