

Separating myths from facts: Understanding food labels and innovation in food production

The results from a new [Enough Movement](#) study showed that consumers significantly misunderstood what food claims and labels actually mean and that they are increasingly out of touch with the farming realities of getting healthy and safe food to the table. The Enough Movement, an initiative of Elanco Animal Health, carried out the study in 11 countries globally and measured the understanding and knowledge among consumers of popular food and nutrition topics including product labels, farming methods, nutritional value and environmental impacts.



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“Although food and nutrition are frequent topics of discussion in most households, there is a lot of uncertainty of what food claims and labels actually mean. For example, consumers may choose foods labeled “all-natural” or “organic” and are even prepared to pay an additional premium for these products, despite not knowing what the labels actually mean in terms of environmental impact, animal welfare, nutritional value and other metrics commonly associated with their food choices,” explains Andre Westerveld, regional director of Elanco Animal Health.

What does sustainability mean? It depends on who you ask...

Most people also agree that sustainability in agriculture is a good thing, but what that ‘sustainability’ actually means to people will be very different depending on who you ask. What we do know is that we need to satisfy human food needs, enhance environmental quality, protect our natural resources upon which the agricultural economy depends, sustain the economic viability of farm operations, without compromising the ability of future generations to do the same.

“Given that by 2050, the world will support a population of 9.7 billion people, sustainability in agriculture is a very serious challenge - how can we produce more and enough food to feed the world’s population without using more resources and exerting more pressure on the environment? The absolute and undeniable reality is that we have to produce more, and do it with less. This can only be done through innovation and technology in food production, but for many consumers and retailers, what that innovation and technology entail is misunderstood, and often mistrusted.

We need to understand our conflicts in this regard, which in most instances arise from misinformation and sensationalist claims that have absolutely no scientific ground. All consumers have a right to expect safe food produced responsibly and industry has a responsibility when it comes to defining responsible and sustainable production.

We need to separate the facts from myths

Right now, South Africa is still facing a crippling drought that has heavily impacted beef and dairy farmers. We have to invest the time and energy to better understand the impact of technology on food security in the context of people, animals and the environment. We need to separate the facts from the myths, separate science from frivolous marketing claims so that we end up with the right dialogue, the right science-based policies, and the right innovative solutions to ensure that we can produce enough safe, healthy and nutritious food without depleting our natural resources," says Westerveld.

UK-based Livestock Sustainability Consultant Dr Jude Capper adds to the debate: "The farm-to-table movement has revealed that we all want to know what's in our food and where it comes from. But it's hard to separate fact from fiction when it comes to food labels, farming practices, and other food production topics. Distinguishing myth from reality can make a big difference in the choices families make about nutrition, household budgets and environmental impact."

The Enough Movement believes that knowledgeable consumers are crucial to supporting sustainable agriculture, humane practices for raising livestock, and science-based regulations and policies that support the economic viability of our farmers. Here's our list of popular food myths, dispelled by the facts so you can make informed food choices based on accurate, science-based information.

Myths and facts about food production:

1. Food labelling

- Although many people buy "all natural" foods thinking they are healthier and safer, most people don't really know what labels like "natural" and "organic" actually mean. For example, organic is a type of farm management and food production system that only allows natural products to be used, but it doesn't mean pesticide-free. Organic farming may use a variety of chemical sprays and powders derived from natural sources, including substances like boron, copper sulfate and pyrethrin similar to the synthetic versions used in modern farming.
- Secondly, there is no difference in the nutritional value and content of organic and conventionally produced food. An analysis by Stanford University on more than 237 studies concluded the quality, safety and nutrition content of organic and conventionally produced foods to be equal.

2. Consumers are confused about modern agriculture and food production systems

- Many people believe that organic production is one of the top three solutions to feeding the growing population on a sustainable basis. However, the reality is that organic farming [produces](#) less food – about 25 percent on average globally. It

requires significantly more land and resources to produce the same yield as modern farming methods.

- While organic methods use less fertiliser, herbicides and energy, modern farming methods resulted in less soil erosion with better yields. In fact, modern farming practices are often the most [environmentally sustainable](#), using innovation to decrease the amount of land, feed and water to raise meat, milk and eggs. Thanks to continuous improvement less feed is needed, the carbon footprint impact is reduced by half while producing the same quantity of meat.
- Overall antibiotic use is lower in organic units but antibiotics are still used to treat bacterial infections. Failure to treat disease and sick animals is ethically unacceptable in terms of animal welfare. Organic producers either market treated animals as conventionally raised or sell them to a producer who is not in the organic programme. Produce from animals that receive antibiotic therapy can only be marketed after the appropriate withdrawal period has passed to ensure that there are no antibiotic residues, but even then, the animals cannot be labeled as organic.
- There is no scientific evidence whatsoever to suggest a difference in nutritional content between conventional and organic protein or a difference between the safety of the two. It does, however, come down to choice and consumers must have options to purchase the most nutritious food they can afford. For many, it's not a realistic possibility to eat organic due to access and cost.

3. Antibiotics in food production

- Increasing scientific evidence suggests that the clinical issues with antimicrobial resistance that we face in human medicine are primarily the result of antibiotic use in people, rather than the use of antibiotics in animals. (UK Department of Health).
- Antibiotics are just one tool among many that veterinarians and farmers used to protect animal health and well-being that includes preventing the spread of diseases among herds and flocks. Farmers work closely with veterinarians and other animal health experts to design comprehensive animal well-being programmes that take into account housing, diet, the treatment and prevention of disease, and other animal health factors. When antibiotics are used, it is under strict guidance related to the type of disease, the dosage and the duration of use.
- If one or more animal has been diagnosed with a bacterial infection, it is almost certain that the other animals have been exposed to the disease, which is why farmers cannot wait to administer an antibiotic until after an animal gets sick. South Africa's raging battle against avian flu is just one example of why proactive disease management is so important. If just one animal is sick, it is necessary that a veterinarian consider the options for controlling the spread of the disease and how to protect the health of other animals in the herd or flock. All animals have the right to be free from pain, injury or disease. If an animal is sick, it should be treated.
- Regardless of whether an animal was sick and treated with an antibiotic at some time in its life or was raised antibiotic free, all the food you buy is free from antibiotics as rigorous testing ensures it. An animal treated with antibiotics must stay on the farm until the antibiotic has passed through the animal's system so there is no antibiotic residue in our meat, milk or eggs.
- Only healthy animals flourish. Modern agricultural units can only flourish because the animals are productive, and they will not be productive unless they are healthy and not stressed. For example, a stressed chicken will not lay any eggs, so it is counterproductive not to care for animals in optimal conditions, whether in a free-range or modern production system. Even in large open spaces, animals still do contract illnesses requiring treatment.
- Best management practices and tools that help keep animals healthy are critically important to the challenge of food waste. Veterinary medicines and vaccines lead to 20% resource waste reduction.

4. Hormones in food production

- Consumers have expressed concerns about the use of hormones in food production. Many believe that the label 'no-added hormones' means that there are no hormones at all in their food. All living things contain hormones – people, plants, animals and, therefore, also the food we eat. If one looks at the natural estrogenic activity of certain common foods, there are 128,423,201ng (nanograms) of estrogen in 85grams of Soya versus 1,8ng of estrogen in 85g of chicken, 1,9ng in beef and 5,4ng in milk.
- There are no hormones used in poultry production ever, yet the majority of consumers believe there are.
- The safety of dairy and meat products that have received Recombinant bovine somatotropin (rbST) supplementation, a protein hormone used to improve milk production, has been recognised in more than 50 countries by their regulatory authorities, together with their scientific assessment bodies. There are about 20 countries, including South Africa, in which rbST has been approved for commercial use, and has been used safely for over 20 years already. Even countries in the EU recognise the safety of cows that were treated with rbST, although it's not used due to quota regulations (farmers are limited in how much milk they can produce and sell), and both meat and milk from rbST supplemented cows can be exported into the EU. The fact that 'rbST-free' may appear on a milk bottle does not make it a health issue and there is absolutely no difference in the taste, quality, nutritional value or safety of milk produced with or without rbST supplementation, and there's no scientifically valid reason for it to be there.

Why is innovation questioned when it's linked to food?

Throughout history, the world's biggest problems have been solved through innovation. It's celebrated in virtually every sector of the economy. So why is innovation questioned when it's linked to food? In the past 60 years, a wide range of innovations in agriculture has allowed farmers to produce more while better caring for the animals and decreasing environmental impact. There is absolutely no denying that innovation has improved food production – from advances in animal health and sanitation, disease detection, animal nutrition, animal comfort, artificial insemination and genetic improvements, vaccines, parasite control, animal housing and productivity optimisations.

“Consumer and retailer conflicts typically arise from misinformation and sensationalist claims that have absolutely no scientific ground. Consumers are entitled to have a choice over the production methods of the food they eat. For them to do that in an informed manner, they need real facts and complete pictures that avoid over-simplistic and hyped rhetoric. The Enough study shows that it is easy to exploit consumer confusion about food as there is a vast disconnect between consumers, retailers and producers as the former two are rarely exposed to the realities of food production, on-farm disease management and sustainability challenges of farming. We need technology, innovation and best management practices in order to deliver sustainable outcomes for agriculture. Science and sanity must serve agriculture and we must avoid being misled by marketing hype and anti-farming sentiments – our very existence and future food security depend on it,” concludes Westerveld.

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