Poultry welfare in developing countries

Transport and slaughter of poultry

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DEPOPULATION

In the village environment, birds may be reared in small numbers and slaughtered as and when they are needed for food. In some ways, this system is better for welfare, as it does not require large-scale depopulation and transport. Birds can usually be caught from their night-time enclosures.

Depopulation on a larger-scale usually takes place during the night, when birds are easier to catch and therefore do not become as stressed by the process. Most large producers are responsible for providing both the catching team and the transportation for the birds. Catching teams are required to grasp large numbers of birds quickly and efficiently. Unfortunately, this often involves handling them incorrectly. The preferable method for handling chickens is to catch both legs simultaneously, to avoid hip dislocations and broken bones. However, owing to the speed at which the catching team works, it is usual for only one leg to be caught, which often results in painful leg dislocations. Birds are usually inverted when caught, so that many may be held in each hand simultaneously. This does not provide optimal bird welfare, as birds prefer to be held upright. These processes are likely to cause pain (Weeks, 2007) to the birds, so it is important that they are handled as carefully as possible to minimize the risk of damage.

Techniques are being developed for avoiding excessive handling of birds during depopulation. Automated “broiler harvesters” are large machines that depopulate broiler houses rapidly, by picking up chickens using revolving rubber fingers. Trials have demonstrated that they may halve the risk of catching damage to the legs (Weeks, 2007), but they can only be used in large clear-span houses. Similar good results can be achieved if birds are caught using gentle and correct handling techniques.

Cage systems for laying hens present special problems during depopulation, and injury and damage levels can be high, as birds have to be removed from the cage fronts. In the EU, attempts have been made to improve cage design so that birds can be removed more easily through the whole cage front, rather than through narrow gaps; this has resulted in a reduced incidence of broken bones sustained at the end of lay.

TRANSPORT

In developing countries, there are three main methods for slaughtering birds. The system in which they are reared determines whether and how they will be transported. Backyard village poultry are often slaughtered by their keepers, within the home environment, which does not require transportation. Larger producers however transport birds to either a “wet” market or a commercial abattoir. The range of transportation to each varies among countries and regions. In general, birds that are slaughtered in abattoirs are transported from the farm in large loose-crates or on modulated lorries, similar to those used in the EU. The stocking density is usually very high, as few legal guidelines exist. This poses a problem, particularly in very hot countries, where many birds may die of heat stress. A major welfare issue with this method of transport is the movement of birds from a controlled (relatively stable) environment to a lorry, which may provide birds with little protection from extreme climates.

In many developing countries, there is demand for fresh meat, and animals are often killed at markets in the presence of the consumer. Worldwide, billions of people buy their poultry at “wet” markets, many of which are unlicensed. Birds are often transported under stressful conditions. Small producers may utilize what little transport they have by tying poultry to the back of their bicycles or motorcycles, often in an inverted position, thus causing a high degree of stress.

SLAUGHTER

In large commercial abattoirs, chickens are generally stunned before being slaughtered. A stunning process causes immediate loss of consciousness, which lasts until death. Stunning in poultry is usually performed by passing an electric current across the brain, disrupting normal electrical activity and causing a loss of consciousness (HSA, no date). This enables them to be killed without feeling the pain associated with the slaughter process.

In large abattoirs, poultry arrive on lorries and are often kept in a lairage (holding area) before being killed. In extreme climates, this can be very stressful as birds are densely stocked and unable to cool themselves. Many birds may die before reaching the slaughter line, often through heat stress. Not only is this bad for

Highly stressfull transport of chickens
the welfare of the birds, the economic loss can also be extreme. Unloading takes place directly from modular or loose crates. Birds are inverted and hung on shackles by their legs. This is likely to cause pain, particularly for large birds, as the shackles are one-size and do not accommodate variations in bird leg size and shape. The shackles carry birds through an electrically charged water-bath stunner. It is essential that the stunner is monitored to ensure that it delivers enough electricity through the brain of each bird. Birds should be observed for the following signs of effective stunning: neck arched and eyes open; no rhythmic breathing; rigidly extended legs; constant rapid body tremors; and wings held close to the body (HSA, no date).

Following stunning, birds may regain consciousness if the brain has not been properly disabled. This makes it essential that birds are bled (by cutting the blood vessels in the neck) within 15 seconds after stunning. In the United Kingdom, it is a legislative requirement that at least one carotid artery is severed during neck-cutting. However, it is recommended that both carotid arteries and both jugular veins are severed, as death then occurs more rapidly.

SLAUGHTER OF VILLAGE POULTRY
In a village environment, poultry that are not transported to be sold at wet markets are likely to be slaughtered on demand within the village. It is likely that only a few birds will be slaughtered at a time, giving the slaughterer plenty of time to ensure that each bird is killed humanely. In wet markets, however, less time may be taken over slaughtering birds, and it is likely that a number are still conscious while being killed. Unlike in commercial abattoirs, stunning is rare at wet markets, although it is a legal requirement in a number of countries. An alternative to the water-bath stunner is a hand-held, low voltage stunner with electrodes that are placed either side of the bird’s brain, passing an electric current through it (HSA, no date); however, this has not yet been widely adopted.

The methods of slaughtering poultry that are likely to be used in villages are neck dislocation, decapitation or delivering a concussive blow to the head (leading to loss of brain function). Although none of these methods provide pre-slaughter stunning, they are regularly used for emergency on-farm killing. Each of the three methods has welfare problems associated with it. If performed correctly, a concussive blow to a chicken’s head may be the most effective way of killing it. To be effective, however, the blow must be very heavy and accurately directed to the bony part of the head, behind the comb. If delivered to any other part of the head, soft tissue may absorb some of the force of the blow, which may not result in concussion. For a concussive blow to be a reliable method of slaughter, it must be performed accurately and consistently.

Neck dislocation and decapitation must also be performed correctly to be effective methods of slaughter. Of the two, decapitation may be the more reliable, as it involves severing all the arteries supplying blood to the brain (the largest of which are the carotid arteries in the neck) immediately. This gives a very rapid loss of blood pressure, and death follows shortly after (HSA, no date). Neck dislocation involves stretching the neck to dislocate the spinal cord and cause damage to the surrounding blood vessels (HSA, no date). The procedure can be difficult to perform correctly and consistently, and does not always concuss the brain, causing insensibility. It is therefore not recommended as a routine method of slaughter (HSA, no date). As with the commercial slaughter of poultry, bleeding should be carried out immediately after either neck dislocation or producing concussion, to ensure that the birds are killed.

REFERENCES
HSA. no date. Practical slaughter of poultry. Humane Slaughter Association (HSA).

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