



A Matter of Ethics

Research and technological advances play key role in ag ethics.

by Tray Smith

Once every year animal scientists from across the United States and around the world gather to talk shop. It's a pretty big deal. It became even bigger two years ago when the American Society of Animal Science (ASAS) started having its annual conference jointly with the American Dairy Science Association (ADSA) and the Poultry Science Association (PSA).

The agenda is lengthy, as researchers present findings from scores of scientific studies conducted since the groups last met. Reports cover the gamut of research topics related to nutrition, genetics, reproduction and animal behavior. As one might expect, the purpose of many of these research projects is to help food animal producers increase productivity and efficiency.

The 2004 conference in Saint Louis, Mo., also featured a symposium on bioethics. That term may be unfamiliar to many cattlemen, but most of us understand that "ethics" may be defined as a set of moral values — a sense of moral duty or obligation to do that which is right. Bioethics, then, pertains to the ethical implications of the biological sciences.

A discussion of bioethics is a bit more philosophical than the usual ASAS conference

subject matter. It went beyond research applications to include ethics in production agriculture in general. The symposium attracted a big crowd, nearly filling one of the convention center's largest meeting rooms. It may have been one of the best-attended sessions during the five-day conference.

Cause for concern

Why did it capture so much attention? And why is the ASAS Bioethics Committee promising more discussion of this subject at future conferences? Committee members believe animal scientists, in general, may be doing a good job of helping producers do things right, but should be doing more to help them do the right things.

Certainly, animal science research has helped producers do more things right to improve productivity through management of genetics, nutrition and health. Because of output-increasing technology that helped

boost weaning weights and improve calving rates, the average beef cow in the United States produces roughly 170 pounds (lb.) more carcass beef per year than did her counterpart 30 years ago.

However, University of Maryland animal scientist Ray Stricklin notes how increased productivity hasn't always brought increased profitability. Indeed, many cow-calf producers' profit margins remain relatively low, despite steady to improving beef demand. To remain full-time producers and maintain income levels, many operators have had to increase the size of their herds. Others seek off-farm jobs or quit the cow business. The net result has been reduced numbers of full-time producers, with increasingly larger herds.

Stricklin says U.S. dairy herds have also increased in size. Between 1991 and 2000, total dairy cow numbers declined by about 6%, but the number of dairy operations dropped by 42%. Still, thanks to output-

improving technology, the industry achieved a 14% increase in milk production — an annual average increase of 21% more milk.

Those examples illustrate how successfully animal science has boosted productivity. However,

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Stricklin and his Bioethics Committee colleagues say still-low profit margins mean producers have to produce greater volume to increase income. Pursuit of economies of scale, they say, has contributed to the industrialization of production agriculture. They suggest it is possible to become so focused on improving productivity and efficiency that some potentially negative consequences are ignored.

"We, as animal scientists, have an obligation to consider the costs of our successes," Stricklin says. "We have to consider the impact on society and the environment."

Maynard Hogberg, chairman of Iowa State University's Animal Science Department, says the scientific community must share part of the responsibility for the shift toward industrialized agriculture driven by the bottom line. That narrow focus does not always recognize an equitable balance of interests. There is pressure, Hogberg contends, to cut corners for the sake of profit. That can result in an undermining of the public trust, increased scrutiny and increased regulation.

"Agriculture is coming under more

scrutiny by the general public, so we need to make sure that what we do is acceptable to broader society," Hogberg adds. "We can't afford to take anything for granted."

Advocates for increased emphasis on bioethics say the animal science community should devote more attention to potential environmental effects associated with increasing concentration of food animal production. With regard to large confined animal operations, questions to be considered might include:

- ▶ How big is too big? At what point are the economies of scale, achieved by large confinement operations, threatened by challenges associated with animal waste management?
- ▶ How are choices of animal feed ingredients affecting nutrient content of waste and its subsequent use as fertilizer for cropland?
- ▶ Who owns the rights to fresh air? How can confinement operations reduce or avoid production of offensive odors?
- ▶ How can producers add value to their products, while addressing consumers' concerns about the environment?

Hitting close to home

Hogberg says he believes scientists need to question how increasing concentration of food animal production affects the sociology and economy of rural communities. He notes how, as a result of concentration, the percentage of U.S. farms that include beef cattle enterprises has declined from 75% in 1950 to 41%. More dramatically, the number of farms with hog enterprises has dropped from 56% to 3.7%.

In the wake of concentration, Hogberg says, many states have seen diminished livestock production on small and medium-sized operations. There are fewer farmers in general, and more remaining farmers devote their acreage exclusively to crop production. The loss of livestock production has hurt local economies in his home state of Iowa.

"Studies have shown that more livestock receipts mean more county income and a generally higher per capita income. That's not so with crop production, which often results in more income leaving the county," Hogberg explains. "The decline in numbers of (livestock) producers has impacted the sociology of rural communities and, in some

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cases, brought about the closure of small towns.”

In addition to considering the environmental and rural socio-economic consequences of production practices, Stricklin says animal science should get serious about animal welfare.

“Livestock production systems come under criticism as being harmful to animals, and we need to respond to that criticism in a more positive way,” Stricklin offers. “I believe there is a moral basis for livestock production. That is easy to justify when the animals experience better quality lives because of the way they are managed. But what is reasonable quality of life for animals?”

Stricklin states most university animal science departments are addressing this and other ethical questions, to some extent, through classes dealing with current industry issues. In the last four or five years, however, several institutions have established courses that deal specifically with ethics. Members of the ASAS Bioethics Committee believe such courses are a necessary part of educating animal science students.

Stricklin says he tries to challenge his students to think about doing the right things. With regard to the environment, that means ethically sound practices that do no harm or, preferably, have a positive effect on natural resources. It also means considering the value of lifestyle, culture and traditions of rural communities. And, it means using production management systems that prioritize animal welfare, as well as animal performance.

“No one can deny how the combined efforts of land-grant universities, USDA (U.S. Department of Agriculture) and private interests have improved the productivity of agriculture in this country. It has provided enormous benefits to people in the form of abundant food at low cost. It is a tremendous success story,” Stricklin says.

“And there will be more technologies developed that will expand our capabilities. But we need to consider the consequences. Sometime we may want to set some boundaries. Now is the time to start talking about it.”



