

Ten facts you need to know about the chicken and eggs on your table

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Credit: AI-generated image ([disclaimer](#))

When I am asked by friends what I do for living, I tend to raise eyebrows because my job is somewhat odd to many city people. That's because I'm a poultry nutritionist.

Typically, the conversation turns into a friendly debate on the myths

around eating chicken. Do we feed chicken hormones? Are any chickens genetically engineered? Do free range chickens taste better? And so on.

So to save everyone some time, here are some of the most common questions I get asked, and the answers I give.

(1) Should you buy hormone-free chicken?

The truth is that no chickens or eggs produced in Australia contain added hormones, and they have not been given hormones for decades.

Independent tests by the Department of Agriculture, Fisheries and Forestry, as part of the [National Residue Survey](#), confirm that Australian [chicken meat](#) is free of added hormones.

Not that it would be easy to give them hormones anyway. Growth hormones are proteins similar to insulin used to treat diabetes.

Like insulin, they can only be injected into the body because they are broken down in the digestive tract. Therefore, it is pointless to provide chickens growth hormones in their food because they would be rendered ineffective.

And given a typical commercial shed may accommodate 40,000 to 60,000 birds per shed, it is simply logistically impossible to inject hormones into each chicken.

(2) Are meat chickens genetically modified to grow fast?

Our chickens are not genetically modified, and their genes have not been altered artificially. Modern meat chickens grow more quickly and are

more "meaty" than chicken breeds available decades ago due to selective breeding and optimal nutrition.

Just like pedigree dog breeders breed their puppies for desired traits, selective breeding involves those animals that show the desirable characteristics being selected as the parents for the next generation in the breeding program, and this process being repeated over many generations.

In the 1960s, the goal of [selective breeding](#) in meat chickens was simply increased growth rate and increased meat production. Nowadays, the focus has changed from growth and yield to a broad spectrum of outcomes, with a clear emphasis on improving animal welfare, reproduction and overall fitness.

(3) Are meat chickens raised in cages?

All commercial meat chickens are kept in large poultry sheds on litter floors, covered with things like rice hulls or wood shavings. They are not kept in cages.

Additionally, some meat chickens also have access to the outdoors, such as those often referred to as either free-range or organic. A simple comparison is shown below.

Meat chicken types

CONDITIONS	CONVENTIONAL	FREE RANGE	CERTIFIED ORGANIC
Kept in cages	No	No	No
Access to outdoors	No	Yes, once adequately feathered	Yes, once adequately feathered
Added hormones	No	No	No
Usage of antibiotics	Allowed	Depends on accreditation	Depends on accreditation
Grain-fed	Yes	Yes	Yes
Organic feed (no chemical fertilisers, pesticides or herbicides)	No	No	Yes
Produced in Australia	Yes	Yes	Yes
Model Code of Practice for the Welfare of Animals applies	Yes	Yes	Yes

Credit: The Conversation

(4) Are free range chickens happier and healthier?

Not always. In fact, free range chickens are more likely to catch diseases, get injured and die earlier than those kept inside.

In the UK, free range egg layers have a mortality rate of 8-10%, which is far higher than caged hens' death rate of 2-4%.

The contact between free range chickens and wild birds also increases the risk of spreading bird flu. And birds can die from over-consuming grass.

Cannibalism can also happen in egg layers and it is a big challenge for

free range egg production systems in particular.

We always assume animals behave in a civilised manner. But the fact is free range layer hens may peck each other to death. Cannibalism in poultry is part of their natural behaviour and, unfortunately, it has proven difficult to get rid of.

(5) Do free range or organic chickens taste better?

There is very little data supporting the idea that free range or organic chickens actually taste better than conventionally farmed ones.

Commercial meat chickens do not tend to like running around, as they were selected to maximise their growth. So it's a myth that more exercise makes chicken meat more tender.

(6) Why are some meat chickens yellow in colour?

In some cultures, chickens with yellow fat and skin are considered to be better quality. However, this is not true.

The yellowness of the skin, fat and egg yolk depends on the level of beta carotene in the diets. So those yellow chickens are fed with a corn-based diet, which is higher in beta carotene.

(7) Are meat and egg laying chickens the same breed?

The meat and egg industries have different requirements, and use different breeds of bird.

The only eggs produced in the meat industry are those needed to produce the next generation of chickens.

Ross and Cobb birds are the two common commercial breeds selected for meat production.

The egg industry houses their hens quite differently and uses very different breeds of chickens, which are bred selectively over many generations to exhibit optimal egg producing characteristics.

The common breeds of laying hens in Australia are the Hyline Brown and the Isa Brown.

(8) Why are some eggs white and others brown?

The colour of eggshells is the result of pigments being deposited during egg formation. The type of pigment depends upon the breed and is genetically determined.

To get a hint about the egg colour, look at the colour of the chicken's ear lobes!

Interestingly, people have strong preferences for different egg shell colours in different markets. In Australia and parts of Asia, brown eggs are preferred, whereas in the US and Japan, people prefer white eggs.

The nutritional value of the egg only depends on the chickens' diet, not the system of production or the colour of the egg shell.

For example, it has been shown that vitamin D-enhanced eggs can be produced if the diet is supplemented with high level of an active form of vitamin D.

(9) What types of chickens do restaurants use?

It is often difficult to tell.

Fast food chains are more likely to use chickens produced conventionally unless specially labelled. Restaurants vary in the [chickens](#) they use. If you prefer a particular type of chicken, be sure to ask before you order.

(10) Does Australia import chickens from elsewhere?

All the raw chicken meat available in Australia is grown in Australia.

According to Australian Chicken Meat Federation, we consumed [45.3kg of chicken meat](#) per person in 2015, which means 870 grams of chicken meat per week.

Last year, more than 1.1 million tonnes of chicken meat was produced in Australia and almost all of it was consumed here.

The claim "produced in Australia" is applicable to almost all chicken meat sold in Australia with only very small quantities of cooked chicken meat being imported from New Zealand and some canned products containing chicken also potentially imported.

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