38214

rations

Good Practice Note Animal Welfare in Livestock Operations

"We don't underestimate the challenge

of promoting change in animal welfare

in many of our projects, nor the time it

will take. Our philosophy is that it is

better to engage and attempt to make

a difference to animal welfare and,

more generally, business sustainability

than not to engage -

a philosophy well proven by our

experience in managing environmental

and social issues."

lean-Paul Pinard, Director

Agribusiness Department, IFC

nimal welfare is gaining increased recognition as an important element of commercial livestock operations around the world. This has wide-ranging implications for an industry with complex historical and cultural roots.

Animal welfare is being addressed not only by governmental agencies and academic institutions, but by a growing number of professionals at

different locations in the agricultural supply chain. A number of regional and global initiatives have therefore emerged to provide guidance on acceptable practices to actors ranging from individuals caring for animals on farms to large-scale commercial enterprises providing animal-based products from different livestock systems. Many corporate groups—from producers to retailers—are also acknowledging social and

environmental responsibilities and pursuing programs designed to enhance animal welfare.

Animal welfare is first and foremost important for the animal. Farm animals can feel, experience, and suffer. Animal sentience is already recognized by European Union law and forms the basis of many standards of animal welfare around the world.

¹ Protocol on Improved Protection and Respect for the Welfare of Animals, Treaty of Amsterdam 1997

Animal welfare is just as important to humans for reasons of food security and nutrition. Better management of and care for livestock can improve productivity and food quality, thereby helping to address nutritional deficiencies and food shortages as well as ensuring food safety.

Higher animal welfare standards are also increasingly seen to be a prerequisite to enhancing business

efficiency and profitability, satisfying international markets, and meeting consumer expectations. For example, a third of the leading global food retailers with turnovers ranging from US\$25-250 billion, have public animal welfare policies. Businesses that address or enhance animal welfare are likely to win or retain a competitive advantage in the global marketplace in a variety of ways, such as

- global marketplace in a varion of ways, such as costs savings due to more efficient production
- ▶ realizing growing market opportunities for food produced in animal welfare friendly systems

processes that enhance animal welfare

becoming the producer of choice for retailers and consumers concerned with animal health and welfare, food safety and quality, human health, and the environment. Environment and Social Development Department



What's Inside?

- 2 What Animal Welfare is and How it is Addressed
- 5 The Business Case for Improved Animal Welfare
- 10 The Costs of Improving Animal Welfare
- 12 How Can Improvements in Animal Welfare Be Made?
- 21 Why is IFC Concerned with Animal Welfare?

Stakeholders in the animal welfare arena agree that standards of animal welfare have to be based on sound science, research, and practical experience.

IFC is determined to work with and support its clients in reducing losses, potentially increasing productivity, and/or accessing new markets through the application of sustainability principles, including animal welfare standards. This Good Practice Note is part of an IFC initiative to provide enhanced support to its clients in the development of a responsible and forward-looking approach to livestock operations to, among other things, help producers access and maintain entry into high quality and value market segments. It provides guidance on a range of approaches to animal welfare.

What Animal Welfare is and How it is Assessed

The welfare of an animal is a reflection of its physical and mental health and general well-being. An animal in a poor state of welfare may suffer from discomfort, distress, or pain, which may compromise its ability to grow, survive, and produce or re-produce. There are many ways to assess animal welfare, ranging from behavior and health measurements, to the preferences of the animals themselves. Stakeholders in the animal welfare arena agree that standards of animal welfare have to be based on sound science, research, and practical experience.

Common measures of animal welfare include behavior and physiology, productivity and reproductive success, and the incidence of injuries and diseases. Attention to animals' housing, food, water, and health typically leads to improvements in measures of welfare and profitability. Productivity is often used as an indicator of animal health. However, focusing only on improving

productivity—particularly in large-scale operations—can in some cases lead to poor conditions of animal welfare. Productivity should therefore be assessed in conjunction with other elements to ensure that the welfare of the individual animal is not being ignored.

Simple scoring systems as well as complex computer models can be used to assess animal welfare. These can incorporate distinct measures as well as whole animal observations, and can approach animal welfare in terms of the livestock management system being used or in relation to the performance of the animals. The different monitoring systems have varying advantages and disadvantages. Scoring systems are arguably the most common and are used to integrate a number of parameters.

Using these systems, various members of the food supply chain have developed or are in the process of developing and participating in auditing programs to assess how well a particular producer or supplier

Animal Welfare Audit Program

The AWAP audit program has been jointly developed by producers, the National Council of Chain Restaurants, and the Food Marketing Institute. An AWAP audit is voluntary. It is designed to evaluate how a facility is functioning relative to its industry's guidance and best management practices dealing with animal health and welfare. Audit questions are answered on a "Yes," "No," or "Not Applicable" level. These answers are judged relative to thresholds suggested by the industry or modified by the AWAP Technical Committee. If an NCCR or FMI member has different threshold levels for particular questions, they are free to interpret the data in ways that meet their needs. The AWAP audit is not designed to be punitive but allows facilities to voluntarily address and correct conditions.

www.awaudit.org

is doing when it comes to animal health and welfare. One of them, the Animal Welfare Audit Program (AWAP), was cooperatively developed by the National Council of Chain Restaurants (NCCR), the Food Marketing Institute (FMI), and the producer community. The FMI has 2300 member companies active in 60 countries with total annual sales of about US\$340 billion. AWAP is designed to provide objective data regarding animal welfare at livestock production and slaughter facilities.

Out of the evolving international dialogue on animal welfare, a set of basic principles has emerged. Popularly called "The Five Freedoms", these principles have been developed by, and/or are reflected in, various animal welfare guides, recommendations, codes, and legislation of the

European Union, North American countries, Australasia, Asian countries, as well as the World Organization for Animal Health (OIE), to address animal welfare issues.

ℜ Setting Standards

A number of international recommendations, codes, and laws now focus on animal welfare and a growing number of countries have enacted animal welfare legislation outlawing specific animal husbandry practices.

The World Organization for Animal Health (OIE) is an intergovernmental organization created to guarantee the transparency of animal disease status worldwide. As the international reference

Stockmanship, plus the training and supervision necessary to achieve required standards, are considered key factors in the handling and care of livestock.



The "Five Freedoms" of Animal Welfare

Originally put forward by the UK Farm Animal Welfare Council, the "Five Freedoms" define ideal states (rather than

standards) for acceptable welfare. They are based on beliefs that the welfare of an animal includes its physical and mental state; that good animal welfare implies both fitness and a sense of well-being; and that any animal kept by man must, at least, be protected from unnecessary suffering.

The Five Freedoms cover an animal's welfare whether on farm, in transit, at market, or at a place of slaughter. They form a logical and comprehensive framework for analysis of welfare within any system, together with the steps and compromises necessary to safeguard and improve welfare within the proper constraints of an effective livestock industry. Stockmanship, plus the training and supervision necessary to achieve required standards, are considered key factors in the handling and care of livestock.

- 1. Freedom from hunger and thirst by ready access to fresh water and a diet to maintain full health and vigor
- **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 behavior -** 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 that avoid mental suffering

Source: Farm Animal Welfare Council (UK) http://www.fawc.org.uk/freedoms.htm

Animal welfare is important for commercial reasons. Adherence to animal welfare guidelines and standards can lead to improved animal productivity and business profitability.

organization for animal health and zoonoses, the OIE, on behalf of its 167 member countries, provides international leadership on animal welfare through a number of science-based standards and guidelines, expert advice, and the promotion of relevant education and research.

The OIE considers animal welfare to be a complex, multifaceted, public policy issue that includes important scientific, ethical, economic, and political dimensions. Its priority to date is the welfare of animals used in agriculture and aquaculture, with a focus on transportation, humane slaughter, and killing for disease control purposes. Housing and management and other topics, such as research animals and wildlife, will also be addressed. The OIE regards the involvement of a broad range of stakeholders as important in this complex topic and collaborates with a wide range of groups to ensure the standards, guidelines, and recommendations represent a broad international view.

The United Nations Food and Agriculture Organisation (FAO) is in the early stages of including animal welfare standards in some of its programs.

The European Convention for the Protection of Animals kept for Farming Purposes is a set of principles setting out requirements with respect to housing, food, water, and care necessary to safeguard the welfare of animals, particularly those kept in modern, intensive farming systems. In addition, the European Union has in place several directives, which set minimum legally binding standards of welfare for various farm animals, such as laying hens, pigs, and calves. As these are minimum standards, individual member states can set higher standards for animals within their own territories.

Some welfare organizations have drawn up labeling schemes for animal products from farms that meet certain higher welfare standards, such as the RSPCA's Freedom Food scheme in the UK.

Freedom Food Farm Assurance Scheme

Freedom Food is the farm assurance and food labelling scheme set up by the United Kingdom's Royal Society for the Prevention of Cruelty to Animals (RSPCA). The aim of the scheme is to improve the lives of as many farm animals as possible by implementing welfare standards (based on the Five Freedoms) on farms, by haulers, and in abattoirs.

For example, freedom from fear and distress may mean avoiding mixing animals of different ages, sexes, and social groups, which can be very stressful to the animals and may result in injury. Allowing generous feeding and drinking spaces helps minimise bullying and competition. A clean, dry, bedded area for mammalian species and plenty of space to move around means freedom from discomfort. Freedom from pain, injury, and disease means the environment must be well maintained to provide good health. Finally, giving animals enough space, appropriate environmental enrichment, and company of their own kind gives them the freedom to express normal behaviour. Producers, haulers, and abattoirs are subject to regular inspections.

Freedom Foods has now been operating in the United Kingdom for ten years, and has achieved a 25% share of the retail eggs sales in that country.

www.rspca.org.uk



Voted number 1 fashion retailer in 2005 for animal welfare by the RSPCA.



ourtesy Marks & Spend

Some retailers also set their own higher welfare standards. A number of individual corporations have developed animal welfare assurance programs and require compliance on the part of their suppliers. McDonald's Corporation, one of the world's leading food service retailers with more than 31,000 restaurants in 118 countries, has committed to a set of guiding principles on animal welfare aimed at treating animals with care and respect, and free from cruelty, abuse, and neglect.*

British retailing giant Marks & Spencer have adopted the recommendations of the Farm Animal Welfare Council as part of their business principles for animal welfare.** The company aims to ensure that animal welfare is protected wherever animals are used in the production of their products.

Programs such as these are already influencing both large and small livestock producers in the emerging markets. Burger King, for example, is planning to expand its assurance program to include its Latin American supplier.

The Business Case for Improved Animal Welfare

Animal welfare is important for commercial as well as ethical reasons. The health and well-being of animals can have a direct impact on growth, reproduction, or meat quality, and is therefore important to producers, food retailers, customers, and others in the supply chain. For the producer in particular, adherence to animal welfare guidelines and standards can increase business profitability by improving productivity and efficiency, as well as by reducing losses.

Disease is a good example of a joint threat to animal welfare and—especially for small-scale livestock production in emerging market countries—business sustainability. Outbreaks of diseases transmissible to humans, such as avian influenza, have shown the catastrophic effects that disease can have on livestock operations and have triggered international demands to tighten disease control. The humane destruction of affected animals is a further welfare issue as well as entailing costs to businesses. Controlling disease

The best route for getting buy-in for animal welfare standards with commercial farmers is to stress the business case.

^{*} Source: http://www.mcdonalds.com/corp/values/socialrespons/market/animalwelfare.html

^{**} Source: http://www2.marksandspencer.com/thecompany/ourcommitmenttosociety/suppliers/supplier_animal.shtml

Sometimes very simple changes in how animals are treated can have dramatic effects on the bottom line.

makes a major contribution to animal welfare but can also mean the difference to a business' survival.

Commercial Successes on the Farm

Initial steps to improve animal welfare may mean an additional financial cost for a company.

However, experience shows that the long-term savings and commercial benefits can outweigh initial expenditures. Sometimes very simple changes in how animals are treated can have dramatic effects on the bottom line. The following cases involving IFC clients show the very real business case for improving animal welfare in livestock operations.

Case I

Many poultry operators see incubator and hatchery management as having a major impact on animal welfare in their operations. Embryo development is very dependent on optimum temperature and ventilation. In one IFC-funded operation, old setter trays were too small, resulting in eggs touching each other and compromising ventilation. These were replaced with new trays that had more space and that allowed eggs to dissipate heat more easily. Hatchability increased 3% with better development of internal organs, resulting in faster growth rate and improved feed conversion. Also changing the hatcher trays from old wire mesh to plastic resulted in less downgrading of day old chicks (0.5%). In the old trays, chickens got their hocks stuck in the wire. The improved yield and increase in hatchability alone was worth around US\$300,000 per annum for one client.

Case 2

Many Soviet-style broiler operations used caged rearing. By converting some sheds to floor rearing,

a client was able to provide a better brooding environment with a resulting drop in mortality of 0.5%. The conversion to floor rearing also allowed for improvements in the ventilation system, which resulted in improved livestock performance. In addition, live bird quality was significantly improved by a reduction in the incidence of breast blisters. This enabled higher yields, and higher profit margins, to be obtained in the processing plant. The overall improvement in profitability from converting sheds to floor rearing systems convinced the company to convert all cage sheds to floor rearing systems. The company requested funding from IFC to undertake this change, thereby offering IFC the opportunity to further engage with the company on animal welfare issues.

Case 3

Transportation can often have detrimental effects on animal welfare. For example, bruising occurring when animals are handled, loaded, transported, and unloaded prior to slaughter or during slaughter, can lead to down-grading of carcasses and lower quality cuts. Bruised meat (and the carcass) has a higher pH value and may be considered unfit for human consumption. Bruised chicken meat is more prone to microbial contamination. Animals stressed prior to slaughter tend to have depleted glycogen stores in their muscles—leading to muscle that has a higher pH value and is likely to be dark-cutting, objectionably dark in color, and prone to microbial spoilage.

An IFC client addressed this by upgrading the practices of the catching gang and training them with various instructional videos. They modified the catching system by placing birds into containers with both hands, rather than throwing as had been

done previously. The transport crates were changed from wire to plastic crates and birds were protected from the sun. The unloading system was modified to stop birds being "dumped" from a height onto the intake belt at the slaughterhouse. The improvement in downgrades (caused by broken wings and legs, and bruises) was carefully monitored and showed that downgrades dropped by 8%. These improvements were worth US\$320,000 per annum and showed clearly the benefits of handling animals gently, transporting them with care, and slaughtering them in a quiet, efficient and compassionate manner.

★ Market Drivers and Opportunity

Affluence in many parts of the world has increased consumer choices and heightened expectations about food production standards, especially food safety and quality. There is also a growing demand for assurances about how animal-derived food is produced, and livestock operations are coming under pressure to adopt and practice animal welfare principles. The result has been a growth in farm assurance schemes that include animal welfare criteria.

The ability to recognize early signs of ill-health, injury, disease, or distress allows for prompt remedial action, thereby reducing mortality rates and negative effects on meat quality.

The Benefits of Good Stockmanship

Good stockmanship has proven to be a crucial component in improving the health and well-being of livestock, with clear business benefits. Animals in intensive farming systems, for example, are reliant on humans for most of their needs. They therefore require well trained and motivated personnel with practical ability, knowledge, and professional competence to ensure that their physical, health, and behavioral needs are met. Knowledge of the normal behavior and function of stock is essential. The ability to recognize early signs of ill-health, injury, disease, or distress allows for prompt remedial action, thereby reducing mortality rates and negative effects on meat quality.

Poor interactions between people and their animals are also known to limit both animal welfare and livestock productivity. People with sound attitudes and positive rather than aversive behaviors towards animals do not elicit as much fear in their livestock and this is reflected in improved livestock performance (e.g. growth, reproduction, and meat quality).

Careful selection of stock handlers, or educating existing staff to improve their attitudes and stock handling, can improve livestock productivity. There are a number of examples:

▶ Handling pigs in an aversive manner, as little as 2-5 minutes three times per week, markedly reduced growth (by 11%) and reproductive performance



(pregnancy rates by 62%) in some experimental studies.

- ▶ Fear of humans was associated with less efficient feed conversion amongst broiler chickens over 22 commercial farms, and was highly likely to have been influenced by the quality of stockmanship.
- Fear may also be a factor in limiting the production of layer hens. The responses of birds towards humans accounted for 23-63% of the variation in peak, hen, day production over 14 commercial farms.
- ▶ Interventions designed to improve the attitude and behavior of people interacting with stock led to an average 4-5% increase in milk yield, milk protein, and milk fat over 94 commercial dairy farms.

Affluence in many parts of the world has increased consumer choices and heightened expectations about food production standards, especially food safety and quality.



There are several different types of schemes which aim to ensure compliance with good practices. Some companies have individual programs, while others are working with restaurant and food marketing groups to bring together common programs. McDonald's, for instance, requires its suppliers to abide by specific welfare guidelines that exceed those of many governments. All these assurance schemes are founded on good and best management practices so that consumers can be assured of the quality of animal-based products.

Standards can help to secure and maintain demand for products in welfare-sensitive markets. Although these may lead to an increase in production costs, some of the additional cost can be recouped through market premiums. Surveys in Europe and North America find that the majority of consumers care about animal welfare and report a willingness to pay significantly more for animal products they perceive to have come from farm animals raised humanely. Cage-free eggs, for example, enjoy a price premium often more than twice that of cage eggs. Several emerging market industries have benefited from this approach.²

Case 4

The broiler industry in Thailand has moved into organic poultry meat and premium cooked products, with stringent hygiene standards and animal welfare standards. Broiler farm management standards address animal health, farm systems, and feed. The application of these standards is part of the industry's desire to guarantee strict hygiene and be regarded as reliable suppliers to both domestic and international markets. This allows access to affluent markets not available to other low-cost producers. Over 500,000 tonnes are produced annually with 30-40% exported, mostly to Japan (50%) and the European Union (30%).

Case 5

The Namibian beef industry has a strong reputation for superior beef. This is due partly to a national assurance scheme which addresses animal health and welfare, transport and handling, and slaughter, and partly to its guaranteed hormone-free status. The scheme gives this beef industry advantages over its competitors and the country is the largest exporter to the UK of beef from the African continent. Over 100,000 tonnes of beef are produced each year, of which about 80% is exported.

² Source: Developing Animal Welfare: the Opportunities for Trade in High Welfare Products from Developing Countries. RSPCA & Eurogroup for Animal Welfare, http://www.eurogroupanimalwelfare. Org/pdf/developingaw.pdf

What Stakeholders Think

A strong driver of improved animal welfare is market acceptance of companies and products. Knowledge of societal expectations may also help in understanding the forces impinging upon livestock farming. With this in mind, IFC commissioned a survey of opinions among a number of key international agribusiness and animal welfare stakeholders, including representatives of leading institutions and civil society organizations. The following areas of agreement emerged from the responses to the survey.

→ Use of animals

Most participants believed in the important contribution that livestock farming makes to human welfare, but that with it comes a responsibility to treat animals with compassion and care. Animal welfare is therefore inextricably linked to human health and prosperity. Human attitudes towards animals were felt to be important determinants of the way animals are treated. A minority view that animals should not be used for human gain was noted.

→ Five freedoms and intensive farming

Many surveyed were of the opinion that a central principle for ensuring and enhancing animal welfare is to base husbandry practices on the Five Freedoms so that farming systems give livestock the opportunity to satisfy their needs. For some participants, intensive farming systems by their very nature are inhumane since they conflict with one or more of the Five Freedoms.

→ Working together

There was strong encouragement for IFC to work with other groups such as the World Organization for Animal Health (OIE) and the veterinary profession, and, where possible, for IFC to use existing animal welfare guidelines in connection with its investments. Participants agreed that animal welfare should be based on strong scientific standards backed by research and education, with assistance given to developing countries to ensure that the treatment of animals is not compromised by a community's lack of access to research data or infrastructure. Helping people to improve the welfare of animals was seen as more important than imposing external standards.

→ Gradual improvements

Moves towards improving animal welfare will likely need to be made incrementally, recognizing the

potentially limited ability of businesses and emerging markets to accommodate them. The crucial issues of space, social engagement, and, above all, health must be addressed first. Participants felt that a verification system should be implemented to provide a significant measure of animal welfare, and therefore provide official recognition for the production methods used.

→ Addressing differences

There is a need to address apparent inconsistencies in animal welfare. The development of larger-scale farming systems in particular needs to address both the positive and negative social and environmental impacts of those developments. In addition, the application of standards needs to take into account differences between emerging markets and developed countries, particularly with respect to poverty, communities, the environment, and globalization. This is apparent in the paradoxical situation that modernization of farming systems is often encouraged in emerging markets, while there is pressure to move towards less intensive systems in developed countries.

→ Effecting change

Among the many forces improving animal welfare, economics was acknowledged as both significant and complex. It was noted that some higher standards of welfare come at a cost, principally to the intensive livestock farmer. Concerned consumers and retailers can drive change by favoring products and businesses that maintain and enhance animal welfare, and this is likely to increase in importance with the greater understanding of the connection between animal husbandry practices and food safety and quality. While education is an important contributor to change, so too are legislation, public policy, and public opinion.

→ Just distribution of costs

Since the cost of production does not contribute greatly to the overall price of food, a more equitable distribution of the costs of improving animal welfare may be possible. In intensive animal agricultural systems, improvements in animal welfare potentially have a significant economic cost. It is therefore important that, if there is retailer or consumer pressure to improve, then the system is encouraged to do so by the small price premiums required to do so.

Concerned
consumers and
retailers can drive
change by favoring
products and
businesses that
maintain and
enhance animal
welfare.

The most effective approach will be one that balances costs by taking full advantage of livestock performance improvements and new opportunities offered by the marketplace.

The Costs of Improving Animal Welfare

While improving animal welfare is critical for improving business sustainability and can strengthen business performance in a variety of ways, it is also acknowledged that in some cases there are costs associated with such improvements. The most effective approach will be one that balances costs by taking full advantage of livestock performance improvements and new opportunities offered by the marketplace.

♯ Costs in the Supply Chain

Animal welfare stakeholders participating in the IFC survey (see "What Stakeholders Think") regarded economic costs as a major or strong constraint on improving animal welfare, especially in intensive livestock industries, but will vary depending on the sector, feed supplies, and other factors.

For example, the processes of farrowing and fattening are considered most important to pig welfare. The group housing of non-lactating sows, provision of straw, and generally more space for animals, can have significant economic implications. The cost of higher welfare associated with both welfare assured and with free-range pig farming systems has been estimated to be 4-8% higher than that in more conventionally farmed systems.³ One study found that, depending on the improvements made, pig production and

distribution costs could increase by 22-32%.⁴ However, it is important to note that the figures given are based on the costs of labor in industrialized countries. In less industrialized countries, where labor costs are typically much lower, the relative costs of confinement and noconfinement systems are likely to be different.

Another study found that the switch from sow stalls (gestation crates) to group housing of pregnant sows was estimated to cost less than \$2 p.a. to consumers in the European Union. Standards could therefore be improved without impacting significantly on retail prices, but with a risk of placing additional burdens on the producer. The respondents to the survey acknowledged that the cost of production does not contribute greatly to the overall price of food to the consumer. They agreed that fundamental reform was needed in the structure of the food chain to allow for a more equitable distribution of the costs of improving animal welfare.

Costs for Communities and the Environment

Greater livestock production and the increased degree of processing associated with growing global consumption of meat and animal products increases pressure on natural resources. Waste production, gas emission, higher demand for feed (increasing the need for cultivation), and the pressure for genetically uniform stock (resulting in a reduction in biodiversity) are some of the greatest challenges for intensive livestock production. While, on the one hand, intensive livestock production can result in greater environmental pollution than less intensive or smallholder producers, it might reduce pressure on fragile ecosystems and produce less

³ Journal of Agricultural and Environmental Ethics 16, 163-186

⁴ Livestock Production Science 48, 23-37

⁵ "The Economics of Factory Farming," Compassion in World Farming (CIWF) Trust, 2002

carbon dioxide emissions per kg of product than some low-level production systems.

In the future, environmental costs related to livestock production may have to be borne by producers and/or imposed on consumers; or they may be mitigated by aligning farming systems with the land's ability to absorb nutrient surpluses, practicing sustainable rotational farming, and by using improvements in technology to enhance the digestibility of key nutrients.

The future of animal production may be headed toward a prioritization of the environment and animal welfare, at the expense of increased production. This is evidenced by growing consumer interest and changes in legislation. This will undoubtedly open up new opportunities for producers with systems that are less compromising to animal welfare.

Differences between developed and developing countries

IFC, investing in emerging markets, has noted differences in opportunities and costs when improving animal welfare between developed and developing countries. For instance, the varying cost of labor means that animal welfare improvements in developed countries are more likely to be made through the automation of systems, while cheaper labor in developing countries offers more scope to increase human contact where this could have a positive effect.

Developed countries tend to have more financial resources and infrastructure to support animal welfare. This includes housing, feeding systems, and

transportation; greater ability to address problems such as drought, cold, and predators; and stronger research programs in the area of animal welfare. Developed countries are also likely to have a greater number of veterinarians and animal production specialists; more developed industries for vaccine and animal health supplies; and enhanced education and industry awareness regarding animal welfare.

Although developing countries often face significant challenges with regard to resources, knowledge, research, and awareness around animal welfare, they have an opportunity to benefit from the experiences of developed countries and more advanced technology. Thanks to NGO campaigns that have led to stronger legislation and raised consumer expectations in developed countries, the emerging markets are in a good position to capitalize on increased market premiums for more sustainable products. Moreover, as awareness about animal welfare issues and food safety/quality increases globally, they may also be able to benefit from future demand in their home markets.



The emerging markets are in a good position to capitalize on increased market premiums for more sustainable products.

Animal welfare can be assured or enhanced by following good management practices.

How Can Improvements in Animal Welfare be Made?

Animal welfare can be assured or enhanced by following good management practices. The World Organization for Animal Health (OIE) guidelines on animal welfare have become the international reference for animal welfare in the trade of animals and products and the control of eradication of animal diseases. They also act as a guide for the development of national and regional assurance programs and it is envisaged that these guidelines will be used as a basis for bilateral agreements between OIE member countries.

Codes of welfare, or standards, aim to ensure that the needs of terrestrial (especially intensive pig and poultry) and aquatic animals are met by setting minimum requirements for treatment of animals throughout the production process. In conjunction with relevant legislation in particular countries, these good practices apply to all persons responsible for the welfare of farm animals. While producers may have less control over some of food chain participants (e.g. transport and slaughter company personnel), they all contribute to enhanced animal welfare—and therefore product quality and profitability—and should also be encouraged to follow the good practices.

The following sections provide general guidance on accepted good practice in animal welfare.

Additional references are provided at the end of the chapter, indicating where more detailed information and quantitative guidance can be obtained. References to specific OIE guidelines are also contained at the end of relevant sections.

→ Genetics and Breed Selection

Breeds should be selected for good skeletal and cardiovascular health, low aggression, and suitable for both the environment/climate and the system in which they are bred.

Breeding objectives should be assessed not only by production characteristics, but also by rates of injury, disease, and mortality in both breeding stock and offspring. For broiler chickens, for example, genetic selection and manipulation for fast growth has led to unacceptably high rates of leg disorders, acute and chronic pain, abnormal gait, respiratory infections, acute death syndrome, and other significant welfare issues, which translate into costs and losses for producers. Leading poultry welfare scientist lan J.H. Duncan has concluded that "without a doubt, the biggest welfare problems for meat birds are those associated with fast growth."



⁶ For citations and other statistics, see Welfare Issues with Selective Breeding for Rapid Growth in Broiler Chickens and Turkeys., The Humane Society of the United States (HSUS), http://www.hsus.org/farm/ resources/research/practices/fast growth broilers.html

⁷ Duncan IJH. 2004. "Welfare problems of poultry". In Benson JB and Rollin BE (eds.), *The Well-Being of Farm Animals* (Ames, IA: Blackwell, p. 310)

→ Feed and Water

Animals should receive a daily diet adequate in composition, quantity, and containing appropriate nutrients to maintain good health, meet their physiological requirements, and avoid metabolic and nutritional disorders. Feed should be palatable and free of contaminants, moulds, and toxins.

It should be noted that food and water requirements vary with feed composition, physiological state, stage of growth, size and condition, pregnancy, lactation, exercise and activity, and climate. Access to feed should be at intervals appropriate to the physiological needs of the animals, and at least once daily.

Animals should have an adequate daily supply of water that is palatable and not harmful to their health.

Food and water should be provided in such a way that all animals have an opportunity to feed or drink without undue competition and injury.

Animals on highly concentrated diets may also require access to bulky or high fiber feed in order to satisfy hunger. Medicated or enriched food and water should only be used on professional advice, or when it is not detrimental to animal health and welfare.

Reserves of food and water should be maintained to allow for interruption to supply.

→ Housing Systems

Animal accommodation should be designed, constructed, and maintained to allow all animals space to stand, turn around, stretch, sit, and/or lie



Going further

Housing systems that allow animals to engage in natural behaviors, such as nesting, dust-bathing, or perching, are accepted by animal scientists and veterinarians to greatly improve animal welfare. As such, providing environmental enrichment in housing systems, including appropriate and well-maintained bedding and secure access to the outdoors, can be incorporated into the business model.

down comfortably at the same time. They should also allow all animals to directly interact with herd or flock mates, unless isolated for veterinary reasons.

Stocking densities should be low enough to prevent excessive temperatures and humidity; competition, stress, and aggression between animals, and abnormal behavior; and to enable good litter management.

All animals should have access to a clean and dry place. Floor litter must be kept free of excessive moisture, and be loose and friable in the case of broiler chickens. All surfaces and flooring should be

Animals should have an adequate daily supply of water that is palatable and not harmful to their health.

Handling and restraining techniques should minimize distress and avoid injury.

non-slip, without sharp projections or edges likely to cause injury, and provide for the animal to bear weight on the entire sole of the foot.

Housing should be constructed of fire-resistant materials and electrical and fuel installations planned and fitted to minimize fire risk. Fire fighting equipment and smoke detectors should be installed with sufficient exits to enable evacuation of the building in an emergency. There should be sufficient drainage to protect animals from flooding.

Automated feeding and watering systems should allow all animals the opportunity of access to sufficient feed and water without undue competition (including intimidation, bullying and aggression) likely to cause injury or distress.

Feeding and watering systems should be designed, constructed, placed, and maintained to prevent contamination or spoiling, and minimize spillage.

All automated systems supplying food and water; removing waste; and controlling temperature, lighting, and ventilation should be checked and maintained regularly, and backup systems should be available in case of failure.

Natural or artificial light (of an intensity of at least 20 lux) should be available in all buildings for a minimum of eight hours daily, and there should be a period of darkness sufficient to allow proper rest.

Air quality should be maintained by removing excessive heat and moisture, minimizing transmission of airborne infectious agents, preventing the build up of noxious or harmful waste gases, and to reasonably control humidity and minimize dust particles.



Effluent and waste should not be allowed to build up where it leads to discomfort and compromised welfare.

Animals should be protected from extreme temperatures or abrupt temperature fluctuations, cold draughts, and from predators, vermin, and excessive noise.

Animals with access to, or living, outdoors should have access to shade and shelter and protection from predators.

→ Husbandry Practices

Each operation should have strategies to prevent overheating and cooling.

Handling and restraining techniques should minimize distress and avoid injury.

Painful husbandry procedures (e.g. beak trimming, castration) must only be carried out when necessary, and when there is no other practical alternative. In such a case, they should be carried

out in a hygienic manner by a competent and trained operator.

Animals in intensive systems should be inspected at least daily, or more regularly under circumstances likely to affect welfare (e.g. introduction of new foods, outbreaks of disease).

→ Health and Disease

Personnel responsible for the care and management of animals should have an appropriate level of knowledge of the normal health and behavior of the animals in their care so as to be able to recognize poor health and welfare. Animals should be inspected regularly, at least daily, and more frequently during periods of significant risk to health and welfare.

Animals must be maintained in good body condition and remedial action (veterinary attention, improved nutrition, or husbandry) taken when in poor condition, or when there are signs of significant distress, ill-health, disease, or injury.

Animals should be periodically checked for the presence of parasites, and any corrective treatment deemed necessary to prevent distress and suffering should be administered as soon as possible.

Any sick or injured animals should be treated or cared for as soon as practically possible, including being isolated or humanely destroyed if necessary.

Staff should be properly trained in humane destruction methods and when to apply them, and be supplied with the required equipment. Dead animals should be removed promptly.

Veterinary care should be available at all times and medications and treatments given in accordance with advice and instructions. Good record keeping will assist with managing health and disease problems.

A preventative health program should be established in consultation with a veterinary surgeon. External audits are encouraged.

See Guidelines for the Killing of Animals for Disease Control Purposes, World Organization for Animal Health (OIE), www.oie.int

http://www.oie.int/eng/normes/MCode/a_summry.htm

→ Transport

Facilities for loading, transporting, and unloading should be designed, constructed, and maintained so as to permit proper handling of animals and prevent increased risk of injuries.

Catching, handling, and loading should be carried out quietly and confidently by trained and competent personnel, and animals should not be inverted when handled.



Catching, handling, and loading should be carried out quietly and confidently by trained and competent personnel, and animals should not be inverted when handled.

Animals should be slaughtered as close as possible to the farm of origin to minimize the rigors of transport.

Animals should be fit to travel without unreasonable or unnecessary pain or distress, and non-ambulatory and other unfit animals must be promptly and humanely euthanized on-site.

Provision should be made for care of animals during the journey and at the destination. Particular care should be taken with animals that are fatigued, old, young, infirm, pregnant, and/or nursing.

Animals should be neither too loosely nor too tightly loaded so as to reduce the risk of excessive movement or overcrowding resulting in injury.

The distance animals are transported, and the time taken, should be minimized. Where animals are transported over long distances, appropriate provision needs to be made for feeding and watering.

During transport animals should be protected from extremes of heat and cold and provided with adequate ventilation.

Casualty animals should not be transported. However, should an animal become a casualty during a journey, then it should receive immediate veterinary attention or be euthanized without delay.

See Guidelines for the Transport of Animals by Land, Sea and Air, World Organization for Animal Health (OIE), www.oie.int http://www.oie.int/eng/normes/MCode/a_summry.htm

→ Slaughter

Prior to slaughter, proper handling techniques, and lighting, space, and ventilation should be used to keep the animals calm. Holding facilities should

protect animals from adverse weather, have adequate and uniform lighting, sufficient space to allow animals to stand up and lie down, be well ventilated and drained, and be free from smooth floor surfaces and sharp protrusions.

Animals should be slaughtered as close as possible to the farm of origin to minimize the rigors of transport.

Animals should be slaughtered as soon as possible after arriving at the slaughter facility. In cases where animals are kept for long periods prior to slaughter, feed and water must be provided.

All animals must be handled and restrained, rendered unconscious, and slaughtered in the least distressing and most pain-free manner possible by trained and competent staff. All animals should be rendered unconscious by a means which causes unconsciousness to persist until death occurs.

Contingency plans should be made for animal slaughter or accommodation in the event of the slaughter facility being unable to continue through unforeseen disruption or plant failure.

See Guidelines for the Slaughter of Animals for Human Consumption, World Organization for Animal Health (OIE), www.oie.int

http://www.oie.int/eng/normes/MCode/a summry.htm

→ Stockmanship

Animals in intensive farming systems are reliant on humans for most of their needs, requiring people with knowledge and experience and the observance of high standards. There should be a sufficient number of trained and well-motivated personnel with practical ability, knowledge and professional competence to maintain animal health and welfare and ensure that the physical, health, and behavioral needs of animals are met.

Good stockmanship is crucial and requires people who are competent and well-trained, patient, careful, and caring, and who display empathy with animals and handle them quietly and firmly. Stock people should not be cruel and should at all times endeavor to avoid causing pain, suffering, or distress to animals.

Stock people should be skilled at handling, preventing, and treating illnesses and diseases and caring for affected animals, including minimizing aggression. Knowledge of the normal behavior and function of stock is essential and individuals should be able to recognize early signs of ill-health, injury, disease, or distress requiring prompt remedial action.

Intensively managed animals must be inspected at least once per day (or more frequently, dependent on the likelihood of any risk to animal health and welfare). Ill or injured animals must be treated to alleviate pain and distress promptly, or be killed humanely.

Ongoing professional training programs should be available to stock people, and the development of such programs should be encouraged so that a culture of caring and responsible planning and management is developed.



Stock managers and handlers should have access to a disaster response and recovery plan (e.g. failure of feed or water supply, electricity supply, structural damage, or fire and flood).

→ Quality Management

To ensure that high levels of animal husbandry are maintained, and that principles of animal welfare are adhered to, a quality assurance system that provides for written procedures should be implemented by producers. Staff should be trained in animal welfare, including knowledge of relevant legal requirements and codes of practice.

The quality assurance system should require continual review of the existing system and practices, with the aim of enhancing the welfare of animals.

Regular inspections should take place, including some visits that are unannounced. Welfare audits are encouraged.

Systems of monitoring and recording are encouraged in order to ensure good husbandry and welfare and especially so that problems can be averted before they arise.

Staff should be trained in animal welfare, including knowledge of relevant legal requirements and codes of practice.

Handling of live fish and other aquatic animals should be kept to a minimum to avoid stress and injury.

Aquaculture

In addition to the relevant good practices above, farmed fish and other aquatic animals have specific requirements and demands which can affect their welfare.

The water supply should be of sufficient flow, quality, and quantity to ensure the well-being of the species being farmed. The physical environment should be designed, sited, and maintained so as to enhance animal health and welfare.

All fish and other aquatic animals should receive adequate quantities of feed, using the correct nutritional composition for the species farmed, and for their physiological state, especially the stage of growth. Food should be presented in a form and distributed in a manner that ensures that all individuals have sufficient access to the feed supplied.

The stocking density for fish and other aquatic animals should be adjusted to the specific requirements of the species so as to minimize crowding and stress, aggression, injuries, and illhealth. This will need to take account of the average size of the animal, their health and behavioral needs, the environment, the availability of oxygen, and the removal of wastes that may cause stress or toxic effects if allowed to accumulate.

Any unnecessary distress to the animal should be avoided. Fish and other aquatic animals should be kept in good health and inspected frequently enough to ensure that significant behavioral and physical changes would be detected and remedial action taken. Proper diagnosis should be made if the presence of disease is suspected. Handling of live fish and other aquatic animals should be kept to a minimum to avoid stress and injury. Dead or dying animals should be promptly removed and immediately and humanely euthanized.

(Continued on page 21)



Additional Resources

→ General

▶ European Convention for the Protection of Animals Kept for Farming Purposes. Council of Europe. http://www.coe.int/T/E/Legal_affairs/Legal_cooperation/Biological_safety,_use_of_animals/ Farming/

→ Broiler chickens

- Animal Welfare (Broiler Chickens: Fully Housed) Code of Welfare. National Animal Welfare Advisory Committee, Wellington, 2003.
- Code of Recommendations for the Welfare of Livestock: Meat Chickens and Breeding Chickens. DEFRA Publications, London, 2002.
- Primary Industries Standing Committee Model Code of Practice for the Welfare of Animals: Domestic Poultry. Fourth edition. CSIRO Publishing, Collingwood, 2002.
- Recommended Code of Practice for the Care and Handling of Farm Animals: Chickens, Turkeys and Breeders from Hatchery to Processing Plant. Canadian Agri-Food Research Council, Ottawa, 2003.

http://www.carc-crac.ca/english/codes_of_practice/CodesIndexPage.htm

Recommended code of practice for the care and handling of pullets, layers and spent fowl: Poultry Layers. Canadian Agri-Food Research Council, Ottawa, 2003.

http://www.carc-crac.ca/english/codes of practice/CodesIndexPage.htm

→ Pigs

 Code of Recommendations for the Welfare of Livestock: Pigs. DEFRA Publications, London, 2003.



- Primary Industries Standing Committee Model Code of Practice for the Welfare of Animals: Pigs. Second edition. CSIRO Publishing, Collingwood, 2003
- Recommended Code of Practice for the Care and Handling of Farm Animals: Pigs. Agriculture and Agri-Food Canada, Ottawa, 1993.

→ Slaughter

- Code of Recommendations and Minimum Standards for the Welfare of Animals at the Time of Slaughter at Licensed and Approved Premises. Animal Welfare Advisory Committee, Wellington, 1996.
- ▶ European Convention for the Protection of Animals for Slaughter. Council of Europe. Http://conventions.coe.int/Treaty/en/Treaties/ Html/102.htm
- Guidelines for the Humane Handling, Transport and Slaughter of Livestock. Food and Agriculture Organization of the United Nations and Humane Society International.

http://www.fao.org/DOCREP/003/X6909E/X6909E00.HTM

 Guidelines for the Slaughter of Animals for Human Consumption. OIE.
 Http://www.oie.int/downld/SC/2005/ animal_welfare_2005.pdf

Additional Resources (continued)

- ▶ Model Code of Practice for the Welfare of Animals: Livestock at Slaughtering Establishments. CSIRO Publishing, Collingwood, 2001.
- ▶ U.S. Code of Federal Regulations, Title 9, Chapter 3, Part 313, Humane Slaughter of Livestock, http://www.access.gpo.gov/nara/cfr/waisidx_00/ 9cfr313 00.html

→ Transport

- ▶ Code of Recommendations and Minimum Standards for the Welfare of Animals Transported in New Zealand. Animal Welfare Advisory Committee, Wellington, 1998.
- ▶ European Convention for the Protection of Animals during International Transport. Council of Europe. http://conventions.coe.int/treaty/Commun/QueVo ulezVous.asp?NT=065&CM=1&CL=ENG
- Guidelines for the Humane Handling, Transport and Slaughter of Livestock. Food and Agriculture Organization of the United Nations and Humane Society International. http://www.fao.org/DOCREP/003/X6909E/X6909 E00.HTM
- ▶ Model Code of Practice for the Welfare of Animals: Land Transport of Pigs. CSIRO Publishing, Collingwood, 1998.

→ Aquaculture

• Avoiding Cruelty in Shellfish Preparation. New South Wales Department of Primary Industries Agriculture Guidelines. Http://www.agric.nsw.gov.au/reader/aw-

pamphlet/shellfish-prep.htm

- ▶ A Code of Practice for the Farming and Handling of Yabbies. Aquaculture Council of Western Australia. http://www.aquaculturecouncilwa.com/publications /yabby aquaculture code of practice
- ▶ British Columbia Salmon Farmers Association Code of Practice. British Columbia Salmon Farmers http://www.salmonfarmers.org/files/ code of practice.html
- ▶ Codes of Practice for Responsible Shrimp Farming. Global Aquaculture Alliance. http://www.gaalliance.org/code.html
- ▶ Code of Conduct for Responsible Fisheries. FAO Fisheries Department http://www.fao.org/DOCREP/005/v9878e/ v9878e00.htm
- ▶ Code of Conduct for European Aquaculture. Federation of European Aquaculture Producers http://www.feap.info/FileLibrary%5C6%5CFEAP%2

0Code%20of%20Conduct.pdf



The movement and transport of live fish and other aquatic animals should be done without unnecessary delay, with an adequate oxygen supply, avoiding rapid changes in variables such as temperature and water quality, and in containers designed to eliminate injury.

Whenever possible, predators should be excluded from the areas where live fish and other aquatic animals are held. Parasites should be controlled where they have the potential to compromise animal health and welfare.

When fish and other aquatic animals are required to be fasted before slaughter to induce a completely empty digestive system, the period of fasting should only be for as long as is necessary. Fish and other aquatic animals should be killed quickly and humanely.

Why is IFC Concerned with Animal Welfare?

Increased market awareness of environmental, social, and commercial values is driving changes in the way business is done, leading to the recognition of new risks and opportunities. In the case of animal welfare, failure to keep pace with changing consumer expectations and market opportunities could put companies and their investors at a competitive disadvantage in an increasingly global marketplace. IFC is therefore committed to helping its clients become aware of potential new opportunities, while at the same time managing immediate risks and impacts related to animal health, such as the spread of Avian Flu.

IFC was established to promote sustainable private sector investment in developing countries, helping to reduce poverty and improve people's lives. IFC's Agribusiness Department invests in, among other things, livestock and aquaculture projects and production facilities. IFC's US\$300 million portfolio of investments in such facilities consists primarily of investments in integrated pig and poultry operations (with some beef processing). IFC services companies in countries with a competitive advantage in livestock production, as well as those in countries that are in the process of developing or about to develop production systems.

In many of the countries where IFC invests, livestock industries still have a major role to play in benefiting poor rural communities by enhancing food security, providing employment, and reducing the risk of social instability. IFC believes there are situations where modernization of livestock farming can both contribute to the economic viability of poor rural communities as well as provide opportunities for improved animal welfare standards. IFC will therefore consider animal welfare issues when selecting projects and will seek ways to promote systems that positively impact animal welfare.



In addressing animal welfare, IFC is guided by its ongoing interactions with key international organizations.

. Eerikainer

An important part
of IFC's role is to
transfer not just
capital but
knowledge and
guidance to client
companies operating
in emerging markets.

♯ Working with Partner Organizations

In addressing animal welfare, IFC is guided by its ongoing interactions with key international organizations, including the World Organization for Animal Health (OIE), the Food and Agricultural Organization of the United Nations (FAO), the World Veterinary Association (WVA), the International Society for Applied Ethology (ISAE), international primary industry organizations, and international animal welfare NGOs. Some of these groups have already contributed to IFC's animal welfare initiative.

IFC recognizes that, although animal welfare is not covered by World Trade Organization (WTO) agreements, there is broad-based support from all stakeholders for the international animal welfare leadership role of the OIE. IFC will continue to liaise closely with the OIE to ensure that its lending approaches are consistent with the standards developed by the OIE.

♯ Building Sustainable Businesses

IFC's approach to animal welfare balances economic, environmental, and social objectives, while being mindful of companies' objectives and the market environment in which they operate. Based on extensive experience in emerging markets, IFC's approach to animal welfare takes four key dimensions into consideration:

■ Sustainable Economic Development — Livestock farming can have a major, positive impact on the economic viability of poor rural communities and emerging markets. IFC is committed to promoting sustainable economic development through its investments, which includes attention to recognized standards of animal welfare. However, while animal welfare is an important issue, it has to be seen within the context of other social and economic issues, and improvements should be sought in a way that balances the needs of communities, the private sector, and the environment.

- ▶ Cultural differences In many of the countries where IFC invests, animal welfare has an important cultural component. While animal welfare standards are based firmly on scientific knowledge and practical experience, IFC is mindful of the specific needs of people in emerging markets and their cultural practices. These needs have to be accommodated during the implementation of animal welfare standards and balanced with a realistic assessment of market requirements, social expectations, and beliefs. Any changes to husbandry practices need to consider local communities' knowledge, experience and beliefs, as well as the demands of the international food supply chain.
- Recognizing good practice The basic needs of animals, as reflected by the Five Freedoms, form the basis of internationally recognized welfare standards and principles of good practice. IFC aims to promote improvement and encourage innovation by demonstrating business case scenarios for change that are both practicable and achievable, and that focus on animal welfare outcomes (i.e. acceptable states of health and welfare in animals).
- Improving systems Most systems of intensive animal farming pose challenges to ensuring animal welfare. IFC would like to encourage the development of more animal-

welfare-friendly systems and may become increasingly selective in its assessment of livestock investments where they do not contribute to improving standards of animal welfare, or to the alleviation of poverty, especially in rural regions.

Working with Companies

An important part of IFC's role is to transfer not just capital but knowledge and guidance to client companies operating in emerging markets. As part of its commitment to sustainability in all its investments, IFC engages with existing and prospective clients in a dialogue on applied or recommended animal welfare standards. Through a collaborative approach, IFC aims to help businesses realize opportunities in livestock farming by improving animal welfare.

IFC is committed to encouraging good practice in animal welfare by

- promoting the business case for changes that enhance animal welfare in private-sector livestock operations
- informing stakeholders of the animal welfare standards and guidelines published by the World Organization for Animal Health (OIE)
- drawing clients' attention to obligatory animal welfare standards developed by their national governments and by trading blocks, such as the European Union
- liaising with food distribution companies and retailers to encourage change in the supply chain
- sharing resources and developing guidance material to assist companies in raising animal welfare standards in their operations

Before investing in a livestock operation or enterprise, IFC will assess how the applicant



addresses or plans to address various animal welfare aspects. IFC will develop a species-specific checklist that will be discussed with the company during project appraisal and during supervision visits. IFC may decline selected projects where the system is incompatible with the Five Freedoms (e.g. foi gras production) or where the applicant is not committed to working with IFC and other agencies to improve its operations where such improvement is considered necessary for the sustainability of the applicant's business.

Before investing in a livestock operation or enterprise, IFC will assess how the applicant addresses or plans to address various animal welfare aspects.

Acknowledgements

"Improving Animal Welfare in Livestock Operations" is the sixth in a series of Good Practice Notes prepared by the Environment and Social Development Department of the International Finance Corporation (IFC) and is a joint initiative with IFC's Agribusiness Department. It was developed with funding from IFC's Agribusiness Department and the Social Responsibility Practice Area, and with support from the Knowledge and Innovation Unit in the Environment & Social Development Department.

IFC commissioned IAWC Limited * to research and prepare an initial draft of the Good Practice Note. Additional work was carried out by Oliver Ryan, Louise Gardiner, and Veronique Gubser, Design and layout were done by Vanessa Manuel.

We are grateful to all those who participated in the peer review and public comment process, including Debra Sequeira, Peter Neame, Robert Horner, William Bulmer, Maria Arsenova, Mark Eckstein, and Nicholas Flanders

Special thanks go to the following individuals and organizations for their valuable comments: The World Organization for Animal Health (OIE), Robert Madelin, Andrea Gavinelli and Rex Homer (the European Commission Health & Consumer Protection Directorate-General), Miyun Park, Marta Prado, and Jennifer Lanier (The Humane Society of the United States), Joyce D'Silva (Compassion in World Farming), Michael Appleby (World Society for the Protection of Animals, Eurogroup for Animal Welfare and RSPCA), David Fraser (University of British Columbia, Canada), Harry J. Blokhuis (Welfare Quality), Marlene Halverson (Animal Welfare Institute), Noam Mohr (People for the Ethical Treatment of Animals).

For more information about animal welfare in IFC's agribusiness investments, please contact;

Oliver Ryan, Principal Engineer Agribusiness Department International Finance Corporation 2121 Pennsylvania Avenue, NW Washington DC 22043, USA oryan@ifc.org www.ifc.org/agribusiness

For more information on IFC's Good Practice Publications, please contact the Environment and Social Development Department, enviro@ifc.org www.ifc.org/enviro

* IAWC Limited: International Animal Welfare Consultants: Internationally recognised advice on complex issues. www.animalwelfareconsultants.com

Good Practice Publications available at www.ifc.org/enviropublications



GOOD PRACTICE NOTE: Addressing the Social Dimensions of Private Sector Projects (December 2003)

Covers issues from scoping and baseline data collection to impact analysis, mitigation and monitoring of social impacts. It presents social assessment as a tool for identifying opportunities that go beyond traditional mitigation measures to promote sustainable development on a broader scale.

28 pages | © 2003 IFC | Free to download

GOOD PRACTICE NOTE: HIV/AIDS in the Workplace (December 2002)

Looks at the impact of the pandemic on the private sector and provides a guide to companies on how to set up an effective HIV/AIDS program, including awareness raising, prevention, care and treatment, to support their employees and the communities in which they work and live. 24 pages | © 2002 IFC | Free to download

GOOD PRACTICE NOTE: Addressing Child Labor in the Workplace and Supply Chain (December 2002)

Offers a unique private sector perspective on the topic of harmful child labor and provides companies with a range of basic, good practice approaches that other businesses have successfully applied in managing risks associated with child labor in their own workplaces and those of their vendors and suppliers.

20 pages | © 2002 IFC | Free to download

Useful References

World Organization for Animal Health www.oie.org

World Animal Net is the world's largest network of animal protection societies with consultative status at the United Nations www.worldanimal.net

World Society for the Protection of Animals is the largest international federation of animal protection organizations, with over 692 societies in more than 142 countries www.wspa.org.uk

The Royal Society for the Prevention of Cruelty to Animals

www.rspca.org.uk

The Eurogroup for Animal Welfare is the Secretariat of the European Parliament group established to consider animal welfare matters www.eurogroupanimalwelfare.org

European Commission Community Action Plan on the Protection and Welfare of Animals 2006-

http://ec.europa.eu/food/animal/welfare/com acti on plan230106 en.pdf

Welfare Quality® is an EU funded project to integrate animal welfare in the food quality chain. www.welfarequality.net

United Nations Food and Agriculture Organization

www.fao.org

"Animals, Ethic and Trade - The Challenge of Animal Sentience", edited by Jacky Turner and Joyce D'Silva (Earthscan, 2006). This book brings together internationally renowned experts on animal behavior and agriculture with ethicists, religious scholars, international industry, and regulators for the first time to debate critical issues in animal welfare and animal sentience. It includes a chapter on "Animal Welfare and Economic development: A Financial Institution Perspective" by Oliver Ryan, IFC.

"Creating Business Opportunity through Improved Animal Welfare" (IFC, April 2006). This four-page Quick Note is designed to help clients better understand the business case for improved animal welfare and the types of issues that will be addressed during assessment by IFC. www.ifc.org/enviropublications

Disclaimer

The purpose of the Good Practice Note series is to share information about private sector approaches for addressing a range of environmental and social issues. This Good Practice Note provides guidance and examples of basic good practice approaches that businesses have successfully applied in their operations. IFC has not financed all the projects or companies mentioned in the Good Practice Note. Some of the information in the Note comes from publicly available sources such as company websites. IFC has not verified the accuracy of such information nor the companies' practices.

This Good Practice Note does not represent a commitment by IFC to require projects it finances to take certain or all of the actions specified in the Good Practice Note. Instead, any issues arising in an IFC-financed project will be evaluated and addressed in the context of the particular circumstances of the project.