Duck Farming in South Africa

© Louise Kolbe Duck House farm
Duck farming in South Africa mostly uses the white Peking duck for meat production.

The main focus of duck farming in South Africa is for meat production. Duck meat is mostly sold directly to high-end restaurants, in some supermarkets, delis and at farmer's markets.

The duck industry of South Africa is a small niche market with some challenges; not threats that include avian influenza and competitive cheap imports, but it is a market with huge potential for growth, especially in the Western Cape. New farmers are therefore urged to research and develop their intended market before starting out.

This series of articles looks at duck meat farming and also at other duck-related products.

By Marinda Louw

Duck Meat Production

Duck Farming in South Africa

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Duck farming often keep animals inside with no access to open water for bathing or grooming. Here, ducks are kept on wire floors which may damage their webbed feet.

Duck farming for meat is a niche market in South Africa, with a few small free-range farms supplying restaurants, retailers, farmers' markets, and directly to the public.

However, most duck meat consumed in South Africa is imported from Thailand, Hungary, China and Brazil. These imports, even though cheaper than South African duck meat, are not considered the same quality as free-range ducks grown and supplied by South African duck farmers.

Ducks are also farmed for eggs, down and feathers as well as the production of foie gras, which the fattened livers of force-fed ducks and geese. The production of foie gras is illegal in South Africa, but it is legal to import it.

Global Duck Meat Producers

The majority of duck meat (over 80%) is produced in Asia, with China as the biggest producer of duck meat in the world. China is, however, only the third-biggest importer of duck meat. This implies that China is a consumer of its own duck meat production.

The world's top-3 importers of duck meat are Saudi-Arabia, Germany, and France. Africa produces around 2% of the world's duck meat, with notable producers being Egypt and Madagascar.

Duck Breeds in South Africa

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The large Moscovy duck is a good all-round duck for the production of down, lean meat and eggs. It is prone to anemia and does well when allowed to forage.

Most important duck breeds for meat production are Pekin, Muscovy, Aylesbury and Rouen.

The Pekin duck, which originated in China, is a white duck with a bright orange bill and an upright demeanour. It matures slightly slower than the Aylesbury but is the predominant breed used for commercial meat production worldwide, including South Africa. Pekin ducks are hardier and more economical to raise that the Aylesbury. The Pekin lays up to 160 eggs per year and can be used as a multi-purpose breed - for both egg and meat production ('Peking' is the name of a popular dish).

The large Aylesbury duck from England has a long, broad and deep body with a light-pink bill and white feathers. Originally called 'White English' the Aylesbury is bred for its white meat and white down. The meat of the Aylesbury duck is uncoloured due to its all white-feathered body. The Aylesbury is a popular meat bird that can lay up to 110 eggs per year.

The Muscovy (also called Barbary duck) is a duck that originated from South America and exhibits a very efficient feed-to-meat conversion. The Muscovy has white and black/grey feathers with a bright red crest around their eyes and bill. These ducks are good foragers, not very noisy, not prone to disease and the breed adapts well to cold conditions. The Muscovy lays up to 100 eggs per year.

The beautiful Rouen duck is from France and resembles the Mallard or wild duck with its dappled appearance, grey body and green-coloured back and neck. The Rouen ducks' bills are wide and orange with black spots. These large ducks have a square body and are excellent foragers, yet slow growers. They can lay up to 100 eggs per year.

Mule ducks are also used for meat and fat liver (foie gras) production. The Mule is a cross with a Moscovy duck and other duck species to produce a sterile duck. The Mule duck produces lean meat and is preferable in more health-conscious circles.

Indian Runners and Khaki Campbells are prolific egg layers and are often used for duck egg production.

What is Peking Duck?

©*Lunghaiu Wandloa*

Air is forced between the skin and meat of ducks in preparation of a dish called 'Peking duck'.

‘Peking duck’ is the name of the breed of duck used for meat production, while ‘Peking duck’ is the name of a culinary dish.

Peking duck is made by pumping air between the skin and the meat before cooking. The duck is then roasted and the crisped skin and meat are served separately. The duck meat is served with hoisin sauce and rolled with spring onion in thin pancakes.

By Marinda Louw
valuable at protecting smaller poultry such as chickens from rats and other small predators.

Processing Ducks for Meat

Ducks are slaughtered in chicken (technically ‘poultry’) abattoirs but would require slight adaptation in slaughtering equipment due to their heavier weight. The only challenge in slaughtering ducks (or other waterfowl) in comparison to chickens is that they have pin feathers which are lodged deeply in the skin. The scalding and plucking machine in a poultry abattoir may not remove duckpin feathers completely and manual plucking of leftover pin feathers and removal of the little bit of duck down are sometimes needed.

The slaughtering process involves hanging, shock, scalding tank, de-feathering, evisceration (the removal of internal organs), portioning (if required) and packaging. Whole ducks are vacuum packed, boxed and sold in both fresh and frozen form.

Ducks can be further processed, portioned and prepared into products such as duck pâté, duck bacon, deboned duck, sausage, and smoked duck. Duck fat is highly rated for its taste and the mouthfeel it imparts to dishes such as roast potatoes and is often cheaper than butter. The fat is rendered from duck fat and skin produced during slaughtering and portioning. It has a high smoke point which makes it suitable to cook without inducing a burnt flavour or taste.

Duck Eggs

Not only are duck eggs larger than chicken eggs and have a higher proportion of egg yolk, but the shells are also thicker which means a longer shelflife.

The nutritional quality of an egg depends on what the animals are fed. Duck farming is often in free-range systems where ducks are exposed to the sun, the vitamin D content may be higher than indoor-fed animals.

Duck eggs are also considered superior for baking due to the higher protein and higher fat content of the yolk content but a lower water content means that it may become rubbery when overcooked.

Duck Feather Farming in South Africa

©Makoti Down Products

Historically, down was collected from the Eider duck, but most commercial down is from farmed geese and some from ducks.

Ducks are specially farmed for feather and down production.

Down is light, fluffy filaments that form the undercoating of goose, duck or swans' bodies and is used as an insulating stuffing for clothes and bedding. Duck body feathers are coarser and are used to stuff pillows, cushions, clothes and other products.

There are three methods to remove down and body feathers from ducks: post mortem (after slaughter), gathering feathers from where it was shed (during moulting) and live-plucking. Live plucking of duck feathers, which is standard practice in factory farms worldwide, often causes the animal's skin to tear and is done every six to seven weeks.

Post mortem harvesting of duck feathers and down is not practical. As presented by South African regulations, abattoirs - where ducks are slaughtered, must discard animal waste, including blood and feathers.

What is Foie Gras?

©Romain Behar

Pieces of fattened duck liver or foie gras.

Foie gras literally means ‘fat liver’ and is the liver of ducks (or geese) that was fattened to enable the fast accumulation of body fat resulting in an enlarged liver. Before migration, waterfowl such as ducks would gorge themselves to fatten their livers, which would supply energy during their long migrations.

In modern farming, the hand-feeding of soaked wheat and figs similar to what the ancient Greeks did, was replaced by a feeding tube. The animals are force-fed corn twice a day for almost two weeks through a feeding tube in a process called ‘gavage’. Birds are often kept in tiny cages, unable to bathe or groom themselves. This practise is banned in many countries, including South Africa.

After slaughtering of the force-fed ducks, the enlarged liver is then prepared as is, canned or made into a mousse or most often foie gras pâté.

By Marinda Louw

How to Farm with Ducks

Duck Farming in South Africa

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In semi-free range farming systems, ducks have access to water, but too young, younglings will only have access once they can swim properly.

Duck farming specifically for meat production is a small yet growing industry in South Africa. Challenges that may develop relate to disease management (particularly bird flu), market development, and competition against imported products.

The farming of ducks for down and feather production is a distinct farming system to the production of meat. The information below briefly looks at meat production and also features the importance of water for ducks, regardless of the farm's production focus.

Duck Farming Systems

Ducks bred for meat are farmed by only a few producers in South Africa, mostly with a combination of indoor and outdoor farming systems.

Ducks can be farmed on large-scale indoor facilities as is the case in Europe and the UK where duck farmers are required to provide litter (an absorbent material to absorb excretions) and access to open water. In the USA, ducks are mostly farmed indoors with floors made from slats which allows the excretions to fall through and be cleared away.

In South Africa, ducks for meat are predominantly produced in free-range farming systems - a combination of indoor growing areas and outdoor areas for bathing and foraging. In practice, this means that older ducks are free to roam outside, bathe and forage, but ducklings younger than three weeks are kept and fed indoors until they are strong enough to venture outside.

Ducks are brought indoors at night as a precaution against cold weather, predators, and theft.

Ducks and Water

©Marinda Louw

Ducks need open water for both swimming and grooming, but in intensive farming systems this is not practical.

Producers who are concerned with their animals' welfare should look at combinations of the ideal water sources and hygiene. This is to limit bacterial growth and wet conditions that may lead to foot disease but still provide adequate water to allow for grooming and bathing.

Ducks are waterbirds who need water. Not only for drinking but also to clean and bathe themselves. Water is also used to regulate body temperature in times of stress and heat. Additionally, ducks rely on water to keep their feathers in good condition and keep their eyes and nostrils clean by dipping their heads underwater.

Ducks drink large volumes of water when they eat, and as research has shown, prefer to do this from an open water source. Due to their large water intake, duck droppings tend to be watery. This results in a need for sufficient absorbing material in their indoor pens. Sawdust offers effective absorption of excess moisture, however, do not use large wood chips as this may hurt their webbed feet. The wet bedding can be used for compost in home vegetable gardens or on the farm.

Farming with Ducks in South Africa

Ducklings for meat farming may be bought from a breeder or can be bred on the farm. Usually, breeding ducks are not slaughtered for the retail market as they are too old for quality meat production.

Vaccination of the ducklings against Newcastle disease is recommended, even in environments with free-range and limited chemical-use systems. Dr Andrew van Wijk, a poultry veterinarian, stated that ducks are often the carriers of avian influenza (bird flu) and may not even exhibit any symptoms.

The ducklings spend about three weeks in special temperature-controlled nurseries where they are fed a special starter feed of pellets. Freshwater and clean drinking equipment are essential and bell drinkers are best used to prevent ducklings from playing in their drinking water.

The wings of younger ducklings are not fully waterproof yet and when allowed to wade in deep water, wings may become too wet and heavy resulting in their drowning of ducklings.

After three weeks, their diet changes to that of grower pellets and the ducks are allowed outside to swim and roam. The ducks' diets may also be supplemented with greens. Ducks are ready for processing at about 49 - 52 days or when a weight of about between 2.3 and 3.2 kg is reached, depending on the gender and type of breed. The feed conversion rate at this age is around 2.9 kg feed for about 1 kg of live weight.

The main production costs in duck farming include the cost of the ducklings, fuel, feed and abattoir costs for slaughtering.

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