Humane Society International animal welfare guidelines for smallholder livestock programs

Animal welfare is the physical and psychological state of an animal. The way animals are raised and treated can have important repercussions on their welfare, as well as on environmental sustainability, food security, and the economic well-being of farmers. There is a scientific basis for animal welfare concerns, and the welfare of animals should be considered along with other sustainability issues and social development goals.

The negative implications of industrial farm animal production on animal welfare, human health, the environment, and rural communities are well documented (please see HSI's white paper: Impact of Industrial Farm Animal Production on Food Security in the Developing World). Many agricultural development programs instead focus assistance on small farmers—particularly women farmers—who raise small numbers of animals for local markets and home consumption. Such programs can have a direct, positive impact on income and nutrition in poor households.[1,2]

However, these programs still have the potential to cause tremendous suffering if animal welfare is not explicitly included in program training and objectives. For example, smallholder poultry development programs in Bangladesh have encouraged the use of wire cages to confine egg laying hens.[3,4] These enclosures may confine animals for nearly their entire lives in a manner that prevents them from fully spreading their limbs, let alone walking or experiencing other important natural behaviors. In Vietnam, biogas projects funded by an international development agency that—although aiming to mitigate climate change and provide a cheap source of energy for rural communities—fail to take into consideration animal welfare. To facilitate manure capture for this biogas project, pigs suffered lifelong confinement in crowded, barren concrete enclosures that did not provide for basic freedom of movement. Such tradeoffs should be avoided, while other options for co-benefits should be pursued.

The Five Freedoms

It is essential that agricultural and development policies explicitly address environmental and social problems resulting from the animal agriculture sector—and do so in a way that supports the health and well-being of farm animals, as well as the people who depend on them. Additionally, it is the responsibility of all stakeholders—including governments, intergovernmental agencies, civil society, and farmers—to safeguard the welfare of farm animals.

The Five Freedoms is a framework for approaching animal welfare. It is a logical way of thinking about the animal welfare problems that can occur in different housing and management systems, and lays out the important needs of animals that should be addressed. The concept originates from a 1965 British government committee, which was first tasked with a formal examination of the welfare of animals in proliferating industrial production systems.[5]

Considering the Five Freedoms in agricultural social development goals

1. Freedom from hunger and thirst by ready access to fresh water and a diet to maintain full health and vigour.

Animals should receive a daily diet adequate in composition, quantity, quality and nutrients to maintain good health, meet physiological requirements and avoid metabolic and nutritional disorders.

In some animal production systems, animals may be denied access to feed and/or water. This can be due to lack of access to the necessary resources or intentional as part of a routine management plan. For example, this can happen in cases where highly productive genetic strains are imported into regions of the world that do not have a consistent supply of high-quality feed. Under these circumstances, animals often fail to thrive and their productivity does not meet expectations. In some situations, the infrastructure to supply the necessary clean drinking water or deliver feed is lacking. Animals should not be imported into regions of the world without the means to properly care for them. Nor should food or water be denied.

In other cases feed may be withheld intentionally as part of a routine management plan, such as when egg-laying hens are subjected to a forced molt. In conventional systems around the world, to extend their laying cycle, hens may be deprived of feed for up to two weeks, sometimes accompanied by water withdrawal for as many as three days. Another sector where feed may be withheld is in breeding operations for pigs and poultry, where the parent generation produces offspring that are raised for meat. Because highly productive broiler chicken and turkey strains grow quickly to market weight, the parent generation, who share this propensity for weight gain, is often feed restricted to prevent health and reproductive disorders. The situation is similar for pigs with North American or European genetics, and breeding sows may be fed just 50-60% of their voluntary feed intake,[6] which can be consumed in as little as five minutes. Underfeeding animals leads to chronic hunger, frustration, and poor welfare, and without daily access to fresh water, mortality rates increase. Management practices that deprive feed and water, and propagation of animals that must be feed restricted to prevent obesity, are both serious welfare problems that should be avoided by selecting genetic strains and management principles that do not require feed and/or water withdrawal.

THE FIVE FREEDOMS

1. **Freedom from hunger and thirst** by ready access to fresh water and a diet to maintain full health and vigour.
2. **Freedom from discomfort** by providing an appropriate environment including shelter and a comfortable resting area.
3. **Freedom from pain, injury or disease** by prevention or rapid diagnosis and treatment.
4. **Freedom to express normal behaviour** by providing sufficient space, proper facilities and company of the animal's own kind.
5. **Freedom from fear and distress** by ensuring conditions and treatment which avoid mental suffering.

*For animal welfare guidelines governing larger farm animal production facilities, please see the International Finance Corporation's Good Practice Note on Animal Welfare, the European Bank for Reconstruction and Development's Environmental and Social Policy, and/or the RSPCA's Freedom Food standards.

2. Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area.


GREG LATZA/FOR THE HSUS

Shelter is a necessity for keeping animals, especially if the breed is not locally adapted to the climate or is not hardy enough to adapt quickly. High temperatures and humidity can cause heat stress, which in severe cases can lead to ataxia and increased mortality. Shade provides comfort and relief. Shelter is especially important for poultry and young animals, both of whom are vulnerable if they are not safely secured when predators are active. One predator can easily decimate an entire flock of chickens in a single night if they are not protected.

Confinement facilities often have concrete floors to help simplify manure management. However, they are unforgiving walking and resting surfaces. Many studies show that lameness in cattle and pigs is associated with hard floors[7,8] and that access to bedded areas and softer soil in outdoor pasture or range land can improve leg and foot health.[9,10,11] As an avian species, hens have feet that are anatomically adapted to close around a tree-branch or other perch—this is the natural resting position of a hen. Yet egg-laying hens kept in battery cages are forced to stand on wire continuously. Animals should not be housed on surfaces that are not comfortable or that can damage their feet and legs.

3. Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment.

Veterinary care is an important factor in the welfare of animals. Unhealthy animals can have reduced productivity and fertility, and this in turn can impact the livelihood of the producer. Disease pressures vary by geographical region. At the least, veterinary care should be adequate to ensure that animals have the vaccinations they need to survive and remain healthy. Sick animals can make people sick, as many animal diseases are zoonotic. However, veterinary services are not always readily available in remote regions of the developing world. This is an important animal welfare concern, as well as an economic concern for the farmer.

Pigs normally spend about 50% of their daily time budget in foraging related behavior, rooting, digging and grazing. When unable to express this natural behavior, young piglets redirect their rooting and chewing to the only available substrate, their pen mates. Investigative oral activity can lead to tail-biting, a serious welfare problem if the injured tail becomes infected and necrotic. To address the problem, it is common practice to cut off the tails of young piglets shortly after birth, using shears or another sharp implement. Raising animals in a more natural, enriched environment is a more humane way to prevent these kinds of problems without the need for painful physical mutilations. In almost every case, there is a more welfare-friendly alternative to routine management practices that involve cutting off part of the animal.

Policies and aid programs aimed at increasing productivity of livestock often promote the use of genetically "improved" breeds from the West. However, these animals are prone to a number of debilitating and painful metabolic disorders, or "production diseases". Lameness and heart and circulatory disorders are common to broiler chickens, those bred specifically for meat production, and as many as 30%[12,13,14] have painful[15,16] walking impairments. Cows bred for high milk yield suffer from a similar suite of diseases and experience greater levels of lameness, mastitis (a painful bacterial infection of the udder) and ketosis (a condition associated with anorexia and depression).[17,18] Genetic strains imported from developed countries often do not have the local immunity that more traditional breeds have developed and may succumb to infectious disease, climate or predators. These animals may require specialized feed and medical care that are not easily accessible to small holders.

4. Freedom to express normal behaviour by providing sufficient space, proper facilities and company of the animal's own kind.

The most salient problem for pigs and poultry around the world is the degree to which the animals are confined. As previously mentioned, egg-laying hens may be confined to battery cages, small wire enclosures that afford each hen very little space, usually less than the area of a letter-sized sheet of paper. Hens are kept this way for approximately a year—unless they are force moulted and kept for a second egg laying cycle, in which case they are confined for two full years before they are eventually depopulated

(usually, killed). Breeding sows in the pork production industry are kept in gestation crates, stalls so narrow that the animals cannot even turn around, for months at a time. Denied the opportunity to express their natural behavior, these intelligent animals begin to show repetitive, stereotypic bar-biting, sham chewing and head weaving—signs of frustration and possible psychosis. These confinement systems are not able to provide an acceptable level of welfare for the animals and should not be used. At the least, animal accommodation should be designed, constructed and maintained to allow all animals space to stand, turn around, stretch, sit and/or lie down comfortably at the same time.

5. Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering.

Unfamiliar places and novel experiences can be sources of fear and anxiety for animals, so transport between locations is a key point at which welfare must be considered. The noise, vibration, motion and crowding are all sources of stress. If animals must be transported, only vehicles built for the purpose of moving livestock should be used. Specialized loading ramps, secure flooring, and safe containment are needed to ensure that stressors are minimized and that the animals are not injured during the process. Only animals fit for transport should be moved; injured, sick, heavily pregnant or newborn animals cannot withstand the rigours of strenuous journeys.

The interactions animals have with their caretakers and handlers can also be a source of fear and stress or, conversely, can have a positive impact if the interactions are gentle, patient and compassionate. Rough or unskilled animal handling is a serious source of injury and carcass damage, which reduces welfare and economic outcomes. Stress itself can also reduce productivity. Persons charged with the responsibility of caring for or transporting animals may need training and resources to ensure they can manage the animals properly and have a positive human-animal relationship.

Animals awaiting slaughter may also experience fear and distress if they are not handled calmly by skilled workers in well-designed facilities. The slaughter of animals presents a unique set of poignant animal welfare and food safety and quality concerns. To minimize pain and suffering at slaughter, specialized equipment and training are necessary. For example, cattle may balk at shadows, moving objects and people positioned incorrectly, which can lead animal handlers to treat them roughly in order to get them to move. If animals are not restrained when they are being stunned, it may take multiple tries to render them unconscious. Animals that are not stunned quickly and painlessly may suffer greatly at slaughter.

GREG LATZA/FOR THE HSUS

Conclusions

All food and farming production involving animals should use systems with high welfare potential and that can meet the five freedoms. A system with high welfare potential is one that allows animals to express natural behavior in a way that improves their quality of life, in addition to providing a clean, healthy, comfortable environment. A system with low welfare potential has inherent barriers to achieving acceptable welfare outcomes. Examples include confining animals to the extent that they cannot express natural behavior or propagating animal genetics associated with severe, unintended animal-welfare side effects. Once a high welfare potential is in place, farmers need the resources and training to run it well, so that it reaches its full welfare potential. The systems with the highest welfare potential are often small-scale, where individualized attention to the animals is possible and likely.

Attention to animal welfare should be part of any sustainable agricultural development goal. When the animals are well cared for, and when they thrive, the people who rely on them also benefit. Helping people and helping animals go hand-in-hand and must be considered together to secure a positive future. For more information, please contact Humane Society International.

HUMANE SOCIETY
INTERNATIONAL

hsi.org

1 Iannotti L, Cunningham K, & Ruel M. 2009. Diversifying into healthy diets: homestead food production in Bangladesh, In: Millions Fed: Proven Successes in Agricultural Development. International Food Policy Research Institute. http://www.ifpri.org/sites/default/files/publications/oc64ch21.pdf. Accessed July 9, 2014. pp. 146, 150.

2 Helen Keller International. http://www.hki.org/working-worldwide/asia-pacific/bangladesh/. Accessed July 9, 2014.

3 Shamsuddoha, M. 2009. Development of livestock sector through leading NGO in Bangladesh. The Annals of The "Ştefan cel Mare" University Suceava. Fascicle of The Faculty of Economics and Public Administration 9:1(9). http://www.seap.usv.ro/annals/ojs/index.php/annals/article/viewFile/145/197.

4 South Asian Pro-Poor Livestock Policy Program. Sustainable livelihoods for the rural poor through small scale poultry rearing. http://sapplpp.org/goodpractices/small-holder-poultry/BDGP02-sustainable-livelihoods-for-the-rural-poor-through-small-scale-poultry-rearing. Accessed July 9, 2014.

5 Farm Animal Welfare Council. Five Freedoms. www.fawc.org.uk/freedoms.htm. Accessed July 2, 2014.

6 Ramonet Y, Meunier-Salaun MC, and Dourmad JY. 1999. High-fiber diets in pregnant sows: digestive utilization and effects on the behavior of the animals. Journal of Animal Science 77:591-9.

7 Kilbride AL, Gillman CE, and Green LE. 2008. Prevalence of foot lesions, limb lesions and abnormal locomotion in pigs on commercial farms in Britain and risks associated with flooring. The Pig Journal 61:62-8.

8 Haskell MJ, Rennie LJ, Bowell VA, Bell MJ, and Lawrence AB. 2006. Housing system, milk production, and zero-grazing effects on lameness and leg injury in dairy cows. Journal of Dairy Science 89:4259-66.

9 Kilbride A, Gillman C, Ossent P, and Green L. 2009. Impact of flooring on the health and welfare of pigs. In Practice 31(8):390-5.

10 Vanegas J, Overton M, Berry SL, and Sischo WM. 2006. Effect of rubber flooring on claw health in lactating dairy cows housed in free-stall barns. Journal of Dairy Science 89(11):4251-8.

11 Bergsten C. 2013. Walking and standing surfaces for longevity, These floors are made for walking. Proceedings, Cow Longevity Conference, August 28-29, Hamra Farm/Tumba, Sweden.

12 Knowles TG, Kestin SC, Haslam SM, et al. 2008. Leg disorders in broiler chickens: prevalence, risk factors and prevention. PLoS ONE 3(2):e1545. doi:10.1371/journal.pone.0001545. www.plosone.org/article/info:doi/10.1371/journal.pone.0001545. Accessed December 3, 2013.

13 Kestin SC, Knowles TG, Tinch AE, and Gregory NG. 1992. Prevalence of leg weakness in broiler chickens and its relationship with genotype. The Veterinary Record 131:190-4.

14 Sanotra GS, Berg C, and Lund JD. 2003. A Comparison between leg problems in Danish and Swedish broiler production. Animal Welfare 12:677-83.

15 Danbury TC, Weeks CA, Chambers JP, Waterman-Pearson AE, and Kestin SC. 2000. Self-selection of the analgesic drug carprofen by lame broiler chickens. The Veterinary Record 146:307-11.

16 Nääs IA, Paz ICLA, Baracho MS, et al., 2009. Impact of lameness on broiler well-being. Journal of Applied Poultry Research 18:432-9.

17 Heringstad B, Klemetsdal G and Steine T. 2003. Selection responses for clinical mastitis and protein yield in two Norwegian dairy cattle selection experiments. Journal of Dairy Science 86:2990-9.

18 Van Dorp TE, Dekkers JCM, Martin SW, and Noordhuizen JPTM. 1998. Genetic Parameters of Health Disorders, and Relationships with 305-Day Milk Yield and Conformation Traits of Registered Holstein Cows. Journal of Dairy Science 81:2264–70.