

An HSUS Report: The Welfare of Animals in the Broiler Chicken Industry

Abstract

More than nine out of ten land animals killed for human consumption in the United States are chickens raised for meat, termed “broilers” by the factory farm chicken industry—approximately one million slaughtered every hour. The overwhelming majority of broiler chickens are confined inside barren, warehouse-like sheds on industrialized factory farms at such high stocking densities that most birds are denied many important natural behaviors. Due primarily to selective breeding for fast growth, these birds suffer both acute and chronic pain, as well as disabilities and illnesses caused by the unnaturally rapid growth, including leg disorders, crippling lameness, organ failure, and heart disease.

Customary broiler chicken industry practices have been shown by poultry science experts to significantly compromise animal welfare—from life on the factory farm through slaughter.

Introduction

Each year in the United States, nearly 9 billion chickens are raised for human consumption.(1) These animals suffer both acute and chronic pain due to selective breeding, confinement, transportation, and slaughter.

In the 1950s, it took 84 days to raise a five-pound chicken. Due primarily to selective breeding, it now takes an average of only 45 days.(2,3) To put the growth rate of today’s factory-farmed broiler chickens into perspective, the University of Arkansas Division of Agriculture reports, “If you grew as fast as a chicken, you’d weigh 349 pounds at age 2.”(4) While this rapid growth increases profitability, it also aggravates health problems among chickens.

Selective Breeding

Broilers’ bone growth is outpaced by the growth of their muscles and fat. As a result, they suffer from leg deformities and lameness.(5,6) One study found that 90 percent of broilers had a detectable abnormality in their gait.(7) Another found that 30 to 49 percent of broilers suffered from leg deformities(8) known to be painful.(9) Researchers found that 26 percent of broiler chickens suffered chronic pain in the last weeks of their lives as a result of bone disease.(10) One animal scientist has concluded, “Broilers are the only livestock that are in chronic pain for the last 20% of their lives. They don’t move around, not because they are overstocked, but because it hurts their joints so much.”(11)

At six weeks, broiler chickens have such difficulty supporting their abnormally heavy bodies that they spend 76 to 86 percent of their time lying down.(12) This, in turn, leads to breast blisters, hock burns, and foot pad dermatitis.(13) Contact dermatitis due to lameness has been shown to affect up to 20 percent of broiler chickens.(14) Because sheds are only cleared of litter and excrement after several flocks have been reared, the birds have no choice but to stand in their own waste. As a result, bacteria often infect skin sores, leading to disease, and the litter-manure mixture may be so alkaline that it burns the skin.(15)

Severe leg deformities are fatal if birds can no longer stand to reach food or water.(16) One to 2 percent of all birds die due to leg problems.(17) One group of researchers concluded, “We consider that birds might have been bred to grow so fast that they are on the verge of structural collapse.”(18)

In addition to lameness, intensive breeding for growth rate has caused broiler chickens to suffer from respiratory disease, big liver and spleen disease, acute death syndrome, and ascites.(19) Broilers selected for faster growth suffer from weakened immune systems, making them more susceptible to a variety of diseases.(20)

In acute death syndrome, chickens suddenly lose their balance, violently flap their wings, go into spasms, and die. Between 1 and 4 percent of broilers may die of this condition.(21) The syndrome is a form of acute heart failure caused by fatal arrhythmias, which are common in broiler chickens and have been linked to their rapid growth rate.(22)

Another typical condition among broilers is ascites, in which the heart and lungs do not have sufficient capacity to support an overgrown body.(23) Ascites is responsible for 5 to 12 percent of mortality in broilers.(24) An industry journal reports that “broilers now grow so rapidly that the heart and lungs are not developed well enough to support the remainder of the body, resulting in congestive heart failure and tremendous death losses.”(25) Heart failure is taken less as an indicator of poor breeding and more as a sign of optimal production. As one chicken farmer wrote, “Aside from the stupendous rate of growth...the sign of a good meat flock is the number of birds dying from heart attacks.”(26)

Despite the health problems described above, producers continue to breed birds for fast growth. One study found that selection against leg disorders ranked only ninth out of 12 factors taken into account by the breeders of broilers, with growth rate and feed efficiency being first and second.(27)

Confinement

Chickens are among the most intensively confined of all farmed animals.(28) Broilers are warehoused in long sheds, called grower houses, which typically confine up to 20,000 chickens at a density of approximately 130 square inches of space per bird.(29) Such densities make it impossible for most birds to carry out normal behaviors. A chicken requires 138 square inches just to stretch a wing, 178 inches to preen, 197 to turn around, and 291 to flap her wings.(30)

Grower houses are commonly windowless and force-ventilated to control temperature. They are barren except for litter material on the floor and rows of feeders and drinkers. Such an environment prevents chickens from practicing many of their natural behaviors, such as foraging.(31) This deprivation is believed to frustrate broilers and decrease their welfare.(32)

Overcrowded confinement also often results in the rapid deterioration of air quality within the grower sheds. As successive flocks are kept on the same litter, chicken excrement accumulates on the floors. As bacteria break down the litter and droppings, the air often becomes polluted with ammonia, dust, bacteria, and fungal spores. High ammonia levels cause painful skin and respiratory problems in the broilers, as well as pulmonary congestion, swelling, hemorrhage, and even blindness.(33-36) Ammonia destroys the cilia that would otherwise prevent harmful bacteria from being inhaled. As a result, chickens “are inhaling harmful bacteria constantly” and develop respiratory infections, such as airsacculitis.(37) To minimize these problems, ammonia levels should not exceed 20 parts per million.(38) However, actual ammonia levels regularly exceed this amount.(39) During the winter, when ventilators are closed to conserve heat, ammonia levels may be as high as 200 parts per million.(40)

Chickens have an acute sense of smell they use to perceive their environment. Ammonia fumes inhibit this sense. As one animal scientist put it, “For a bird with an acute sense of olfaction the polluted atmosphere of a poultry house may be the olfactory equivalent of looking through dark glasses.”(41)

In such overcrowded conditions, factory farmers accept that many chickens will die from disease and stress.(42) But there remains an economic rationale for farms to overcrowd the birds. As two industry researchers write, “[L]imiting the floor space gives poorer results on a bird basis, yet the question has always been and continues to be: What is the least amount of floor space necessary per bird to produce the greatest return on investment?”(43)

Transportation

After an average of 45 days, broiler chickens have reached market weight and are ready to be taken to slaughter. The birds are caught by the legs and stuffed or thrown into crates. Catching teams load crates at rates of 1,000 to 1,500 birds per hour. Many chickens are injured in the process, suffering dislocated and broken hips, legs, and wings, as well as internal hemorrhages.(44,45) One study observed, “Hip dislocation occurs as the birds are carried in the broiler sheds and loaded into the transport crates. Normally the birds are held by one leg as a bunch of birds in each hand. If one or more birds start flapping, they twist at the hip, the femur detaches, and a subcutaneous haemorrhage is produced which kills the bird....Dead birds that have a dislocated hip often have blood in their mouths, which has been coughed up from the respiratory tract. Sometimes this damage is caused by too much haste on the part of the catchers.”(46)

Once the crates are packed onto trucks, the chickens are transported to the slaughter plant. One group of researchers concluded, “Chickens find transport a fearful, stressful, injurious and even fatal procedure.”(47) Several studies have discovered high levels of stress hormones in the blood of chickens during transport.(48,49) During transport, broiler chickens are denied food, water, and shelter from extreme temperatures.(50) According to one scientist, “Unless crates are properly covered, exposure to wind and cold will rapidly cause freezing of unfeathered parts. The frosted appendage first becomes red and swollen, followed by gangrene, necrosis, and sloughing.”(51) Many chickens die during the trip from hypothermia, hyperthermia, or heart failure associated with the stresses of catching and transport.(52,53)

Slaughter

At the slaughter plant, the chickens are moved out of the trucks, dumped onto conveyors, and hung upside down in shackles by their legs. Shackling is painful for chickens, especially since so many suffer from bone and joint problems. One group of researchers concluded that “90 percent of broilers had a detectable gait abnormality indicating leg weakness, and 26 percent suffered an abnormality so severe that their welfare was considered compromised. This level of leg abnormality, if representative of commercial flocks, provides evidence that, potentially, a large number of birds should not be shackled.”(54) One study found that, after shackling, 3 percent of broilers had broken bones and 4.5 percent had dislocations.(55) Another study found a 44-percent increase in newly broken bones following shackling.(56)

In the United States, federal regulations do not require birds to be rendered insensible to pain before they are killed as current interpretations of the Humane Methods of Slaughter Act exclude poultry from the Act’s protections. Thus there are no legal requirements that chickens be made unconscious before they are slaughtered.(57) Electric stunning is often used to immobilize chickens before slaughter, making them easier to handle. However, the voltage used may be insufficient to induce unconsciousness.(58,59)

Birds then have their throats cut by hand or machine. Failure by workers or machines to cut both carotid arteries can add two minutes to the time taken for birds to bleed to death.(60) As slaughter lines run at speeds of up to 8,400 chickens per hour, many workers miss these arteries and most machines are not even designed to cut them properly.(61,62) One researcher concluded, the “problems associated with inefficient neck cutting [are] only too common in poultry processing plants.”(63) As a result, birds may be conscious as they enter tanks of scalding water that are used to loosen the birds’ feathers. One study found that up to 23 percent of broilers were still alive when they entered scalding tanks.(64)

Broiler Breeders

Each year in the United States, approximately 60 million chickens are used as the parents of broilers. These “breeders” have the same genetic predisposition as broilers for fast growth, lameness, and heart disease. However, their food is restricted so they do not grow so fast. If, like factory-farmed broilers, they were fed on unrestricted diets, only 20 percent would survive to sexual maturity.⁽⁶⁵⁾ So breeders are fed as little as a quarter of the amount of food they would otherwise eat.⁽⁶⁶⁾ Food restriction is believed to cause “general undernourishment, specific nutritional deficiency, and frustration.”⁽⁶⁷⁾ The European Commission’s Scientific Committee on Animal Health and Animal Welfare concluded that “current commercial food restriction of breeding birds causes poor welfare.”⁽⁶⁸⁾

Broiler breeders undergo a series of mutilations meant to reduce side effects of intensive confinement, such as disease and aggression. A portion of their beaks and toes are cut off, and males also have their combs and leg spurs removed. These mutilations are performed without anesthetic and are believed to cause both acute and chronic pain.⁽⁶⁹⁻⁷¹⁾

To control the age of sexual maturity and reduce costs, producers may limit the amount of light breeders receive to as little as six hours per day. This darkness causes stress and frustration among birds, and increases the incidence of blindness, which can reach 30 percent.^(72,73)

As a result of these and other insults to their welfare, breeders suffer from a variety of diseases and injuries during their lives. One study found that 92 percent of male breeders had pelvic limb lesions, 85 percent had total or partial rupture of ligaments or tendons, 54 percent had total ligament or tendon failure at one or more skeletal sites, and 16 percent had total detachment of the femoral head.⁽⁷⁴⁾

Conclusion

Standard broiler industry selective breeding, confinement, transport, and slaughter practices cause chickens to experience both acute and chronic pain. One animal scientist concluded: “[O]n the balance of the evidence, we must conclude that approximately one quarter of the heavy strains of broiler chicken and turkey are in chronic pain for approximately one third of their lives....[T]his must constitute, in both magnitude and severity, the single most severe, systematic example of man’s inhumanity to another sentient animal.”⁽⁷⁵⁾

For many producers, profits have taken priority over animal welfare, as birds are pushed beyond their physical limits and housed in conditions both unhealthy and unnatural. As one industry journal asked, “Is it more profitable to grow the biggest bird and have increased mortality due to heart attacks, ascites, and leg problems, or should birds be grown slower so that birds are smaller, but have fewer heart, lung and skeletal problems?...A large portion of growers’ pay is based on the pounds of saleable meat produced, so simple calculations suggest that it is better to get the weight and ignore the mortality.”⁽⁷⁶⁾

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