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The Welfare of Animals in the Meat, Egg, and Dairy Industries

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An HSUS Report: The Welfare of Animals in the Meat, Egg, and Dairy Industries

Abstract

Each year in the United States, approximately 11 billion animals are raised and killed for meat, eggs, and milk. These farm animals—sentient, complex, and capable of feeling pain and frustration, joy and excitement—are viewed by industrialized agriculture as commodities and suffer myriad assaults to their physical, mental, and emotional well-being, typically denied the ability to engage in their species-specific behavioral needs. Despite the routine abuses they endure, no federal law protects animals from cruelty on the farm, and the majority of states exempt customary agricultural practices—no matter how abusive—from the scope of their animal cruelty statutes. The treatment of farm animals and the conditions in which they are raised, transported, and slaughtered within industrialized agriculture are incompatible with providing adequate levels of welfare.

Birds

Of the approximately 11 billion animals killed annually in the United States,^{1,2,3,4,5} 86% are birds—98% of land animals in agriculture—and the overwhelming majority are “broiler” chickens raised for meat, approximately 1 million killed each hour.⁶ Additionally, approximately 340 million laying hens⁷ are raised in the egg industry (280 million birds who produce table eggs and 60 million kept for breeding), and more than 270 million turkeys⁸ are slaughtered for meat.

On factory farms, birds raised for meat are confined by the tens of thousands^{9,10} in grower houses, which are commonly artificially lit, force-ventilated, and completely barren except for litter material on the floor and long rows of feeders and drinkers. The most significant assault on their welfare is fast growth.¹¹ The poultry industry has used selective breeding to produce birds whose bodies “are on the verge of structural collapse.”¹² Studies consistently show that approximately 26-30% of broiler chickens suffer from gait defects severe enough to impair walking ability,^{13,14,15} and additional research strongly suggests that birds at this level of lameness are in pain.^{16,17} On October 14, 1991, *The Guardian* quoted professor John Webster of the University of Bristol School of Veterinary Science who stated, “Broilers are the only livestock that are in chronic pain for the last 20 per cent of their lives. They don’t move around, not because they are overstocked, but because it hurts their joints so much.”¹⁸

Market weight is reached after 6-7 weeks for broiler chickens,¹⁹ approximately 99 days for turkey hens, and 136 days for tom turkeys.²⁰ The birds are hastily caught and can suffer dislocated and broken hips, legs, and wings, as well as internal hemorrhages during the process.^{21,22,23} The birds are put into crates stacked one atop another on trucks.²⁴ During their journey to slaughter, they are not given any food or water and are afforded little if any protection from extreme temperatures.^{25,26}

Like birds raised for meat, chickens in the egg industry suffer immensely—beginning right after hatching. Male chicks are considered byproducts, as they are unable to lay eggs and are not bred for meat production. Millions each year are gassed, macerated, sucked through a vacuum system, or thrown into garbage bins^{27,28,29} where they are left to die from dehydration or asphyxiation. Most female chicks are mutilated without any pain relief.^{30,31,32} To help prevent potential outbreaks of feather-pecking and other injurious behavior that can result

from intensive confinement in barren conditions, tips of their sensitive beaks are seared off with a hot blade.^{33,34,35,36}

More than 95%³⁷ of egg-laying hens in U.S. animal agriculture are intensively confined in small, wire “battery cages” stacked several tiers high and extending down long warehouses.³⁸ Hens are given less space than the area of a letter-sized sheet of paper³⁹ in which to eat, sleep, lay eggs, and defecate. The intensive confinement makes it impossible for them to engage in nearly all of their natural behavior, including dustbathing, foraging, or nesting, the most significant source of frustration for battery caged hens.^{40,41} While many countries are phasing out the abusive battery cage system, U.S. egg producers still overcrowd hens in barren cages so small the birds can’t even spread their wings.^{42,43,44}

When their productivity wanes, hens may be “force molted” through low-nutrient feed, until they lose 30-35% of their body weight^{45,46}—to induce another laying cycle. After two years when hens may no longer be profitable, the majority are “depopulated,” removed from their cages, a process that can cause broken limbs in nearly one in four hens, and then sent to slaughter or gassed on farm.^{47,48,49} As with broiler chickens and other animals, egg-laying hens are given little protection from extreme temperatures during their journey to slaughter.⁵⁰

At the slaughter plant, the birds are uncrated, dumped onto conveyors, and hung upside-down in shackles by their legs. In the United States, birds are typically not rendered unconscious before they are slaughtered, as the U.S. Department of Agriculture (USDA) does not interpret the federal Humane Methods of Slaughter Act to extend to farmed birds.⁵¹

Shackled and inverted, their heads pass through an electrified water bath before their throats are cut, usually by machine.⁵² As slaughter lines run at rapid speeds (up to 8,400 chickens per hour⁵³), mistakes can occur and up to 3%⁵⁴ of birds may still be conscious as they enter tanks of scalding water intended to loosen their feathers.^{55,56,57,58,59,60,61}

Although chickens, turkeys, and eggs are the more common products from farmed birds, *pâté de foie gras* is another food item produced from birds. French for “fatty liver,” foie gras is made from the livers of overfed ducks and geese. Ducks and geese are force-fed via a long tube inserted down their esophagi with an unnatural quantity of food pumped directly into their stomachs.

Force-feeding birds to produce foie gras is detrimental to their welfare, causing the birds’ livers to become diseased.⁶² Birds force-fed for foie gras may suffer from a number of significant welfare problems, including frustration of natural behavior,⁶³ injury,⁶⁴ liver disease, lameness,⁶⁵ diseases of the respiratory and digestive tracts,^{66,67} and higher rates of mortality compared to non force-fed ducks.⁶⁸

The majority of the world’s foie gras is made from duck livers, and approximately 80% is produced in France.⁶⁹ In the United States, three facilities produce livers for foie gras,^{70,71,72,73} slaughtering in total more than 500,000 ducks annually.⁷⁴

Pigs

More than 116 million pigs,⁷⁵ intelligent and highly social animals,^{76,77,78,79} are slaughtered annually in the United States.

In industrial pig production, sows (adult female pigs) are customarily put through consecutive cycles of impregnation, giving birth, and nursing, all while intensively confined. During their four-month pregnancies, approximately 80% of sows⁸⁰ are kept in stalls—individual metal “gestation crates” that are 0.6 m (2 ft) wide and 2.1 m (7 ft) long⁸¹—so small, the animals are unable to turn around. The USDA’s Agricultural Research Service reported in its March 2005 issue of *Agricultural Research*, “Confining pregnant sows in stalls is a major well-being issue. It curtails movement and social interaction and fails to provide dirt or hay to satisfy their

instincts to use their snouts to root for food.”⁸² Despite this understanding about the welfare issues arising from confinement in gestation crates, their use is still prevalent throughout much of the U.S. pork industry, although they have been banned in other countries.⁸³ However, there is a growing concern in the U.S. with confining sows in gestation stalls and many states and companies are phasing out the practice.^{84,85,86,87,88,89,90,91,92,93}

Right before giving birth, the sows are moved into equally restrictive “farrowing crates,” stalls designed to separate the mother pig from her nursing piglets, to protect them from crushing, but are so small she can only stand up and lie down.⁹⁴ After the piglets are weaned prematurely,⁹⁵ the cycle begins again for the mother pig, who averages 2.1-2.5 litters each year.⁹⁶ Once they can no longer reproduce efficiently, the sows are sent to slaughter.⁹⁷

Pigs raised for meat undergo mutilations—including castration and tail docking—without any pain relief.⁹⁸ For six months, they are confined in pens^{99,100} until they reach the average market weight around 122 kg (270 lb).¹⁰¹ As with birds, the pigs are given little protection from extreme heat or cold while on the trucks transporting them to slaughter.¹⁰²

According to the federal Humane Methods of Slaughter Act, pigs and other animals considered “livestock” are to be “rendered insensible to pain” before they are shackled and killed.¹⁰³ However, a January 2004 report by the U.S. General Accounting Office on the USDA’s enforcement of the Act found that some animals are still conscious as they are hung upside down and their throats are being cut.¹⁰⁴

Cattle

Every year in the United States, approximately 35 million cattle are raised for beef,¹⁰⁵ 9 million cows for milk,¹⁰⁶ and 450,000 calves for veal.¹⁰⁷

Most cattle raised for beef are castrated, de-horned, and branded,¹⁰⁸ painful procedures often performed without any anesthesia.^{109,110} For seven months, calves graze on the range¹¹¹ before they are transported to feedlots,^{112,113} where they are fattened on unnatural diets.¹¹⁴ Within six months, they reach market weight of 544 kg (1,200 lb)¹¹⁵ and are trucked to slaughter. As with other animals to be killed for food, cattle are not given any food, water, or protection from the elements during the journey.¹¹⁶

Cows in the dairy industry endure annual cycles of artificial insemination, mechanized milking for 10 out of 12 months¹¹⁷ (including 7 months of their 9-month pregnancies), and giving birth. Many are routinely given hormones to increase milk yield.¹¹⁸ According to John Webster, “[t]he amount of work done by the [dairy] cow in peak lactation is immense. To achieve a comparable high work rate a human would have to jog for about six hours a day, every day.”¹¹⁹ In the U.S. industry, cows, overwhelmingly Holsteins,¹²⁰ produce an average of 729 days of milk,¹²¹ which corresponds to 2.4 lactations, before they are considered “spent” and are sent for slaughter at an average of less than 5 years of age.¹²² Cows can naturally live more than 20 years.¹²³

A byproduct of the dairy industry is a calf per year per cow. According to a U.S. Department of Agriculture fact sheet, “[m]ale dairy calves are used in the veal industry. Dairy cows must give birth to continue producing milk, but male dairy calves are of little or no value to the dairy farmer.”¹²⁴ As a result, within their first few days of life, the calves are taken from their mothers.^{125,126} Females will likely join the dairy line, while some males are sold to veal farmers. Indeed, the veal industry would likely not exist without the dairy industry. Calves raised for veal are intensively confined and tethered in individual stalls so small they can’t turn around during their entire 16- to 18-week lives before slaughter.^{127,128} Veal crates are widely known for their inherent cruelty. As with conventional battery cages and gestation crates, veal crates are being phased out in Europe,^{129,130,131} yet are still in use in the United States, though some states and companies are beginning to phase them out.^{132,133,134,135,136}

Cattle suffer the same mistreatment as pigs during both their transport and slaughter. Additionally, typically during or after transport, some cattle can have difficulty getting up from a recumbent position. Nonambulatory cattle—referred to as “downers” by the industry—are animals who collapse for a variety of metabolic,

infectious, toxic, and/or musculoskeletal reasons and are too sick or injured to stand or walk on their own. Data from federally inspected slaughter facilities estimate 1.1-1.5% of U.S. dairy cows go down in a year, but this does not include those who collapse on-farm. A 2007 review of nonambulatory cattle suggests that the number of downed cattle on U.S. farms or feedlots or who are sent to slaughter in any given year may approach 500,000.¹³⁷ It has been reported that dairy cows account for approximately 75% of downed cattle.¹³⁸

Aquatic Animals

A significant animal welfare problem in the U.S. is aquaculture—the factory farming of fish. According to the USDA’s Census of Aquaculture completed in 2005, nearly 1.3 billion fish were raised for human consumption annually, with the industry dominated by catfish, trout, tilapia, bass, and salmon.¹³⁹ Aquaculture production systems can cause great suffering for farmed fish.¹⁴⁰

Since the mid-1980s, the aquaculture industry has expanded approximately 8% per year,¹⁴¹ and the numbers of farmed fish are expected to continue to increase, perhaps surpassing the numbers of wild-caught animals from the world’s fisheries. Tore Håstein of Norway’s National Veterinary Institute addressed the World Organisation for Animal Health (OIE) Global Conference on Animal Welfare in 2004 and reported that aquaculture has “developed to become the fastest growing food production sector in the world...and it will continue to grow in the years to come.”¹⁴²

With the expansion of the fish farming industry comes growing concern for the well-being of increasing numbers of aquatic animals raised and killed for human consumption.¹⁴³ A review of recent scientific literature on fish welfare^{144,145,146,147,148,149,150,151,152,153} and stress,^{154,155,156,157,158} as well as debates on pain and consciousness in fish,^{159,160,161,162,163,164,165,166} reflect the escalating interest in the well-being of farm-raised fish.

The welfare of farmed fish may be most easily observed through their response to stressors.¹⁶⁷ Their environment can affect welfare if water quality is degraded or if stocking densities are inappropriate for the species in question.¹⁶⁸ Additionally, farmed fish are vulnerable to a variety of diseases and parasites which can degrade their health, and susceptibility to these problems increases with stress.¹⁶⁹ Handling fish throughout the many stages of production may introduce more challenges to their well-being.¹⁷⁰ And, as with other species, both transport^{171,172,173,174} and slaughter^{175,176,177,178,179,180} pose potential problems for farmed fish.

Productivity and Welfare

Domesticated animals have been selectively bred, over many generations, with an aim toward improving productivity and feed efficiency. Breeders have been highly successful in creating genetic lines of animals who rapidly gain weight, grow to unprecedented sizes, lay greater numbers of eggs, produce higher milk yields, and give birth to larger litters.

The breeding goal of pushing animals toward their biological limit and seeking maximum output with minimum input has been pursued without due regard to animal welfare. According to Donald Broom, Colleen Macleod Professor of Animal Welfare in the Department of Clinical Veterinary Medicine at Cambridge University. “efforts to achieve earlier and faster growth, greater production per individual, efficient feed conversion and partitioning, and increased prolificacy are the causes of some of the worst animal welfare problems.”¹⁸¹ Indeed, problems and diseases can result as genetic side-effects of selective breeding programs that attempt to improve production efficiency.¹⁸² One of the worst production diseases, in scope and severity, is debilitating leg problems and lameness (the inability to walk normally) for broiler chickens,^{183,184,185} turkeys,^{186,187} pigs, and dairy cows.^{188,189} Intense selection for high milk yield has also led to an increase in the incidence of clinical mastitis.^{190,191,192,193} For egg-laying hens, the increase in production has caused osteoporosis-induced loss of structural bone mass¹⁹⁴ so severe that these birds commonly experience bone fractures.¹⁹⁵ Such selective breeding for economically important traits at the expense of overall health is a blight on the animal production industries.

Productivity is often touted as a sign of good welfare. The logic rests on the preposition that animals who are healthy and unstressed are able to channel more of their metabolic resources toward reproduction and growth. While it is true that individuals who are sick or stressed may suffer setbacks in growth or become less likely to reproduce, the tie between productivity and welfare is severed when economic returns on whole herds or flocks are used as the evidence that productivity is high. This is because crowding more animals into smaller spaces can result in more meat or eggs per unit of space (and thus, high productivity), but individual animals' welfare may be severely compromised by increasing stocking density, and may actually result in a slight decline in individual productivity.

Asserted agricultural ethicist Bernard Rollin, University Distinguished Professor, Professor of Philosophy, Professor of Animal Sciences, and Professor of Biomedical Sciences at Colorado State University, "in industrial agriculture, this link between productivity and well-being is severed. When productivity as an economic metric is applied to the whole operation, the welfare of the individual animal is ignored."¹⁹⁶

Conclusion

There are no federal laws regulating the treatment of the billions of animals raised for meat, eggs, and milk while they are on the farm, and the federal Humane Methods of Slaughter Act has been interpreted by the USDA as not affording minimal protections to farmed birds or fish, animals who make up the overwhelming majority of those raised for consumption. Many of the conditions and customary industrial agricultural practices endured by farm animals must fundamentally change to enable higher standards of welfare.

For more detailed information on animal agriculture and its impacts,
please see www.FarmAnimalWelfare.org.

¹ U.S. Department of Agriculture National Agricultural Statistics Service. 2009. Milk production, disposition and income: 2008 summary. <http://usda.mannlib.cornell.edu/usda/current/MilkProdDi/MilkProdDi-05-29-2009.pdf>. Accessed July 13, 2009.

² U.S. Department of Agriculture National Agricultural Statistics Service: 2009. Chicken and eggs, 2008 summary. <http://usda.mannlib.cornell.edu/usda/current/ChickEgg/ChickEgg-02-26-2009.pdf>. Accessed July 13, 2009.

³ U.S. Department of Agriculture National Agricultural Statistics Service. 2009. Poultry Slaughter: 2008 Annual Summary. <http://usda.mannlib.cornell.edu/usda/current/PoulSlauSu/PoulSlauSu-02-25-2009.pdf>. Accessed July 13, 2009.

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⁵ U.S. Department of Agriculture. 2005. Census of Aquaculture (2005), Volume 3, Special Studies Part 2, 2002 Census of Agriculture. www.agcensus.usda.gov/Publications/2002/Aquaculture/AQUACEN.pdf. Accessed July 13, 2009.

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⁷ U.S. Department of Agriculture National Agricultural Statistics Service. 2009. Chickens and Eggs: 2008 Summary. <http://usda.mannlib.cornell.edu/usda/current/ChickEgg/ChickEgg-02-26-2009.pdf>. Accessed July 13, 2009.

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The Humane Society of the United States is the nation's largest animal protection organization—backed by 11 million Americans, or one of every 28. For more than a half-century, The HSUS has been fighting for the protection of all animals through advocacy, education, and hands-on programs. Celebrating animals and confronting cruelty. On the Web at humanesociety.org.