

Question 13

Is the planned construction of new pig facilities aimed, at least in part, at alleviating the crowded conditions in the center's current structures as described by staff?

- Based on current industry standards, ARS scientific experts at USMARC note that the current swine facilities have adequate building size and space to accommodate the swine herd. The new facilities that are being built not only address current research needs, but will also allow USMARC to modernize and address future animal production research needs.

Question 16

You refer to the twinning project's important contribution in overall weight gain. But, was the higher mortality rate of the twins and triplets accompanying that weight gain acceptable to the center?

- Scientific contributions reflective of well-developed experiments and robust data provides factual results from research projects that help guide decisions for USDA stakeholders to make informed decisions that may impact their organization or operation.
- As discussed in Question 10, much of USMARC's research is focused on studying change in performance, efficiency of performance and/or health through selection or in response to various experimental treatments. USMARC scientists document changes in these characteristics and report the changes observed in peer-reviewed articles and to the public. The twinning project added to the base of knowledge on how the increased rate of twinning was achieved and the consequences of achieving that increase through selection, which will guide stakeholders as they weigh the pros and cons of USMARC's research results.

Question 17

Given the easy care trial's stated goal of low inputs, has the center in fact been providing assistance to the pasture-raised sheep in either the birthing process (staff helping to deliver the lambs) or care of the newborn lambs (staff helping to feed or dry or bond the lambs)? And if so, how often has such labor been provided?

- No such birthing assistance is typically provided. However, the foreman states that they will help a ewe in trouble if observed, and he estimates this happens 6 to 12 times a year.

Question 19

Has the center sent newborn lambs from the easy care trial to its nursery facility, and if so, how many lambs does it divert from the trial in this way each year?

- It is not the typical practice for that experiment to bring lambs into the nursery, but we have in the past - for example, USMARC animal caretakers brought 12 lambs into the nursery in 2013.

Question 21

Regarding the May 11 storm you referred to, did the center take any steps to shield or rescue the easy care lambs from this storm, and if so, why were there 174 deaths?

- USMARC has an ongoing program in developing the property to provide for shelter via tree shelterbelts and wind blocking structures. USMARC animal caretakers do try to move animals to more protected locations or to lay hay for bedding in sheep pastures if they are alerted prior to a severe storm. Some storms are beyond the norm and are a threat to both human and animal safety regardless of shelter.
- Regarding the May 11 storm, the forecasts on Friday, May 9, 2014 and Saturday, May 10, 2014, predicted a slight chance of thunderstorms. On Sunday, the storm rapidly progressed into a super cell at 3:30 p.m., which was not forecast. The storm developed just west of USMARC and passed over USMARC within a very short time. Two tornados touched down at 4:00 p.m. and 4:10 p.m. USMARC officials have to balance and consider both the safety of its personnel as well as that of the animals. The storm was too severe to deploy personnel to rescue animals during that storm—in which most of the losses in question occurred.

Questions 27 through 31

You make no reference to the center having its IACUC review and approve experimental protocols. Does the center's IACUC in fact review and approve protocols and if so, why are there no minutes or other records of these reviews?

- As previously stated, the committee does not meet for this purpose. USMARC adopted an alternative strategy for reviewing protocols as was described. Alternative strategies are addressed in the preamble of the Federation of Animal Science Societies (FASS) guidelines.

Note:

- The verb *should* indicates a strong recommendation, but one for which alternative strategies might be justified after careful consideration.

And so for the recommendation that:

"The IACUC should meet at regular intervals, as appropriate, to ensure that the use of agricultural animals in research and teaching programs is humane, appropriate, and in accordance with this guide."

- USMARC believes their alternative strategy meets the spirit of the guidelines. As part of that strategy, final approval is still needed from the IACUC chair. The concerns of the IACUC chair or Committee, if engaged, are reported on the signature line of the experimental outline as are the responses from scientists along with any applicable resolution.
- Pre-submittal discussions regarding experimental protocols and animal wellbeing lead to many changes in what is the formal experimental outline submission—if a formal submission is warranted.

Last question

And lastly, I have shared a number of your recently approved and executed experimental protocols with AAALAC experts, who determined these protocols would not have been approved by universities that conduct farm animal research. The protocols, they say, lacked numerous significant points of information relating to avoiding unnecessary harm to the animals. Do you have any comment?

- USMARC scientists follow the Federation of Animal Science Societies (FASS) guidelines for animal management and health and maintain high professional standards in conducting all aspects of their research projects.
- Identical experiments to those approved by the USMARC IACUC have been approved at other institutions where USMARC scientists and university faculty collaborate. Those experiments are well-documented in peer-reviewed journals.
- As a point of clarification, USMARC’s research structure and research environment differs from that of universities in that:
 - USMARC scientists work with just three species and work exclusively on research for food production. At universities, the array of species used in research is very large, many are laboratory animals, and a portion of their research is done as medical research using animals as models.
 - While the Animal Welfare Act only applies to facilities that use farm animals for biomedical research, and facilities like USMARC that perform research for agricultural purposes are exempted, most USMARC employees have extensive knowledge of the three animal species they work with and any of them can bring up animal welfare issues.
 - At USMARC, the attending USDA veterinarian is directly engaged in providing for care of all animals. The university attending veterinarian typically does not provide direct care for all animals on experiments.
 - USMARC has a small research program with a high degree of interaction among scientists and staff. This usually translates into scientists and staff reaching a consensus prior to formal submission of any protocol. At universities, the ability of scientists to do this is much more limited.

Additional question

*I need one more clarification. In the answers to Questions 37 and 38, it is stated: "the Center has one ARS scientist on staff..." Was this meant to say one ARS **veterinarian** scientist on staff?*

- We apologize for the confusion, the statement should read "One ARS veterinarian on staff."

My original question was whether it is correct that the center used to have as many as six ARS veterinarian scientists on staff and now appears to have none. This is the question I still need answered, and the above reply is confusing.

- USMARC has one ARS veterinarian scientist position on staff that is currently vacant, and one ARS attending veterinarian, and one very experienced UNL Agricultural Research Technician that has been assigned for many years to assist in the animal health program and necropsies. The vacant position is for an Animal Health research leader, which is included in staffing plans and will be advertised as a PhD/DVM. As stated, USMARC management attempted to fill that position several times, but has not been able to successfully find a qualified candidate.
- To help ensure adequate animal care, four of UNL's Great Plains Veterinary Educational Center veterinary staff help in weekend rotations and contribute to our animal care program.