

Do organic animal operations encourage management decisions that negatively impact animal welfare?

Austin J. Bouck

Student, Department of Animal Science, Oregon State University

Abstract

Among the many debates surrounding organic farming, the welfare of the livestock raised on organic operations is of critical concern to consumers and thus producers. As the organic movement continues to grow, these concerns need to be addressed both to justify the increased cost of organic products and defend the treatment of conventionally raised animals. The literature exploring organic philosophy and animal welfare was reviewed, and the USDA organic guidelines were compared with the goals of organic operations. The rates of disease on both organic and conventional farms were used to evaluate the success of preventative health programs. After determining that the ecocentric viewpoint of organic farmers allows good welfare to be present with a small amount of disease, that non-parasitic disease rates are similar or lower in organic operations, and the law requires organic producers not to withhold treatment from sick animals, it was determined that organic operations do not encourage decisions that negatively impact welfare. However, allowing antibiotic use without sacrificing the organic status of an animal would benefit organic livestock and encourage more aggressive medical treatment.

Few agricultural debates come close to generating the same passionate and heated responses that organic farming seems to elicit. The discussion surpasses the interests of producers with conflicting ideologies to be hotly debated by assertive consumers as well; people who highlight the paradox created by their interest in the safe and responsible production of their food, while avoiding all involvement in its creation. The originally proposed Organic Foods Production Act of 1990 received nearly 300,000 comments on the proposed requirements, more than any other piece of legislation in history (Vos, 2000). Clearly this indicated that the role organic farming played in food production was extremely important to U.S. citizens then, and continues to be a relevant topic as organic operations have grown by 40-50% every five years since 1992 (USDA, 2010).

The general public also has a strong interest in the way animals are managed, especially when management techniques play a role in the health or well-being of the animals prior to their use for meat, milk, or eggs. Humane management is often brought up when discussing the merits or flaws of organic operations, and is extremely important to producers due to the important role animal welfare plays when consumers make purchasing decisions. Prickett et al. (2010) found through the use of a telephone survey that 49% of consumers consider the well-being of farm animals when purchasing meat, and 83% of consumers disagree that lower prices are more important than the well-being of the animals used. These numbers become critical when organic producers need to justify the increased cost of their products and conventional producers are forced to avoid the alternate impression that their animals are treated poorly.

Marketing pressure placed on both groups leads to a vicious back and forth of both valid questions and vague accusations, among which is the suggestion that organic farms can act as

reservoirs of disease (Kijlstra and Eijck, 2006). One mechanism for this accusation could be the avoidance of chemical or synthetic intervention for pest control and treatment of disease. This paper seeks to evaluate organic farming ideologies and legal constraints that create ethical dilemmas surrounding animal welfare, and determine whether organic management encourages decisions that are detrimental to the animals involved.

Animal Welfare and the Organic Movement

Early organic movements were created with the goal that a more sustainable and environmentally friendly farming system could be created that would benefit not only farmers and consumers of organic products, but also the animals within this system (Lund, 2006). These ideals have persevered and are a common talking point in promotional materials that market organically raised animals as drug and chemical free, and much closer to a “natural” condition (Riddle, 2005). This concept of “natural” is commonly used to differentiate organically produced animal products from conventional ones.

Utilizing the word “natural” creates an issue of perception; while the public widely accepts “natural” as a product descriptor, the word itself has no legal definition when used in food advertizing or packaging in the U.S. However, consumers have been shown to associate descriptions of “naturalness” not only with animal welfare but sustainability and care for the environment (Verhoog et al., 2003). While this may imply a scheme to sway consumer loyalty, the word is widely accepted by organic producers as an accurate descriptor to differentiate organic methods from conventional. While “natural” can have broad definitions like including the entire universe or everything untouched by man (thus either removing agriculture or providing no distinctions in practice), Verhoog et al. (2004) were able to show that organic producers feel organic can be classified as more natural than conventional agriculture as its aim

is to be harmoniously integrated into nature. In this way nature is seen as a teacher or model for sustainable and humane agriculture. This ethos pushes organic farmers into an ecocentric approach when making management decisions. From this perspective, we begin to see how organic farmers may view welfare differently than conventional farmers or veterinarians.

Welfare from an Ecocentric Perspective

Animal welfare has always been and remains to be an important goal in organic operations (Riddle, 2005; IFOAM, 2005); however, organic producers are still questioned on the welfare status of their animals because of their organic certification. Among the many definitions intended to quantify animal welfare, Frasier et al. (1997, p.187) provide three basic animal welfare ideals:

1. The animal should *feel well*, corresponding to the concepts of experience, feeling, interest, and preference.
2. The animal should *function well*, corresponding to the concepts of need and clinical health.
3. The animal should *lead a natural life* through the development and exercise of its natural adaptations, corresponding to the concept of the “innate nature” of the animal.

In general, livestock in conventional settings have their welfare measured using the first two ideals, with the most emphasis placed on the second. Producers are first and foremost concerned with the prevention of disease that could hurt production or cause unnecessary pain; humane slaughter laws are designed to prevent excess excitement and discomfort (National Archives and Records Administration, 2012b), and welfare audits for slaughter facilities are designed to reduce animal stress prior to slaughter (Grandin and Johnson, 2006). Using these criteria, it becomes clear how viewing welfare through the first two of Frasier’s ideals might suggest organically raised animals could have poorer welfare. It has been shown that organic farms have a higher rate of parasite-related disease (Lund and Algers, 2003), and the use of veterinary drugs is strongly suggested to be a last resort after alternative methods have been

exhausted (IFOAM, 2005). There is also a financial incentive, as once antibiotics have been given to an animal, that animal cannot return to organic production (Riddle, 2008; National Archives and Records Administration, 2012a).

Through the naturalistic perspective however, welfare for organic producers can depend much less on the first two ideals, and more weight is placed on the third. This viewpoint changes the significance of the risks involved in many organic practices, such as free range housing, as both organic producers and consumers emphasize the third ideal as a priority (Alroe et al., 2001; Lund, 2006). Additionally, the ecocentric perspective further lowers the emphasis on the first two, as disease and parasites are both considered healthy parts of a larger ecosystem, and the health of the ecosystem is crucial to the health of the herd and the sustainability of the farm. This idea of looking past the individual is what causes dispute when quantifying animal welfare on the organic farm. Most producers, veterinarians, USDA inspectors, and animal owners evaluate animal welfare at the level of the individual, whereas the ecocentric organic producers are more likely to evaluate welfare at the level of the flock/herd, within the herd's role in the overall ecosystem. At this level, a few animals in poor health are acceptable in a natural ecosystem where small amounts of disease are permissible. The ecocentric view disallows an attempt to alter a healthy system determined by nature by eradicating this small population.

Because animal welfare may be determined using more qualitative criteria in an organic operation, how do organic producers react to poor welfare or illnesses of individual animals? Organic producers hold the health of their animals high in their priorities (IFOAM, 2005; Riddle 2005), so they must be able to maintain a standard of herd health not only for the benefit of their animals, but to keep production high. As part of the naturalness or ecocentric ethos, organic producers believe that farmers should not try to take control of the environment, as conventional

techniques do, but work hand in hand with nature. Thus, any method used to completely eradicate disease through the use of chemicals or medications does not promote a sustainable ecosystem, as it reveals an attempt to control the environment rather than work to bring the ecosystem back into balance (Verhoog et al., 2003). Therefore, prevention becomes key, and the U.S. organic requirements mandate preventative practices that emphasize working with nature such as selection of species and type of livestock that are appropriate to the site and resistant to prevalent disease, provision of a sufficient organic feed ration, and the use of appropriate housing, pasture management, and sanitation protocol to minimize the occurrence of pathogens (Riddle, 2008).

Conflict Between the Organic Approach and Welfare Ideals

Despite measures taken to promote prevention, a certain amount of disease is permissible in a healthy ecosystem and the restrictions placed on organic producers by both their certification requirements and ethos can create dilemma's that could potentially harm animals. Several classic examples of species specific situations have been examined where the animal welfare approach taken by organic producers can be considered detrimental to the animal.

It should be noted that while there is evidence that there is a reluctance to use prohibited medications and chemicals to treat disease on organic farms (Vaarst and Bennedsgaard, 2001), both the Code of Federal Regulations (CFR) and IFOAM standards explicitly state that organic livestock producers must not withhold medical treatment from a sick animal in an effort to preserve that animals organic status (IFOAM, 2005; National Archives and Records Administration, 2012a; Riddle, 2008, 2012).

Dairy

Management of mastitis in organic dairies is a commonly discussed example of when health of the individual and a reluctance to accept the financial loss associated with antibiotic use can potentially harm the animal. Herd health, in general, has not been shown to be significantly different between organic and conventional dairy herds, and some data suggests that the incidence of disease may actually be lower in organic herds, though the reasons for this are unknown (Lund and Algers, 2003; Lund, 2006). Interestingly, the ban on antibiotics for clinical use is more of a concern within U.S. borders, as the majority of certification standards in the European Union allow antibiotic use to treat clinical disease without jeopardizing the organic status of the animal (Ruegg, 2009). However, the strict FDA guidelines for organic milk production not only prohibit the use of antibiotics in organic livestock, but do not allow the use of any compounds with an antimicrobial effect that are not approved by the FDA for organic production (National Archives and Records Administration, 2012a). Currently, there are zero antimicrobials approved for use in organic animals (Ruegg, 2009). This leaves organic dairy producers extremely limited in their options for treatment when faced with a cow that has mastitis. With few options available, Zwald et al. (2004) were able to find that farmers who switched to organic production began to seek information on treatments from other organic farmers as opposed to veterinarians. This trend is not seen in countries where antibiotic options are available to organic dairy farmers (Hamilton et al., 2006).

So what options are available to organic dairy producers in the U.S.? Once again, prevention is key, but research has shown that rates of mastitis are similar between organic and conventional dairy operations (Lund and Algers, 2003; Lund, 2006). This indicates that treatment must be part of a management plan, even if the organic ethos prevents any attempts to interfere with natural processes through antimicrobial intervention. Certain drugs are available

for use on the CFR's approved substances list with increased withdrawal times to maintain the high standards expected in organic milk production (Riddle, 2008; National Archives and Records Administration, 2012a). These drugs include certain anti-inflammatory drugs that would be useful in treating fever and inflammation associated with mastitis. Beyond pharmaceuticals, therapeutic care including frequent milking is a recognized way to discourage bacterial growth within the affected quarters. Combined with approved anti-inflammatory drugs, frequent milking and supportive care constitutes a common mastitis treatment on organic dairies in the United States (Ruegg, 2009).

Many organic farmers will also attempt to utilize complementary and alternative medicines; however, almost all of the products available have not been evaluated in peer reviewed studies for efficacy. Immunoboost, a USDA licensed immune stimulant sold in the U.S., has been evaluated but has not shown to have any significant effect on the treatment of mastitis (Ruegg, 2009). Other various remedies including peppermint, aloe, and garlic have been utilized by organic farmers as intramammary treatments, however the efficacy of these options is doubted, and their use is prohibited by the FDA (National Archives and Records Administration, 2012a). It appears that without recovery using simple supportive care, any medical intervention necessary to prevent unnecessary pain or distress for non-responsive mastitis cases will result in the loss of a producing animal for that organic operation. This creates a potential welfare risk, as the USDA organic requirements do not specify a point when prohibited treatments must be used, and the decision to discontinue organic treatment resides solely with the farmer.

Poultry

Poultry producers face a distinctive management change when converting to organic as free choice medicated feeds containing antibiotics are commonly used to manage disease and

promote growth (Love et al., 2010). Organic poultry is also currently under increased pressure from consumers (Love et al., 2012) to provide a safe and antibiotic free product, which could indicate an increased reluctance to treat conditions using pharmaceuticals. Following the prevention management strategy, organic poultry producers may use a variety of feed supplements including probiotics, prebiotics, organic acids, and plant extracts that have had minimal and sometimes contradictory efficacy reviews (Griggs and Jacob, 2005). Once again, treatment needs to be a key part of the management strategy of the organic producer, and the increased public scrutiny over medication use in poultry has the potential to encourage farmers to withhold medication as has been shown in other species (Lund, 2006).

One of the most contested animal welfare debates surrounding organic poultry is regarding the space required by the USDA regulations to remain organic (Kijlstra and Eijck, 2006). While the law only requires year-round access to the outdoors, shade, shelter, exercise areas, fresh air, clean water for drinking, and direct sunlight (appropriate for the species, age, and climate) (National Archives and Records Administration, 2012a); organic farmers have adopted the term “free-range”, which unfortunately like the word “natural,” has no legal meaning. Nonetheless, open access to runs follows the third of Frasier et al.’s welfare ideals in allowing chickens to exhibit natural behaviors and thus have better welfare. The trade-off, however, is that while we have defined the major focus of disease management in organic operations as prevention based, free ranging chickens are more susceptible to predation, outbreaks of cannibalism, parasite exposure, coccidiosis and ascarid infections, and interactions with wild fowl that transmit dangerous diseases such as avian influenza (Verhoog et al., 2004; Kijlstra and Eijck, 2006; Lund, 2006). In order to keep with organic standards, all of these animals must continue to have access to the outdoors, and prohibited pharmaceuticals cannot be fed to treat

outbreaks of disease or treat the higher rate of parasites that are found on organic operations (Lund, 2003). Clearly, should there be an outbreak of disease or cannibalism, an ethical dilemma is created between the first two ideals concerning the physical and mental needs of the animal, and the third to maintain natural conditions.

The various dilemmas discussed indicate that organic producers face additional pressure, both financially and in public relations, to avoid the use of treatments that would compromise the organic status of that animal. However, prioritizing animal welfare to include aspects beyond the scope of the clinical health of individual animals can potentially change the way welfare is perceived by conventional farmers and the general public. If an ecocentric rather than an individualistic perspective is considered, and positive experiences can be provided for the animal by indulging its natural behaviors and ecological niche, perhaps some stress events like occasional infections are an acceptable trade-off. Given that a higher incidence of disease has not been found, and that organic producers are required by law not to restrict care to maintain an organic status, it can be determined that organic livestock production does not encourage decisions that negatively impact animal welfare. However, it is recommended U.S. should adopt the EU policy of allowing antibiotics to be used in clinical cases without removing the organic status of that animal. With adequately increased withdrawal times in place to reflect the strict requirements that define organic products and enough consumer education, the organic market should recognize and accept the benefits of this policy change. Livestock would benefit by receiving more aggressive medical intervention as financial pressure not to treat animals could be alleviated as it has been in the EU (Ruegg, 2009), and having prescription antibiotics available as a treatment option could encourage more contact with veterinarians instead of neighbors to discuss animal health. Additional research is needed to support this position that

could come from data determining if financial and public pressure are enough to encourage farmers to withhold treatments. In that case, additional actions such as stricter enforcement of the law may be necessary to promote a higher standard of care for organic animals.

Literature Cited

- Alroe, H., M. Varst, and E. S. Kristensen. 2001. Does organic farming face distinctive livestock welfare issues – a conceptual analysis. *Journal of Agricultural and Environmental Ethics* 14: 275-299.
- Frasier, D., D.M. Weary, E.A. Pajor, and B.N. Milligan. A scientific conception of animal welfare that reflects ethical concerns. *Animal Welfare* 6: 187-205
- Grandin, T. and Johnson C. 2006. *Animals in Translation: using the mysteries of autism to decode animal behavior.* p 269 Bloomsbury, London.
- Griggs, J.P. and J.P. Jacob. 2005. Alternatives to antibiotics for organic poultry production. *Journal of Applied Poultry Research* 14: 750-756.
- Hamilton, C.U., Emanuelson, K. Forslund, I. Hanson, and T. Ekman. 2006. Mastitis and related management factors in certified organic dairy herds in Sweden. *Acta Vet. Scand.* 48: 11-18
- IFOAM. 2005. The IFOAM basic standards for organic production and processing. Available at: http://www.ifoam.org/about_ifoam/standards/norms/norm_documents_library/IBS_V3_20070817.pdf. Accessed May 16, 2012.
- Kijlstra, A. and I.A.J.M. Eijck. 2006. Animal health in organic livestock production: a review. *Wageningen Journal of Life Sciences* 54: 77-94.
- Love, D., M. Davis, A. Bassett, A. Gunther, and K. Nachman. 2010. Dose imprecision and resistance: free choice medicated feeds in industrial food animal production in the united states. *Environmental Health Perspectives* 119: 279-283.
- Love, D., R. Halden, M. Davis, and K. Nachman. 2012. Feather meal: a previously unrecognized route for reentry into the food supply of multiple pharmaceuticals and personal care products. *Environmental Science and Technology* 46: 3795-3802.
- Lund, V. 2006. Natural living – a precondition for animal welfare in organic farming. *Livestock Science* 100: 71-83.
- Lund, V. and B. Algers. 2003. Research on animal health and welfare in organic farming – a literature review. *Livestock Production Science* 80: 55-68.
- National Archives and Records Administration. 2012a. Title 7: Agriculture. Available at: <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div5&view=text&node=7:3.1.1.9.32&idno=7#7:3.1.1.9.32.2.354.6>. Accessed May 12, 2012.
- National Archives and Records Administration. 2012b. Title 9: Animals and animal products. Available at: <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=e36cf81b0144333c3ee1a5f090ba75d0&rgn=div5&view=text&node=9:2.0.2.1.14&idno=9>. Accessed Apr. 22, 2012.b
- Prickett, R.L., F.B. Norwood, and J.L. Lusk. 2010. Consumer preferences for farm animal welfare: results from a telephone survey of US households. *Animal Welfare* 19:335-347.
- Riddle, J. 2005. The constellation of organic values. Available at: <http://www.rodaleinstitute.org/20051110/riddle>. Accessed Apr. 22, 2012.
- Riddle, J. 2008. Requirements for organic dairy and livestock in the United States. Southwest research and outreach center. Available at: http://swroc.cfans.umn.edu/prod/groups/cfans/@pub/@cfans/@swroc/documents/asset/cfans_asset_292803.pdf. Accessed Apr. 22, 2012.
- Ruegg, P.L. 2009. Management of mastitis on organic and conventional dairy farms. *Journal of Animal Science* 87:43-55
- USDA. 2010. Organic Production Data Set. Available at: <http://www.ers.usda.gov/Data/Organic/>. Accessed Apr. 22, 2012.
- Vaarst, M. and T.W. Bennedsgaard. 2001. Reduced medication in organic farming with emphasis on organic dairy production. *Acta Vet Stand.* 95: 51-57.
- Verhoog, H., V. Lund, and H. Alroe. 2004. Animal welfare, ethics and organic farming. In: *Animal Health and Welfare in Organic Agriculture.* pps 73-94. CABI Publishing, Wallingford, Oxon, UK.
- Verhoog, H., M. Matze, E. L. Van Bueren, and T. Baars. 2003. The role of the concept of the natural (naturalness) in organic farming. *Journal of Agricultural and Environmental Ethics* 16: 29-49

- Vos, T. 2000. Visions of the middle landscape:
organic farming and the politics of nature.
Agriculture and Human Values 17: 245-256.
- Zwald, A.G., P.L. Rugg, J.B. Kaneene, L.D.
Warnick, S.J. Wells, C. Fossler, and L.W.
Halbert. 2004. Management practices and
reported antimicrobial usage on
conventional and organic dairy farms.
Journal of Dairy Science 87: 191-201