

# The Welfare of Farmed Ducks

RSPCA Farm Animals Department *Information Sheet*

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## Introduction

**The two most common species of farmed ducks reared throughout the world are the domestic, or common, duck and the Muscovy duck. In the UK it is the domestic/common duck species, in particular the Pekin, that is the most commonly used for commercial meat production. In 2010 the UK produced**

**approximately 13.4 million meat ducks<sup>1</sup>, accounting for approximately 8% of the total European production<sup>1</sup>. This information sheet will provide an overview of the UK duck meat industry, focusing on the Pekin duck, and highlight the welfare issues associated with rearing these birds.**

## Duck natural history and behaviour

All breeds of domestic duck originate from the wild Mallard (*Anas platyrhynchos*), which originated from China, and has been domesticated for around 2,000 years. The Pekin (*Anas platyrhynchos domestica*) is the most commonly used duck for commercial meat production today, and arrived in the UK from China in 1872. The Pekin has maintained many of the biological characteristics of Mallards.

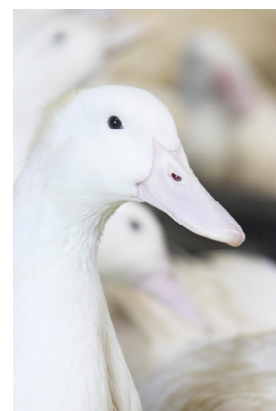
Wild Mallards inhabit a wide range of habitats and climates, and are attracted to bodies of water with aquatic vegetation. They are classified as dabbling ducks, feeding mainly at the surface of the water. Mallards are omnivores, feeding on grass, seeds, aquatic plants, fish, insects and worms. Being waterfowl, Mallards are largely aquatic, and spend much of their time in and around water feeding, bathing, swimming, resting and performing complex social behaviours<sup>2</sup>.

Wild Mallards live socially in large flocks during the autumn and winter. During the breeding season wild Mallards form a monogamous (having one mate at any one time) pair. These pairings generally last a single year: being formed in October and November and remaining until the female (known as a hen) lays her eggs at the start of the nesting season in early March to late May, at which time the males (known as drakes) then flock together. Female Mallards prefer nesting in areas that are well concealed. On average a Mallard hen will lay 8 to 10 eggs per clutch, incubating them for 27 to 28 days and may lay 2 to 3 clutches per year. When prevented

from hatching eggs, an adult Pekin hen can lay an average of 200 eggs per year. As soon as they hatch, ducklings are fully capable of swimming and the mother will oil their feathers to waterproof them. In the wild, mother ducks are very caring and protective of their young and will rear them until they are able to fly. Pekin ducks are generally too heavy to fly. However, some individual ducks may be lighter and capable of short bursts of vertical flight.

As with most waterfowl, Pekin ducks have feet well adapted for paddling through water but are also capable of walking well on land. However, they prefer flat surfaces to walk on and can find it difficult to negotiate steps.

Male mallards have a nasal call, and a high-pitched whistle, while only the female has the deeper *quack* that is characteristically associated with ducks. Whilst adult mallards weigh between 0.7 and 1.6kg, a fully mature adult Pekin duck can weigh between 3.6 and 5kg. The average life expectancy of a Mallard is roughly 20 years, while on average a Pekin can naturally live for about 9 to 12 years.



**Pekin duck.**

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**The Pekin has maintained many of the biological characteristics of Mallards**

## Commercial duck production

In 2010, the UK produced around 13.4 million meat ducks<sup>1</sup>, which accounted for approximately 8% of the total European production<sup>1</sup> and around 0.5% of World production<sup>1</sup>. However, the UK's role in the global duck meat industry is far more significant, as it supplies the genetic material to produce approximately two thirds of the world duck meat total<sup>3</sup>.



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**Pekin duck indoor rearing system.**

The performance of the modern Pekin duck has improved markedly over the last 40 years. This has been brought about by improvements in management and husbandry practices, including exceptional improvements in diet specification and formulation, but genetic selection has made the most significant contribution<sup>3</sup>. Genetic selection has primarily focussed on growth, breast meat yield, and efficiency of converting feed into muscle. These parameters are mainly selected for in the male, whereas egg production and hatchability are key selection parameters for the females.

Commercial ducks grow very rapidly, achieving a live weight of approximately 3.5kg in 44 days<sup>3</sup>. Ducks are typically slaughtered at around 42 – 56 days of age and weight 3.1 – 3.5kg.

**In 2010, the UK produced around 13.4 million ducks**

### Hatching

Pekin embryos take around 28 days to develop in the egg in an environment of 37.5°C and 50 to 75% humidity. Eggs are incubated in large units, which regularly turn the eggs. This turning mimics the behaviour of the female duck shifting her position while sitting on the eggs, which occurs in nature, and is essential to avoid the embryo sticking to the egg shell wall. Three days before the eggs are due to hatch, they are moved to a 'hatcher'. The 'hatcher' has a slightly lower temperature and higher humidity, which increases the survivability of the ducklings while their protective down develops. At hatching, Pekin ducklings weigh about 55g and are transported straight to the farm for rearing.

### Brooding

When the day old ducklings arrive on the farm, heat is provided during a phase known as brooding, which lasts to around 14 days of age. During brooding, ducklings are kept in the area of the heat source to prevent chilling, which can be achieved by confining the ducklings in circles (using an expandable board) or to an area of the house, where one side of the house is heated and the ducklings are confined to that area. However, sometimes the whole house can be

heated. Young ducklings require a warm environment starting at about 32°C and decreasing by preferably no more than 0.5°C per day<sup>4</sup>. For birds up to about 10 days of age, wood shavings, sawdust or pelleted straw (not long straw) can be used to cover the floor.

### Production systems

Unlike some other farm animal species, such as chickens, laying hens and pigs, there is no specific UK legislation concerning ducks, except when reared in free range systems (see 'Free-range' subsection).

### Indoor production

The majority of commercial ducks reared in the UK are reared in indoor systems, where they are typically kept together in flocks of 6,000 to 13,000 birds from day old through to slaughter. Typically, there will be seven birds per square meter and a stocking density of around 22kg/m<sup>2</sup><sup>5</sup>. Under the industry's own standards - the Duck Assurance Scheme (DAS) - a maximum stocking density of 25kg/m<sup>2</sup> is permitted. The RSPCA recommends that the stocking density does not exceed 17kg/m<sup>2</sup>. Buildings can be ventilated naturally or mechanically and heat is generally only provided to the birds during brooding (see 'Brooding' subsection). The entire floor area is usually covered with straw, which can serve as an important enrichment material for the birds, but some systems may have slatted floors without straw. Good management of the straw is critical to ensure the ducks have a good quality, dry bedding.

Artificial lighting is generally provided, but in some cases farms may provide ducks with natural light. There is no requirement within the industry's own standards (DAS) to provide natural light, but the RSPCA recommends that this is provided. During the dark period it is common practice to provide ducks with dim light so they are not in complete darkness. Supplementary lighting during the night can help prevent the birds panicking if they are disturbed.

Ducks are given specially formulated diets that are balanced for energy, protein and essential amino acids, minerals, vitamins and trace minerals, to achieve their full genetic potential. Feeding systems can be varied, but preferably should have a wide feed delivery area so the ducks can perform their normal feeding behaviour of scooping up feed. In a similar manner, drinking water should be provided in a way that allows the birds to scoop up the



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**Pekin duck drinking from a nipple drinker.**

water. Despite this, some producers provide drinking water through ball-bearing nipple drinkers.

Some farms, such as Freedom Food approved farms, provide ducks with access to a source of open water to carry out their water-related behaviours, such as preening and bathing. However, it is not a legal requirement to provide ducks with access to an open water source and many farms may not provide this facility. The DAS only requires bell drinkers to be provided, which are not adequate as they do not enable the birds to enter the water — only partially dip their heads. A source of open water is important to ducks and should be provided (see 'Open water source' subsection).

### Free range

It is estimated that less than 5% of ducks in the UK are reared in free range systems. Here, the rearing system is similar to that described for indoor birds, except the birds also have access to an outdoor range area during the day via popholes (small doorways) in the sides of the house. At night, the birds are generally housed for protection from predators.

## Key welfare issues

### Slatted floors

Although it is not typical in the UK to house ducks in fully slatted systems, it has been reported that there are still a few producers using these systems. Providing ducks with slatted floors can lead to them developing leg problems. The RSPCA believes that ducks should be provided with good quality dry straw to cover the floor.

**There are no UK legal requirements to provide ducks with water for anything other than drinking**

### Open water source

Most people believe that the duck meat they buy is from ducks that have had access to a pond or open water source<sup>6</sup>. As ducks are waterfowl, this is a reasonable assumption. However, there are no UK legal requirements to provide ducks with water for anything other than drinking. Consequently, producers may not provide an open water source or, if they do, it may not be adequate to allow the ducks to freely and fully perform their important water-related behaviours. Some producers believe that providing ducks with access to open water presents a disease risk, but this has not been observed to be the case<sup>7</sup>. Research

There is specific legislation concerning the rearing of free range ducks, which includes not exceeding a stocking density (which relates to the amount of space available to the birds) within the house of 25kg/m<sup>2</sup>, not slaughtering the ducks before 49 days of age, and ensuring the ducks have daytime access to the range for at least half their lifetime. In addition, there must be at least 2m<sup>2</sup> of range space per duck. Within free-range systems, good range management is important to ensure the birds do not poach the land and become dirty.

### Catching

Once birds reach the desired slaughter weight, they are caught, placed in crates and transported on lorries to the abattoir for slaughter.

Unlike most other poultry, ducks are typically caught and lifted by their neck (this should be done with care, especially avoiding pressure on the wind pipe) until the catcher can support the ducks weight with the other hand. Ducks should not be *carried* by their necks or be caught and carried by their legs alone, as their legs are fragile and prone to injury. Best practice is to catch and carry birds singly by placing a hand either side of the body, over the wings.

has shown that access to open water can lead to improved production and physical condition<sup>8</sup> and is beneficial to the health and behaviour of ducks. For example, open water, which enables ducks to fully emerge their heads, is necessary to keep the birds eyes, nostrils, beaks and plumage in good condition<sup>9</sup>.

It is essential that any open water sources provided to the ducks are managed correctly. For instance, the open water facilities should have a continuous supply of clean water, controlled by a ball and valve, be cleaned out at least twice a day, and be placed over a well drained area and not on the ducks' main bedded area.

The RSPCA believes there is a sufficient weight of scientific evidence to clearly demonstrate that ducks should be provided with access to open water sources that enable them to freely and fully fulfil their water-related behaviours. As such, UK legislation should require farmed ducks to be provided with a suitable open water source that allows full body access, alongside access to clean, fresh drinking water.

### Growth rate

We are concerned that commercial duck production may be heading in the direction of increasing the rate of growth of ducks beyond a level that is acceptable to welfare. For example, meat ducks can have difficulty walking and be subject to leg problems<sup>10</sup>. In a recently published scientific paper, 13% of commercial ducks assessed had moderate, and 1.2% had severe, gait (leg) problems.



**Pekin duck bathing in an open water facility.**



## Work of the RSPCA to improve duck welfare

### Welfare standards

The RSPCA strongly encourages duck producers to adopt the *RSPCA welfare standards for domestic/common ducks*, which have been developed to ensure that higher standards of animal welfare are met at all stages of the animals' lives.

The standards represent 'best practice' in the care and welfare of ducks and, as such, go above and beyond both standard industry practice and legal requirements. Amongst other requirements, the standards require producers to provide ducks with open water facilities, straw bedding and plenty of space.



### Research projects

In 2007, the RSPCA's Farm Animals Department secured funding from The Tubney Charitable Trust to help progress the Society's work on duck welfare. Part of the funding went towards commissioning a three-year research project to help evaluate and identify practical ways of providing farmed ducks with an open source of water. The research, which

was conducted by the University of Cambridge, in conjunction with the UK duck industry, aimed to identify a commercially viable way of providing ducks with an open source of water that would allow them to perform key water-related behaviours.

The project progressed well and concluded in late 2011. The research primarily consisted of three parts. First, using small groups of ducks at commercial stocking densities, the effects of different open water facilities on duck health and behaviour were investigated. Second, the preference of ducks for different depths of water was assessed and finally, a trial was designed to assess the effect of various open water resources on duck welfare and production under commercial conditions. This commercial study took into account water quality parameters as well as water usage, for the different facilities offered. By early 2012 the research had culminated in presentations at seven conferences worldwide and the publication of two papers in peer reviewed scientific journals. Further papers are in preparation for publication during 2012.

The RSPCA Farm Animals Department will be reviewing all the available research, with a view to strengthening, where relevant, the *RSPCA welfare standards for domestic/common ducks*. An economic assessment is also planned to determine the cost of implementing and managing the preferred open water source according to any new standards developed.

### Recommended further information

- RSPCA. Farm Animals Department. (2011) *RSPCA Welfare Standards for Domestic/Common Ducks*. Horsham: RSPCA.
- Webster, J. (ed.) (2011) *Management and Welfare of Farm Animals: The UFAW Farm Handbook*. 5th ed. London: Wiley-Blackwell.
- Council of Europe. (1999) *Recommendation concerning domestic ducks (Anas platyrhynchos)*. Brussels: Council of Europe.

### How you can help!

If you eat duck and are concerned about welfare, then look out for products carrying the RSPCA's Freedom Food logo. Freedom Food is the RSPCA's farm assurance and food labelling scheme which inspects the hatching, rearing, transportation and slaughter of ducks to the *RSPCA welfare standards for domestic/common ducks*.

If more consumers insist on higher welfare products, more supermarkets will stock them, more farmers will be encouraged to improve their farming practices, and more farm animals will benefit.

Take part in the RSPCA's campaigns for farm animals by visiting [www.rspca.org.uk/campaigns/farm](http://www.rspca.org.uk/campaigns/farm).

### References

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- <sup>10</sup>Council of Europe. (1999) *Recommendation concerning domestic ducks (Anas platyrhynchos)*. Brussels: Council of Europe.