

## Perceptions of Food Animal Welfare in Extension: Results of a Two-State Survey

### Abstract

Food animal welfare has become a contentious issue, pitting agricultural producers against an array of animal advocacy groups. The stakes in this debate are large both economically and culturally. Extension is likely to find itself squarely in the middle as it attempts to reconcile decades of research aimed at increased productivity with initiatives demanding changes in well-established production practices. Extension's reputation as a source of unbiased, research-based information will depend in part upon personal opinions that faculty bring to the debate. A survey of Iowa and Nebraska Extension faculty demonstrates that variation in opinion with implications for educational efforts.

**Randy Cantrell**  
Extension Professor  
and Community  
Development  
Specialist  
University of  
Nebraska Rural  
Initiative  
[rcantrell1@unl.edu](mailto:rcantrell1@unl.edu)

**Bradley Lubben**  
Extension Assistant  
Professor and Policy  
Specialist  
Department of  
Agricultural Economics  
[blubben2@unl.edu](mailto:blubben2@unl.edu)

**Duane Reese**  
Extension Associate  
Professor and Swine  
Specialist  
Department of Animal  
Science  
[dreese1@unl.edu](mailto:dreese1@unl.edu)

University of  
Nebraska-Lincoln  
Lincoln, Nebraska

### Introduction

As debate over food animal welfare grows, Extension finds itself in an interesting and potentially challenging situation involving a controversial public policy issue. On one side of the issue are producers and an agricultural industry with which Extension has a long and successful history of education and service. On the other are growing numbers of well-organized and politically astute animal advocacy groups.

Successful state ballot initiatives mandating particular livestock housing practices, welfare standards imposed by some major food retailers, and negotiated compromises between commodity groups and advocacy organizations all indicate a changing policy environment for food animal welfare. How those changes progress and how they affect individual livestock producers will depend in part upon how contentious and politicized the debate becomes.

Because of its public funding and mission of research, teaching, and Extension related to agriculture, Extension may be one of the few organizations that can contribute to the animal welfare debate in an informative, unbiased, and respected way. Croney, Appley, Capper, Mench, and Priest (2012) describe academic experts as highly credible on the issue of farm animal welfare. But providing

education on public policy issues can be challenging. As described many years ago, public policy issues involve a complex mix of facts, myths, and values (Flinchbaugh, 1973).

Extension can help improve understanding of such complex issues by establishing facts and destroying myths while respecting values, but it is critical for Extension to first understand its potential role and limitations. In short, as Barrows (1984) noted in discussing the role of Extension in public policy issues, Extension should be involved, objective, and as neutral as possible. However, as pointed out by Croney and Anthony (2010), animal care, use, and policy decisions are driven by values and not just science. And, just as values may influence how the general public views animal welfare issues, they could also influence how Extension faculty members see their role in education regarding animal welfare.

Extension faculty can influence the animal welfare debate in two ways: first, through university research designed to measure the effect of new practices on both animal welfare and agricultural profitability and second, through Extension educational programs. How that influence is exercised will depend in part on the attitudes toward food animal welfare held by Extension faculty today. If Extension faculty members see merit in new welfare standards, they can play a part in making the on-farm introduction of those standards successful and productive. If they do not accept the arguments for change, they may slow the adoption of new practices. While that might be perceived as supportive of agricultural producers in the short run, it may prove to be counterproductive if the preferences of consumers and the voting public demand changes in food animal production practices.

## The Survey

If, as it now appears, changes in how food animals are managed and housed are coming, it is important to know the opinions of Extension faculty going into a period of change. This article reports a study of the question of how Extension educators, specialists, and administrators view food animal welfare and how those views might affect educational efforts on the issue. In order to address that question, an IRB-approved on-line survey of University of Nebraska-Lincoln (UNL) and Iowa State University (ISU) Extension personnel was conducted in April 2011.

The on-line survey used the commercial Survey Monkey service. Mailing lists were provided by UNL and ISU Extension administration. Because neither system had a single mailing list that reached all of their employees, several lists were provided by each administration. The goal was to reach all Extension educators, specialists, assistants, and administrators without regard to program area. Extension administrators estimated that these lists included approximately 500 employees across the two states.

The survey was designed to identify respondent opinions regarding the welfare of food animals (beef and dairy cattle, swine and poultry) and how public perceptions and political activity might be expected to affect current management practices for food animal producers. A series of demographic and personal experience questions were designed to allow the investigators to identify individual characteristics associated with those opinions. Thus, the approach taken in the study reported here was essentially an inductive and descriptive analysis of Extension faculty values, beliefs, and experiences that might affect opinions and attitudes on what Extension should do regarding the food animal welfare debate.

The survey was open for 2 weeks in April 2011. Extension personnel in both states were sent an invitation to participate along with a description of the study. One week later, the same individuals received an email reminding them that the survey was still open. This process resulted in 303 returned surveys. The survey responses were anonymous, with identification only by IP address for purposes of determining valid Extension responses and eliminating duplicate responses.

Some returns were found to have been completed by individuals who were not Extension employees, and they were deleted. A number of other returns were found to be duplicates, in which individuals had begun the survey, stopped, and returned to it at a later time without saving their initial responses, resulting in multiple returns. The most complete of a duplicate pair was retained and the other deleted.

Still other returns were largely blank, indicating that the respondent had either wearied of or been displeased with the questions or the process and had opted out after beginning. In cases where the individual left the survey before reaching the midpoint, incomplete returns were deleted. The decision to retain or delete individual returns was made by agreement among multiple investigators.

After reviewing the validity of the returns, the IP addresses were deleted to preserve the anonymity of the data. When the vetting process was complete, 263 usable returns remained. The investigators estimate this to be roughly a 50% response rate. However, given the use of aggregated mailing lists, there can be no certainty as to how many individuals actually received notice of the survey. Coupled with the fact that there was no way to account for addresses resident on multiple lists without gaining access to each state's computer files (which the investigators were unable to do), the sampling format provided data with some inherent weakness.

The data do, however, represent the opinions of a sizeable portion of UNL and ISU Extension employees and the investigators believe that the reliability of the sample is such that survey results can be taken as indicative of the opinions of this population in general.

## **Characteristics of the Respondents**

In the following summary of respondent characteristics, the reader will note that in some cases the number of responses does not sum to 263. Nonresponse was found scattered throughout the returned surveys. As is often the case with social surveys, nonresponse tended to be associated with items that could be seen as personal or seen as of dubious (or even nefarious) value given the stated purposes of the survey.

The usable responses included 131 (52.4% of total) respondents from ISU Extension and 119 (46.6% of total) respondents from the smaller UNL Extension system. Thirteen respondents chose not to name their Extension system.

Extension Educators were the largest respondent group at 104 (41.9%). Completed surveys were also obtained from 67 specialists (27%), 58 assistants (23.4%), and 19 administrators (7.7%). Fifteen respondents chose not to reveal their job title.

When asked who they saw as their primary clients, 133 (50.6%) respondents identified youth.

Livestock or poultry producers were identified as the primary clients of 95 respondents (36.1%). Crop producers were reported as the primary clients of 73 respondents (27.8%), while 71 respondents (27%) indicated that their primary clients included consumers. Thirty respondents identified some "other" primary client group such as volunteers, communities, entrepreneurs, and food processors. Multiple responses were allowed for this question, and the total responses sum to 402.

Not surprisingly, for Extension faculty with a focus on agriculture and rural audiences, an historical or current farming background was reported by the majority (85%) of respondents. Respondents indicated that they currently reside on a working farm or ranch 77 times (29.6%). Another 144 respondents (55.4%) indicated that they had previously lived on a working farm or ranch, while only 39 respondents (15%) indicated that they had never had such an experience.

Similarly, the majority of respondents (77%) were either currently or historically associated with livestock or poultry production. When asked if they or members of their household currently raise livestock or poultry, 98 (37.7%) indicated that they did so. Another 102 (39.2%) indicated that they had previously done so.

The reported age of respondents ranged from 22 to 70 years, with the average reported age being 47.6 years.

On average, respondents had been associated with Extension for 14 years with the range of service being from less than a year to 39 years.

## **Opinions Regarding "The Five Freedoms"**

Respondents were asked to identify their level of agreement with each of The Five Freedoms, which are associated with the U.K. Animal Welfare Council. While these are not universally accepted standards, they do underpin much of current animal welfare policy in Europe and thus provide a framework for the animal welfare discussion in the United States.

Respondents were introduced to The Five Freedoms with the following paragraph.

According to the U.K.'s Animal Welfare Council (AWC) "The welfare of an animal includes its physical and mental state and ... good animal welfare implies both fitness and a sense of well-being. Any animal kept by man, must at least, be protected from unnecessary suffering." The AWC believes that "an animal's welfare, whether on farm, in transit, at market or at a place of slaughter should be considered in terms of "Five Freedoms". These freedoms define ideal states rather than standards for acceptable welfare." The "Five Freedoms" appear below. Please indicate the extent to which YOU agree with each.

Responses can be taken to indicate the level of agreement with different aspects of animal welfare, rather than specific knowledge of the AWC or a particular policy. The Five Freedoms are of special interest in that three are about physical welfare and two are about mental welfare (Grandin &

Johnson, 2009). While the physical welfare of food animals tends to be addressed by state regulation and a variety of animal cruelty laws, it is the mental dimension that has most often been the focus of welfare advocacy groups and that has generated the most concern among producers and their organizations.

**Table 1.**  
Level of Agreement with "The Five Freedoms" Identified by the Animal Welfare Council

	Percent of Respondents (n=263)				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
FREEDOM from HUNGER and THIRST - by ready access to fresh water and a diet to maintain full health and vigor.	62.4	32.7	3.1	1.4	0.4
FREEDOM from DISCOMFORT- by providing an appropriate environment including shelter and a comfortable resting area.	39.2	50.2	7.6	2.7	0.4
FREEDOM from PAIN, INJURY or DISEASE- by prevention or rapid diagnosis and treatment.	46.8	46.8	5.3	0.8	0.4
FREEDOM to EXPRESS NORMAL BEHAVIOR- by providing sufficient space, proper facilities and company of the animal's own kind.	24.0	44.1	22.1	7.6	2.3
FREEDOM from FEAR and DISTRESS - by ensuring conditions and treatment which avoid mental suffering.	22.9	40.1	26.3	8.8	1.9

The majority of respondents indicated that they agreed or strongly agreed with each of The Five Freedoms, as seen in Table 1. Agreement was especially high for "freedoms" involving food, water, shelter, and health (physical welfare). Freedoms concerning mental welfare (behavior and fear) generated slightly lower levels of agreement, but even for those items, over 60% of those responding indicated agreement or strong agreement. In a survey of 31 faculty members from large midwestern public universities, Heleski, Mertig, and Zanella (2004) also observed a lower degree of agreement for the behavioral freedom than the others.

Exactly half (50.1%) of those responding either agreed or strongly agreed with all five freedoms. The other half either disagreed with or were uncertain regarding at least one of the five.

In recent years, ISU has given more attention to food animal welfare than has UNL. This attention has taken the form of creating faculty positions specifically related to food animal welfare, filling two of those positions with ethologists, conducting research and publishing welfare-related materials. However, as seen in Table 2, while ISU Extension employees did appear to be slightly more likely to agree or strongly agree with all of The Five Freedoms, that relationship was weak and not statistically significant.

**Table 2.**  
State Extension System by Agreement with the Five Freedoms

State System	Agree or Strongly Agree With All Five Freedoms	
	% No	% Yes
Iowa State University	48.9	51.1
University of Nebraska	52.1	47.9
Pearson Chi Square	0.263	
Significance	0.61	

Similarly, there was no significant difference in agreement with The Five Freedoms between respondents based on whether or not they work directly with livestock producers or work with youth.

Because residing on a working farm can be expected to make individuals more familiar with and more acclimated to contemporary food animal production practices it might logically be expected that current farm residents would be less likely to accept each of The Five Freedoms on face value alone.

Among respondents who have never resided on a working farm, 69% agreed or strongly agreed with all The Five Freedoms (Table 3), while less than half of those who now or have ever been farm residents did so. This association is statistically significant using a criterion of 0.05.

**Table 3.**  
Reside on a Working Farm by Agreement with the Five Freedoms

	Agree or Strongly Agree With All Five

Reside on a Working Farm	Freedoms	
	% No	% Yes
Never	30.8	69.2
Previously	53.5	46.5
Currently	54.5	45.5
Pearson Chi Square	7.085	
Significance	0.029	

### Other Opinions Found Among Extension Personnel

Two other survey items may provide a clue as to how Extension personnel are likely to react to efforts at regulating food animal welfare.

Fewer than half (42%) of those responding agreed with the proposition that the "best" indicator of animal welfare for food animals is productivity (i.e., growth rate, reproductive rate) because poorly treated animals are less productive.

**Table 4.**  
Reside on a Working Farm by Productivity Is the Best Indicator of Animal Welfare

Reside on a Working Farm	Agree or Strongly Agree that Productivity is the Best Indicator of Animal Welfare	
	% No	% Yes
Never	74.4	25.6
Previously	55.9	44.1
Currently	50.6	49.4
Pearson Chi Square	8.13	
Significance	0.047	

The opinion that productivity is the best indicator of animal welfare is more likely among Extension personnel who currently reside or have previously resided on a working farm, as seen in Table 4.

Perhaps of more interest to Extension administrators, 38% of those responding agreed with the proposition that Extension should seek to assist producers in defending their production practices against regulatory efforts that would change the housing, management, and care of food animals.

Again, personal proximity to agricultural production is a characteristic that is associated with the

opinion that Extension should seek to assist producers in defending their practices. As seen in Table 5, half (51%) of respondents who currently reside on a working farm took that position, while only one in five (21%) of respondents with no farm experience did so.

**Table 5.**

Reside on a Working Farm by Extension Should Seek to Assist Producers in Defending Their Production Practices Against Regulatory Efforts

Reside on a Working Farm	Agree or Strongly Agree that Extension Should Seek to Assist Producers in Defending their Practices	
	% No	% Yes
Never	79.5	20.5
Previously	63.2	26.8
Currently	49.4	50.6
Pearson Chi Square	10.308	
Significance	0.006	

Furthermore, the opinion that Extension should (or should not) seek to assist producers in defending their practices is closely associated with opinions regarding the mental aspects of animal welfare, as defined by the Five Freedoms. As demonstrated in Table 6, Extension personnel who agree with the proposition that food animals should be free to exhibit normal behavior and experience freedom from fear tend not to agree that Extension should assist producers in defending current practices (71.3%). Conversely, those who do not agree with the mental aspects of food animal welfare are essentially equally divided in their opinion that Extension should be involved in defending current producer practices.

**Table 6.**

Agreement with Mental Aspects of Food Animal Welfare (Freedoms 4 and 5) by Extension Should Seek to Assist Producers in Defending Their Practices

Agree or Strongly Agree with Freedoms 4 - 5	Agree or Strongly Agree that Extension Should Seek to Assist Producers in Defending their Practices	
	% No	% Yes
No	50.4	49.6
Yes	71.3	28.7
Pearson Chi Square	12.031	
Significance	0.001	



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## Conclusion

Opinions regarding animal welfare and the potential for ballot initiatives or other forces resulting in increased regulation of production practices related to food animals were far from uniform among Extension personnel responding to the survey reported here. There was near universal agreement on those physical aspects of food animal welfare that involve basic production practices such as maintaining adequate food and water, housing, and health care. However, there was less agreement (although still a majority) with those mental aspects of welfare that involve behavior, fear, or distress. In fact, exactly half of the respondents in the survey agreed or strongly agreed with all of The Five Freedoms as defined by the U.K.'s Animal Welfare Council, and, conversely, exactly half did not.

The respondent characteristic that apparently has the strongest association with these opinions is personal proximity to and involvement with agriculture. The association between Extension's connection to agriculture and opinions regarding animal welfare can be explained as being both economic (reflecting the self-interest of those who are themselves agricultural producers) and social (reflecting the social bonds between Extension personnel and their producer clients). Given Extension's traditional commitment to science-based objectivity, those positions could well be swayed by research. The problem is that such research, especially regarding animal behavior and affective states as impacted by housing system and management, is not currently plentiful and will require both time and scarce resources to produce. Meanwhile, food animal welfare is emerging as an issue now and has the potential to grow quickly.

Extension administrators who are concerned as to the position that their organization will take (or appear to take) on the emerging issue of food animal welfare are likely to find the apparent divisions among their faculty and staff to be problematic. If so, they will find it important to quickly define an appropriate role for Extension to play in what may well be a contentious policy debate. In doing so, they will need to identify opportunities for that debate to be addressed internally before it is addressed publicly and, in all likelihood, inconsistently by individual Extension representatives.

If Extension is to provide public policy education, it must recognize that it is not appropriate to advocate a particular public policy solution; rather, it is Extension's role to apply educational processes that educate citizens on policy alternatives and consequences, and engage citizens in collaborative learning, consensus building, and problem solving (Public Issues Education Task Force, 2002). Further, the task force notes the importance of recognizing when an issue is too polarized to allow successful learning and recognizing when an Extension professional is perceived to have a stake in the outcome or a strong personal viewpoint that precludes a neutral approach. Just as Gerrior et al. (2009) concluded on public policy education on health and wellness issues, it is essential for administrators to support Extension's involvement in the issue and provide adequate training on public policy education.

Institutional investments in animal welfare research, teaching, and Extension programs may increase the ability of Extension faculty to address animal welfare issues in an appropriate way that starts with recognizing both the science and the values that are involved in the debate. Criticisms leveled

at sow gestation crates, hen battery cages, and veal calf crates revolve around the way in which they impose behavioral restrictions on animals and how they may negatively affect the animal's mental state, not around how they affect animal productivity. Believing that animal productivity is the best measure of animal welfare misses this critical point. So does believing that Extension should assist producers in defending their current production practices.

These results indicate that Extension personnel might well benefit from professional development programs designed to enhance their effectiveness in meeting current and future challenges regarding animal care and treatment, and also in providing public policy education on animal welfare.

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