

Broiler Chickens

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Photo courtesy of Hillside Animal Sanctuary

Broiler chickens (often referred to as 'Broilers') have been selectively bred and reared for their meat rather than eggs. The industry began in the late 1950's and there are approximately 116 million broilers in the UK at any one time. Almost 800 million broiler chickens were slaughtered in the UK in 2008(1). The majority of broiler chickens are housed in large windowless sheds in massive flocks holding tens of thousands of birds (20,000 - 50,000)(2).

Broiler Production & Welfare

Broilers are hatched from eggs laid by breeding stock (broiler breeders). Broiler breeders are usually housed on deep litter (soft wood shavings, chopped straw, etc). They are slaughtered at around 10 months old when their peak egg production is past (just under 6 million (5.71 million) spent broiler breeders were slaughtered in England and Wales 2008(1)). Each broiler breeder produces up to 140 chicks. While broiler breeders are growing to adulthood their food is severely restricted, they therefore suffer severe hunger. The restriction of food is carried out to prevent them from growing as fast as the meat broilers, breeder broilers are required to survive to adulthood in order to produce chicks(2). The surplus chicks produced (referred to as 'hatchery waste') are killed by a number of permitted methods. These include the use of mechanical apparatus producing immediate death, (such as a homogeniser which minces up chicks alive), exposure to gas mixtures or dislocation of the neck(1).

Intensively reared broilers exist on concrete-floored sheds are covered with a layer of litter. Chicks are placed in a brooding area when they arrive in-house and require careful monitoring as they are particularly susceptible to extremes of temperature. Broilers should not be exposed to strong, direct sunlight or hot humid conditions which could cause heat stress and lead to death. All accommodation should be designed with adequate ventilation and access to light, either natural or artificial. Lighting should allow the birds to see clearly and stimulate activity. Houses should have a uniform level of light and if behavioural problems, such as cannibalism, occurs then it recommended the lights are dimmed for a few days. Artificial light should be given for at least 8 hours a day for those with no access to daylight and 30 minutes of darkness must be given each day so the birds become used to total darkness and help prevent panic in the event of a power failure.

Birds are closely packed and have little space to move around in. The current recommended maximum stocking density is stated as 34 kg of bird per square metre (up to 17 chickens per square meter). This means each bird has an area of around 0.05m², similar in size to an A4 sheet of paper. As the birds grow, conditions deteriorate and the sheds become increasingly crowded until the shed floor becomes a solid mass of chickens competing to reach food and water. The birds' natural behaviour to perch, walk, run and fly are obviously frustrated in the shed environment.

A new EU law is to come into force in 2010 which will allow chickens across Europe to be stocked at a higher density than previously (up to 42 kg of bird per square meter). This means that the birds will have to endure an even more overcrowded environment. The amount of space given is equivalent to



21 birds being packed into an area of one square meter (CIWF -Farm Animal Voice, Autumn 2009).

Standard intensively farmed broiler chickens are reared to their slaughter weight of around 1.8 to 3 kg within just 6 weeks of being hatched (chickens are normally fully grown by 5-6 months). By selective breeding, the length of time broiler chicks take to grow to 2 kg has been halved in the last 30 years. As broilers are bred to grow as fast as possible this has led to them becoming more inactive. Their frame cannot support their own weight and this affects the way they walk and puts additional stresses on their hips and legs. At just 6 weeks old, they spend 76%-86% of their time lying down(3). Birds severely crippled and deformed die of starvation and thirst, unable to reach food or water. Other birds may only be able to move by using their wings to balance. The Farm Animal Welfare Council (FAWC) describes these birds as "obviously distressed". Broilers have a mortality rate 7 times that of young laying hens of the same age(2). Every day some 100,000 birds die in UK broiler sheds as a result of heart failure, disease and afflictions caused by intensive methods of production(4).

Mutilations of broilers can cause considerable pain and it is recommended by DEFRA that they should only be carried out where necessary to avoid a worse welfare problem. Beak-trimming of birds for meat should not be necessary as they are usually slaughtered before reaching sexual maturity. If it is to be carried out then it should be done by either a veterinary surgeon or in accordance with the Veterinary Surgery (Exemptions) Order 1962. Dubbing (cutting out of toes) must be performed by a vet if the bird has reached 3 days in age, otherwise it may be carried out by unqualified persons over 18 using a suitable instrument. Other mutilations broilers may have to endure include de-spurring, de-clawing and toe removal. The following mutilations are prohibited by law; de-winging, pinioning, notching, tendon severing, the use of blinkers which pierce the nasal septum, surgical castration and devoicing(1).

Disease

The unnatural growth rate of broilers, together with the lack of space to move or exercise, encourages the birds to rest on the litter. As broilers spend their entire lives in direct contact with the bedding their health and welfare are linked to its quality(5). Conditions such as hock burn, breast blisters, skeletal disorders, lameness and heart-failure are consequences of management-related problems.

Hock burn & breast blisters

When caked litter accumulates the wet droppings on the surface cause inflammation of the skin over the hock, (hocks are the joint in the hind legs). This may lead to ulceration followed by scabs over the ulcers. Hock burn is extremely painful for the bird and can often be seen on chickens sold in supermarkets. Soiled litter can also affect the bird's breast leading to blisters which if they become infected leads to abscess formation. As these birds spend more of their time sitting on the damp litter this ultimately accelerates the incidence of leg weakness.

Skeletal disorders & lameness

The two main disorders affecting broilers are due to their rapid growth rates. Bone growth disorders affect young birds whilst arthritis is prevalent among broiler breeders. In birds over around 35 days the structure supporting the bird (bones, tendons and ligaments) often cannot keep pace with the growth of muscle and fat(5). A DEFRA-funded study, conducted by a team of independent researchers at Bristol University, showed that almost 30% of broilers had moderate to severe leg disorders that impaired their ability to move. This indicates that over 200 million broilers in the UK suffer from lameness, and scientific research strongly suggests, this is painful for the birds. Some of the chickens have difficulty reaching food/water and in the worst cases they can barely move at all(6).

Heart failure

Fast growing broilers suffer from 2 forms of heart disease, ascites and Sudden Death Syndrome (SDS). These conditions are due likely to the fact that the broilers' require high oxygen levels to keep up with their metabolism which in turn intensifies the activity of their cardio-pulmonary systems.

Keratocon-junctivitis

Chickens, like humans, are sensitive to ammonia. Prolonged exposure to high levels (50 to 100 parts per million) can result in kerato-conjunctivitis, this is a painful eye condition leading to blindness(7).

Bacterial infections



The unhealthy, intensive nature of broiler farms means bacteria can spread easily through flocks. Salmonella and Campylobacter are widespread in broiler farms and frequent causes of food poisoning in humans.

Bird Flu

Avian influenza is a highly contagious viral disease affecting the respiratory, digestive and/or nervous system of many species of birds. It is caused by a Type A influenza virus, a disease which must be notified to the local State Veterinary Service Divisional Veterinary Manager. There are two types of avian influenza virus, low pathogenic (LPAI) and highly pathogenic (HPAI). Within the LPAI types there is evidence that certain H5 and H7 viruses may mutate and become highly pathogenic. On April 5th 2006 a dead swan which was found in Scotland tested positive for the highly pathogenic virus H5N1. On February 3rd 2007, H5N1 was confirmed on a poultry farm in Holton, Suffolk. A 3 km Protection Zone (PZ) and 10 km Surveillance Zone (SZ) were imposed along with a wider Restricted Zone. On March 12th 2007 the restrictions around the farm in Holton were lifted. Only the movement of meat produced from birds originating within the PZ that were killed prior to the PZ merging with the SZ will need to continue to be licensed and reported. A Food Standards Agency (FSA) investigation has thoroughly examined the possibility that food waste at the Bernard Matthews cutting plant at Holton may have been stored inappropriately. The investigation concluded that there was no evidence of any offences under the Animal By-Products Regulations 2005.

All of the evidence collected indicates that the infection has not spread beyond one site. Defra have not yet located the exact source of the infection but the lack of evidence of another outbreak indicates that the risk of spread of infection has now reduced. European Union (EU) trade will recommence from the restriction zones and Defra are working with exporters, British Embassies overseas and non-EU countries' veterinary authorities to try to keep export markets open and to facilitate exports (1).

Transport

The catching and transport of birds prior to slaughter can cause considerable pain and distress. Each catcher will hold several birds upside down by their legs and cram them into crates which are then loaded onto lorries. Dislocated hips, broken wings and legs, and bruising are common occurrences. The process of catching, loading, transport and unloading causes serious injury and even death to a significant number of broilers, the amount may be as high as 18 to 35 million across the EU(2). Transport to slaughter can be a considerable distance and the birds may be exposed to extremes of weather. Cold, heat, stress, suffocation and shock all take their toll.

Slaughter

Broiler chickens are slaughtered at just 6-7 weeks of age (a chicken's natural lifespan is around 7 years). Almost 800 million broiler chickens (784.39 million) were slaughtered in the UK in 2008 (798.52 million in 2007) (1). On reaching the slaughterhouse, broiler chickens are removed from their crates and hung upside down shackled by their feet to a moving line whilst still fully conscious. Their heads and neck are dragged through an electrically charged water bath designed to stun the birds, rendering them unconscious. The moving line then takes the birds to an automatic neck cutter. Birds are then bled before entering a scalding tank to make the plucking easier. Broilers often experience pain and struggle while hung in shackles, and they may suffer during the slaughter process. It is estimated that over 50 million broilers across the European Union may be slaughtered while fully conscious(2). It is essential that a sufficient stunning current is used and that both carotid arteries (the major blood supplies to the brain) are cut to reduce the risk of birds regaining consciousness during bleed-out and subsequently entering the scalding tank whilst still alive.

References & Useful Links

1. Department for Environment Food and Rural Affairs www.defra.gov.uk/
2. Compassion in World Farming Trust. 2005. The Welfare of Broiler Chickens in the EU. http://www.ciwf.org.uk/publications/reports/Welfare_of_Broiler_Chickens_in_the_EU_2005.pdf
3. Weeks, C. A., Danbury, T. D., Davies, H.C., Hunt, P and Kestin, S.C. 2000. The behaviour of broiler chickens and its modification by lameness. Applied Animal Behaviour Science 67: 111-125.



4. Soil Association. Animal welfare - some common questions answered

www.soilassociation.org/web/sa/saweb.nsf/

ae318a5b15f8f08c80256de20033d3be/6d48728c364f4fe780256df3005aaf59!OpenDocument

5. Universities Federation for Animal Welfare (UFAW). 1999. (4th Edition). Management and Welfare of Farm Animals.

6. Compassion in World Farming Press Release. 31.07.06. New research shows that millions of factory farmed chickens suffer from lameness. <http://www.ciwf.org.uk/publications/prs/nr1406.pdf>

7. Ritz. C.W., Fairchild. B.D and Lacy. M.P. April 2005. Litter Quality and Broiler Performance <http://pubs.caes.uga.edu/caespubs/pubs/PDF/B1267.pdf>

Further Information - Any questions regarding this information sheet please contact Gilly Prime - Information and Research Officer gilly@vegsoc.org