



DELTA PLAN FOR LIVESTOCK FARMING

Good for people. Good for animals.



Imprint

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Animal seeks farmer

I'm looking for a home with straw bedding and a mud bath where I can freshen up every day. I prefer to share my home with others, but I'd also like to have some personal space. Last but not least, I'm rather attached to my tail, so please can I keep it?

Animal seeks long-term relationship

I'm sharing this lonely hearts ad on behalf of a pig. A pig who is looking for a better relationship, because the way we treat our livestock animals at the moment has become untenable. We expect our animals to give constantly, and they often get very little in return. It's time for us to start making amends. It's time for a livestock system where animals have the freedom to behave naturally, where farmers are better paid and where biodiversity is more of a priority.

As the Head of Policy at Dierenbescherming (Dutch Society for the Protection of Animals), I am therefore delighted to present our plan for a balanced livestock farming system:

Delta Plan for Livestock Farming

Good for people. Good for animals.

Our mission is to bring people together and to inspire them. Our ultimate goal is to create a livestock system that is both integrally sustainable and focused on animal welfare. As we cannot achieve this goal in isolation, it's essential that we bring all stakeholders on board. If we work together, we can make sure that this future-proof livestock farming system becomes a reality.

I'm counting on you.



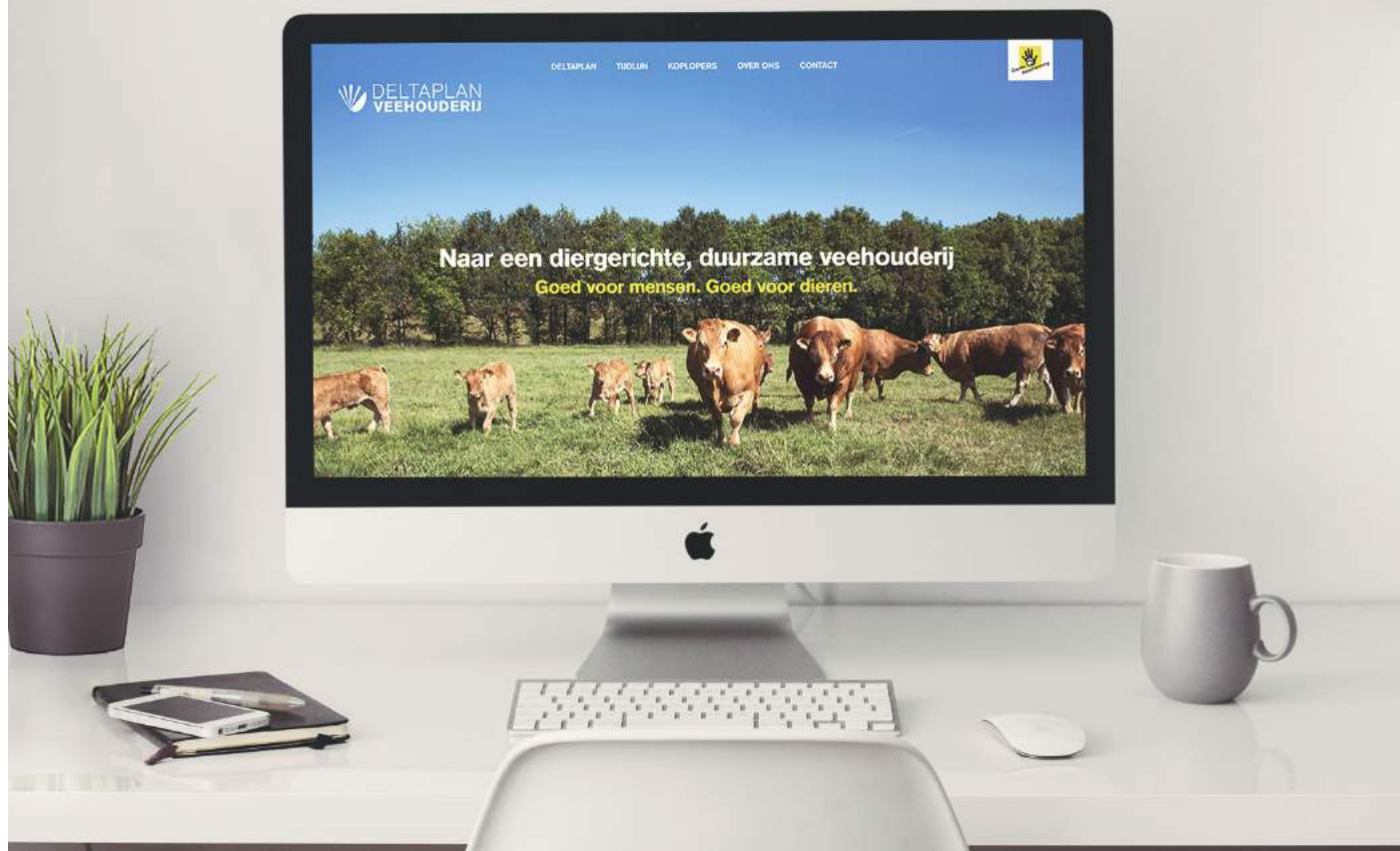
Gemma Willemsen

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Visit www.deltaplanveehouderij.nl for more information.



1. Introduction

Livestock farming has been facing crises and structural problems for years now. Every time a crisis breaks, there are calls for lasting solutions. But somehow we usually end up firefighting and the underlying causes remain unresolved. That is why the Dutch Society for the Protection of Animals is presenting its Delta Plan for Livestock Farming. *Good for people. Good for animals.* This plan outlines our vision for livestock farming by 2050, along with four transition pathways to make it a reality. Animals are at the heart of our vision and our plan presents win-win solutions to create a livestock system that is both integrally sustainable and focused on animal welfare.

A radical change of direction

Our current livestock system focuses on maximising production and minimising costs. This approach has resulted in numerous crises and scandals, from bird flu to manure fraud, and from animal abuse in abattoirs to barn fires. These are all symptoms of a system that has become untenable – for farmers, for nature and for the public. And, most importantly, for the animals forced to bear the brunt of this system. These constantly recurring symptoms have prompted the Dutch Society for the Protection of Animals to reflect on a radical change of direction for livestock farming, with animal welfare at its heart. It's past time that we create a system to meet the needs of animals, not the other way around. One that will involve a fair price being paid to the farmers that make it possible.

Four pathways

This plan sets out four different transition pathways to bring about this change. We will only achieve this goal if all the stakeholders come together and take action.

Pathway 1: Making livestock farming more humane as part of an overall sustainability strategy

Animals are strong and resilient and have the freedom to behave naturally. Live transport is minimised and every animal has access to outdoor space or pasture.

Pathway 2: From wasteful carnivores to appreciative omnivores

Consumers have significantly reduced their consumption of animal products and pay a realistic and fair price for meat, dairy and eggs. They are more appreciative of sustainable food and waste less of it.

Pathway 3: Working together in short, fixed chains

Livestock farming operates in short, fixed chains, which ensures better cooperation, fair prices for farmers and greater transparency.

Pathway 4: Quality production for a self-sufficient region

Livestock farming is designed to produce integrally sustainable products that add value for the market in Northwestern Europe.

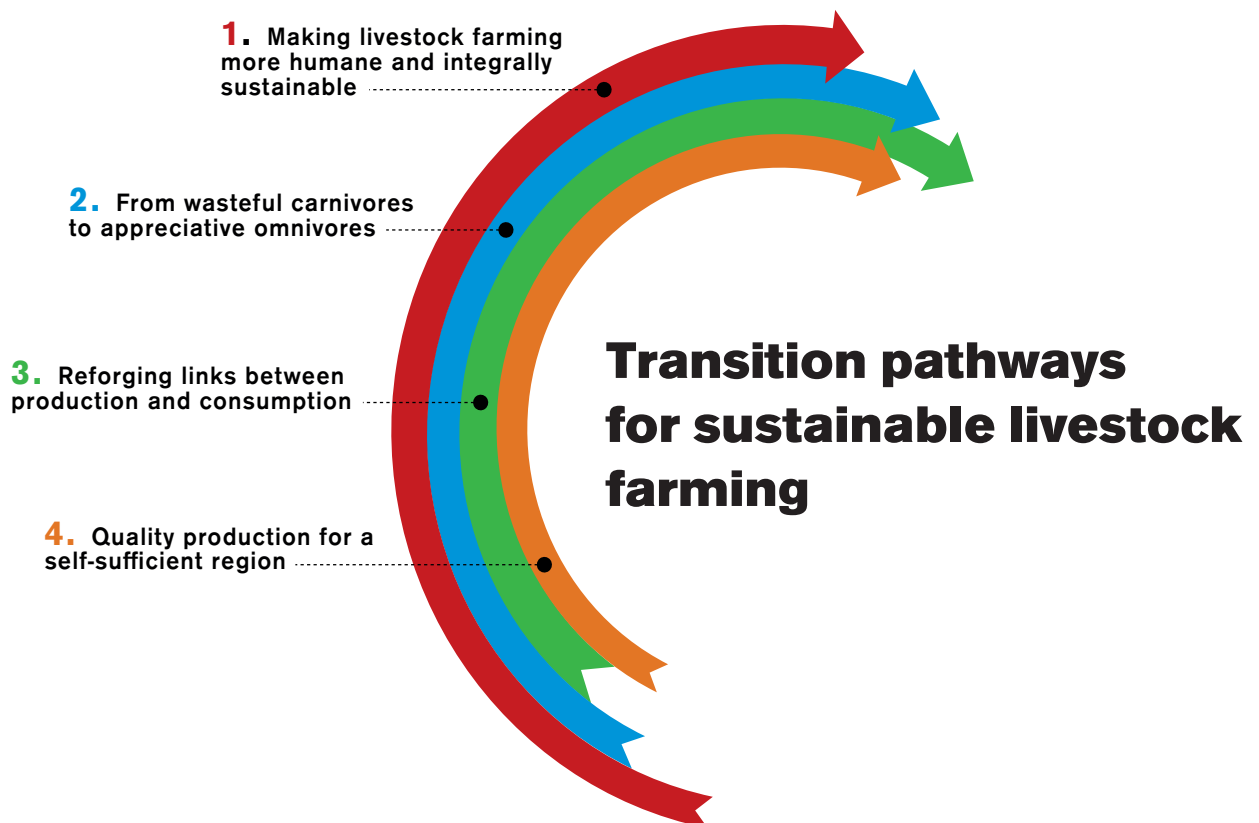


Although these pathways are already in use, they remain less travelled. We do have examples of good practice, but they are yet to develop a large-scale following. These examples include housing systems designed with animals in mind, short chains where farmers earn more, nature-inclusive farming and animal products derived from animals who have enjoyed a better life. This plan showcases pioneers and examples of good practice that are inspiring others. The speed of the transition depends on the actions of stakeholders, because everybody has a part to play – from farmers to supermarkets and from the public to politicians. We have to work together.

The role of the Dutch Society for the Protection of Animals

Our mission is to bring people together and to inspire them. We are active idealists who want to help create a livestock system that is both integrally sustainable and focused on animal welfare. The Delta Plan for Livestock Farming is the thread that runs through all our projects relating to livestock farming policy and guides everything we do.

The Delta Plan for Livestock Farming is intended as a resource that will inspire people to take action. If we follow all the transition pathways and work together, we can create a win-win situation for livestock farming throughout the Netherlands. A system that is good for people and good for animals!

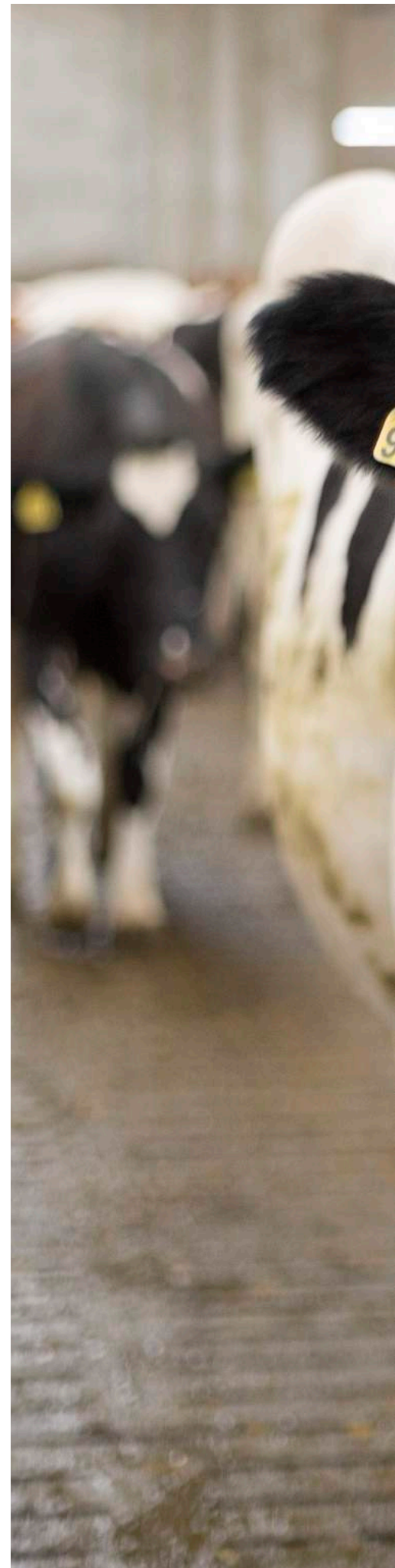


2. Intensive livestock farming has become untenable

The middle of the 20th century saw the establishment of an intensive livestock farming system that was extremely successful in economic terms. This was complemented by a government policy that supported these developments, new technology that allowed farming to become more intensive, and a changing pattern of consumption that meant people were eating more and more animal protein. The negative effects of this intensive livestock farming system, not only on animal welfare, but also on the environment, nature, the landscape, public health and ultimately the income of most livestock farmers, were either ignored or underestimated. This approach may have seemed a logical step back then, but by the time people began asking critical questions, huge amounts of money had already been invested. As a result, resolving the problems caused by the new system proved to be difficult and time-consuming.

Fast forward to the present day and the livestock farming sector in the Netherlands has been struggling for decades now. It has experienced many crises and scandals in recent years, such as bird flu, the threat of African swine fever, the fipronil contamination issue, barn fires, animal abuse in abattoirs and manure fraud. Farmers are protesting against the lack of appreciation for their work. Politicians are facing lawsuits to force them to improve air quality. Public taxes are still being used to pay the price of the negative impact on the environment, for example, without any structural improvements being made to the system. These are all symptoms of a system that has become **untenable**.

This is a statement that we are hearing more and more often. The system has become untenable for farmers, for nature and for the public. But it has also become untenable for the animals themselves – and this is something we tend to forget. Animals were the answer to our cry of 'no more hunger, ever' in the years after World War II. When we talk about growth, what we actually mean is more and more animals. When we talk about making production more and more efficient, that means they have less and less freedom to enjoy a natural life. Crammed into less and less space, having to grow faster and faster and being expected to produce more and more young. Our current system focuses on maximising production and efficiency and minimising costs. And nobody benefits from that.





Untenable for animals

Recent decades have seen improvements to animal welfare in livestock farming. Sows and calves are now kept in groups rather than isolation, laying hens have moved from battery cages to barn or free-range settings and tie stalls have been replaced by cubicle housing systems where milking cows have room to lie down. The number of mutilations carried out on animals has also been gradually reduced. But every year, many of the more than 450 million animals in Dutch livestock farming still face serious welfare issues, including lack of space, not being able to behave naturally because of a lack of environmental enrichment or a lack of access to outdoor spaces, serious health issues, stress and exhaustion when transported long distances, and high mortality rates in young animals.

To date, improving animal welfare has focused on removing negative experiences, such as illness and injury, and on ensuring that social animals are not housed on their own. Animals are living beings with feelings and emotions, which they can experience both negatively and positively. If they are to have an acceptable level of welfare, it is essential that we both minimise the duration, severity and frequency of negative experiences and that we ensure animals enjoy positive experiences that make their life worth living. Just because animals are not lame, do not have injuries or produce a good yield, for example, does not automatically mean that the state of their welfare is good. Animals also need to have enough space and opportunities to display positive behaviour such as playing, to explore their surroundings and to enjoy positive social interaction.

Untenable for farmers

Most livestock farms focus on maximising production and minimising prices. Buyers can choose from multiple providers and regularly switch suppliers based on who is offering the lowest price. The result is a system where pricing is the sole criterion livestock farmers have to compete on, and they are rarely united in a strong chain that looks after their interests. Faced with a lack of market power and encouraged by advisers, most livestock farmers therefore follow the path of scaling up and more intensive farming, creating a downwards spiral. As a result, many livestock farmers are in a precarious economic position. In 2018, the number of households with an income below the low-income threshold was 35% in dairy farming, 48% in pig farming, 15% in egg farming, and 28% in broiler chicken farming. That means very little is left over for investing in animal welfare and other aspects of sustainability. Other links in the chain, such as abattoirs, egg packing plants and processing companies, are also forced to participate in the drive to produce more for less, leaving them very little room to create their own added value.

Livestock farmers who do want to become more sustainable tend to find it very difficult to obtain the required permits, financing and sales. Banks and investors frequently perceive the risks of alternative approaches or making systems more sustainable to be too high, because they fear that these changes will not pay for themselves through sales. Another factor is that trend setters are frequently not appreciated by their fellow farmers, who worry that they will be forced to follow suit and become more sustainable without seeing a return on these additional costs. The system as a whole is resistant to innovation and the individual parts are focused on maintaining the status quo.

The gap between consumers and livestock farmers is much wider than it used to be. Ever-increasing intensification in livestock farming combined with a reduction in how much people value the sector mean that livestock farming has gone from enjoying a high status in the mid-20th century to having spent several decades under fire from the public. There is a gaping divide between livestock farmers and many sections of society. This polarisation of views may threaten moves to make the industry more sustainable, including improving animal welfare, if it creates a situation where everyone focuses on their own interests and turns their back on dialogue and change.

Untenable for the public

The normal public perception of livestock farming is either as a nuisance (creating offensive smells or polluting the landscape, for example) or as a danger to public health. Smells from livestock buildings can impact people nearby, disrupt behaviour and activities and cause stress-related health problems. Examples of public health risks include the outbreak of Q fever in the Netherlands, bacteria that develop a resistance to antibiotics and emissions of particulate matter from animal pens that may contain endotoxins (the remains of dead bacteria) and micro-organisms.





Untenable for the environment, nature and climate

Most animal feed is imported and around 70% of Dutch dairy and meat products and eggs are exported. As the majority of the manure that is generated remains in the Netherlands, the excess quantities of manure mean that far more minerals are being added to the soil in certain regions than crops are able to absorb. The surplus accumulates in the soil or leaks into the ground and surface water. As a result, levels exceed the chemical and ecological quality requirements in more than 60% of regional waters.

Manure releases ammonia, some of which is deposited in the environment as nitrogen. Over the years this has had several consequences, including the accumulation of nitrogen in nature areas, to the detriment of biodiversity. In May 2019, the Council of State ruled that the Dutch handling of nitrogen did not comply with European legislation; a ruling that ultimately resulted in a 'nitrogen crisis' and protests by farmers later that year.

Biodiversity is declining rapidly, with studies showing that the biomass of flying insects has fallen by 75% over the last 27 years. Global consumption of meat and dairy is responsible for around 30% of the loss of biodiversity on land. Small areas of the natural environment have become disconnected, so animals are unable to migrate and species may disappear. Livestock farming is under increasing pressure to take steps to reverse this decline in biodiversity.

Livestock farming causes the emission of greenhouse gases. In 2017, livestock farming produced an estimated 18.7 mega tonnes of CO₂ equivalents, making it responsible for around 10% of total Dutch emissions of greenhouse gases. The Paris Climate Agreement states that CO₂ emissions must be reduced by 49% by 2030 and 95% by 2050 compared to 1990 levels. The government resolution on the climate agreement adopted in 2019 set a target of reducing the amount of CO₂ equivalents produced by agriculture by 6 mega tonnes between now and 2030, which means that emissions must be cut by around one third.

Untenable for retail and catering

Retail outlets such as supermarkets and catering services compete for market share, which means they are caught in a kind of prisoner's dilemma. Many supermarkets include animal welfare in their corporate social responsibility (CSR) policy and use it to distinguish themselves from their competitors. At the same time, they want to keep their prices as low as possible to stop customers shopping at other supermarkets. As a result, real opportunities to make things more sustainable are few and far between. Supermarkets respond to this social demand for products that are more animal friendly by creating and/or selling concepts, some of which are less about reliable quality marks and more about corporate logos with very few ambitious requirements for animal welfare and very little transparency on how they ensure these requirements are met. Many businesses find themselves in the firing line as a result – examples include supermarkets' own-brand chicken and the Mora brand's better welfare claim, which was dismantled by a well-known Dutch consumer TV programme, damaging the image of these businesses. Although some producers of premium brands already use quality marks for animal welfare, catering and hospitality are lagging behind.

Constant pressure to maximise production at cheap prices regularly causes abuse and scandals in the production chain. Long chains made up of a range of dealers and processors and the related lack of transparency increase the risk of fraud and abuse and the danger that these are not promptly identified and addressed. The horse meat scandal is just one example of this. The food industry, retail and catering regularly face adverse economic consequences and damage to their corporate image as a result of such crises and abuses in the livestock farming sector.

Untenable for government officials and politicians

Politicians are constantly embroiled in the same debates in which the same symptoms of a livestock farming system that has become untenable are highlighted, leaving them no choice but to deal with incidents and underperformers. In recent years, the government has faced legal proceedings to force them to comply with the law. All in all the political debate around livestock farming has contributed relatively little to the development of a specific policy aimed at implementing structural solutions, as a result of which politicians, animals and farmers all lose out.

The majority of EU member states in Northwestern Europe appear to support introducing more stringent requirements for animal welfare and other issues relating to sustainability. The obligation to ensure a level playing field means that these requirements would have to apply across the EU, so they are regularly rejected by a majority of southern and eastern EU member states. The result is a situation where Northwestern Europe is full of good intentions, the EU is cast as the potential scapegoat and there is little actual political cooperation within Northwestern Europe on this issue.

For decades now, the Dutch government has been back-peddalling in many areas due to its unwillingness to impose additional regulations over and above



European legislation. Its primary approach is to encourage businesses to take responsibility for guaranteeing animal welfare and environmental policy and to reach agreements to improve the situation in both these areas using voluntary measures such as negotiated agreements and quality marks. Although the government is willing to encourage and facilitate action, and will sometimes act as a partner in the process, it has no power to force arrangements to be implemented and goals achieved. This means there is still room for people to lag behind; yet change is only possible if everybody is on board, and trend setters will end up at a disadvantage if there are no clear boundaries for the underperformers. All too often we see various parties being given too much time and leeway to comply with arrangements and being granted extensions when they fail to do so.

3. Animals are at the heart of our vision of the future

Livestock farming would not be possible without animals, so animals must be at the heart of livestock farming. If a livestock farming system is good for animals, that means it is properly organised and deserves to be appreciated as it helps to create win-win situations for farmers, the public, the environment and nature. Read on for our vision of the future for livestock farming, based on what animals need.

Animal housing: from a focus on low costs to a focus on animal needs

We strongly believe that in the future, all animal housing must be designed with animals in mind, so that their primary needs are met. Proper animal welfare is about more than simply preventing negative experiences: animals must also have positive experiences, such as exploring new enrichment material and having access to outside space.

It is imperative that outdoor space or pasture is designed in an integrally sustainable manner for all animals. Poultry must have shelter to protect them against birds of prey, for example, so they feel safe enough to make proper use of their outdoor space. Shelters must also protect animals (not limited to poultry) against bad weather including rain and bright sunshine. The design of the outdoor space can also help to increase biodiversity, improve soil quality, present a more positive image of the livestock farm and act as an additional source of income for farmers, who can plant fruit and nut trees for example.

Animals' primary needs are:

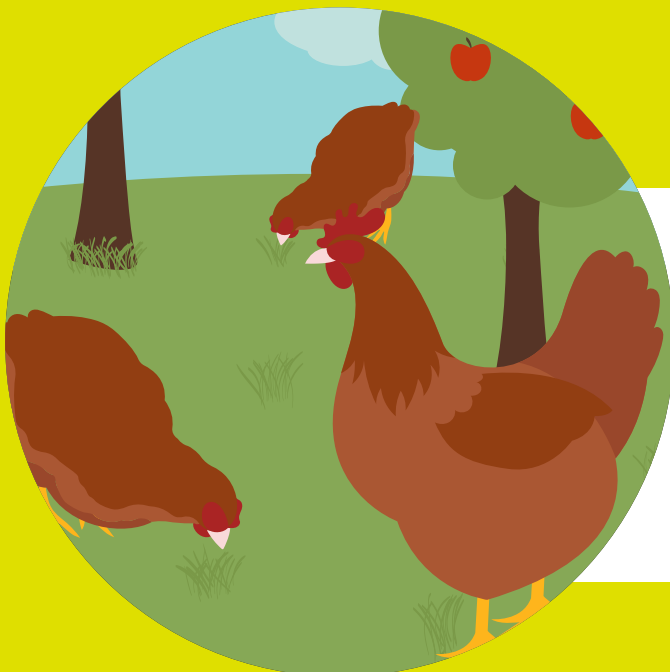
- Having sufficient high-quality food and drink
- Having accommodation that allows them to rest comfortably
- Having daylight, fresh air and a system that works with their biorhythms
- Being able to avoid contact with their manure and urine
- Being able to live together with conspecifics
- Having adequate space to move around properly on a suitable surface
- Having a pleasant climate
- Remaining healthy
- Being able to forage and explore (for example grazing, scratching and rooting)
- Being able to synchronise their behaviour (for example eating, resting, exploring, playing at the same time)
- Being able to look after their skin/feathers (for example dust bathing, ground scratching, scouring, mud bathing)
- Displaying maternal behaviour such as building nests, giving birth and caring for young
- Receiving maternal care
- Feeling safe
- Having freedom of choice

ⁱ The methodology for designing housing with animals in mind has been under development since 2003 by Wageningen University & Research (WUR), following an initial request by the Dutch Society for the Protection of Animals. WUR subsequently expanded this methodology to come up with the concept of 'Reflexive Interactive Design (RIO)' or 'integral sustainable design', which states that the primary needs of farmers and of the public/ consumers, as well as the most important environmental factors, should be taken into consideration in addition to the primary needs of animals. Integral sustainability sessions have already been held for various livestock farming sectors using this methodology. Existing examples of housing designed with animals in mind include Kipster and Rondeel houses for laying hens, the Windstreekstal for broiler chickens, the Dartelstal for pigs and loose housing systems (without cubicles) for dairy cattle.



- Having accommodation that allows them to rest comfortably
- Displaying maternal behaviour such as building nests, giving birth and caring for young
- Receiving maternal care

- Having sufficient high-quality food and drink
- Avoid contact with manure and urine
- Being able to live together with conspecifics
- Having a pleasant climate
- Being able to synchronise their behaviour (for example eating, resting, exploring, playing at the same time)



- Having daylight, fresh air and a system that works with their biorhythms
- Having adequate space to move around properly on a suitable surface
- Being able to forage and explore (for example grazing, ground scratching and rooting)
- Being able to look after their skin/feathers (for example dust bathing, scratching, scouring, mud bathing)
- Feeling safe
- Having freedom of choice

Breeding: from double-muscled to dual-purpose

In the future, rather than selecting animals based on their productivity and efficiency, breeders will focus on factors such as animals' robustness, social behaviour and ability to rear their own young. Extremely productive animals, such as double-muscled cattle, dairy cattle who can sometimes produce more than 10,000 litres of milk a year, fast-growing broilers, laying hens who lay as many as 300 plus eggs a year and sows who give birth to more piglets than they can actually raise, will be replaced by strong and resilient animals such as dual-purpose animals who can produce both meat and eggs or milk. This will eradicate production diseases such as milk fever in cattle and lameness in chickens and sows. The animals will be physically stronger, so they can behave more naturally, will suffer fewer illnesses and will live longer.

Mutilations: from routine to unnecessary

In the future, mutilations will no longer be required because animal housing will be designed with animals in mind. This will allow animals to behave naturally and they will no longer experience chronic stress, so harmful behaviour such as feather pecking and tail biting will no longer occur. Male pigs will no longer have to be castrated as alternative solutions will be used to prevent boar taint.

Transporting animals: from global to local

In principle, live transport will not be part of our vision of the future. Farms will cover the full life-cycle; in other words, animals will be born, will spend their life and will then be slaughtered all on the same site. Mobile abattoirs, or mobile slaughter units where all animals are stunned and killed, will be needed to make this possible. If animals still require one-off transport, then distances will be kept to a minimum.

Stunning and slaughter: from stressful to peaceful

In the future, all methods of stunning and slaughter will be effective and non-aversiveⁱⁱ. Slaughter without stunning will no longer take place, nor will there be any use of aversive stunning methods such as water baths for poultry and CO₂ stunning for pigs.

Livestock farmers: from production specialists to animal welfare specialists

On a future-proof livestock farm, all livestock farmers and anyone who handles animals (staff, vets, abattoir staff, and so on) will have extensive knowledge and skills relating to animal welfare, including behavioural needs, and will refresh this knowledge and these skills at regular intervals. Diseases and other issues will be identified at an early stage, potentially using technology such as sensors. Animals will be herded or caught using methods that minimise stress and do not cause pain.

Livestock farmers and staff will have sufficient time to properly monitor and care for all animals. This will be possible because meat, dairy and eggs will offer a better return, so improving quality can replace growing the business and reducing costs as the priority.

ⁱⁱ Non-aversive means that the method does not cause the animals any distress. CO₂ stunning is aversive for pigs, for example, because the gas irritates their airways. Water bath stunning is aversive for poultry for several reasons, including the fact that they are still alive while they are hung upside down for slaughter, which causes them stress.





The role of animals in the food system

Intrinsic value of animals

Recognising the intrinsic value of animals is a principle that is enshrined in the Dutch Animals Act (Wet dieren). It means that animals have an individual value that is separate from the utility value that people assign to them. The Dutch Society for the Protection of Animals believes that people should give greater weight to the intrinsic value of animals. Where animals are used, the interests of people and animals must be weighed carefully and alternatives to using the animals must be investigated. The Dutch Society for the Protection of Animals applies the following precautionary principle: it is essential that sufficient knowledge is available about whether and how a particular type of animal can be kept in a way that properly guarantees the welfare of that animal, before these animals can actually be kept. If animals are kept for use by humans, steps must be taken to ensure that animal welfare and integrity are not negatively affected and to ensure that the maximum level of animal welfare is maintained.

Research has been carried out to establish how people define animal welfare.

The definitions fall into three categories, with some overlap:

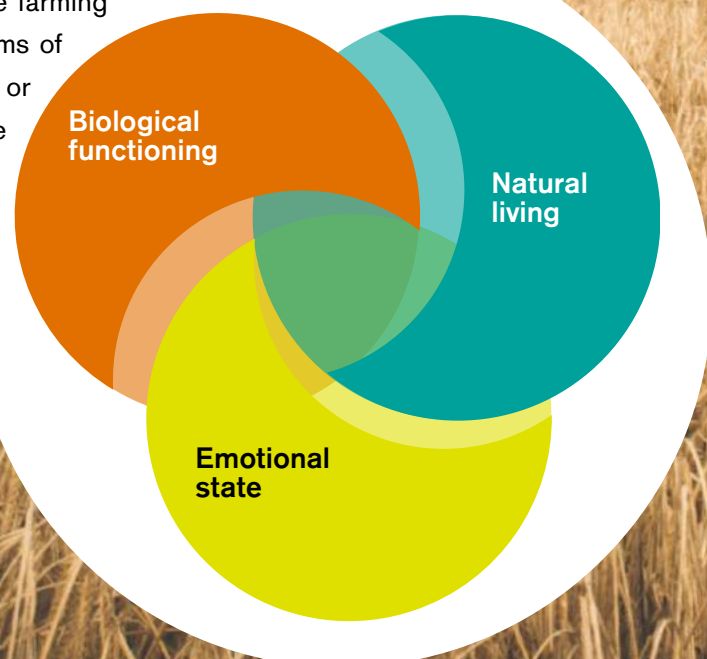
- **Biological functioning:** is the animal healthy? Is it growing properly? etc.
- **Natural living:** is the animal able to behave naturally?
- **Emotional state:** what is the animal's mood? Is it 'happy'?

Broadly speaking, many livestock farmers and vets emphasise biological functioning, the public tend to focus on natural, and animal welfare researchers and the Dutch Society for the Protection of Animals prioritise emotional state. This difference in perspective means that some people view specific issues as problems while other people do not, or at least only regard them as minor ones.

Animals in the food system in 2050

This Delta Plan prepared by the Dutch Society for the Protection of Animals looks ahead to 2050, and we believe that animals will continue to play a role in the food system up until this point. Despite a growing range of meat, dairy and egg replacement products, using animals for food production is still a matter of course in our society in 2020. Although we do not expect this to have changed completely by 2050, we do expect to see a significantly different situation in which the use of animals for food production has been reduced.

Even if we broaden our perspective to include other aspects of sustainability alongside animal welfare, scenarios with animals appear to be more sustainable than scenarios without. Wageningen University & Research has investigated the sustainability of a range of scenarios relating to land use. The scenario where animals are fed with waste flows from arable farming and the food industry or on grass is more sustainable in terms of land use than increasing the efficiency of animal production, or than everyone switching to a vegan diet. In this scenario, the average daily consumption of animal protein would decrease from approximately 48 g in 2020 to approximately 20 g in 2050.



Outlining the future for cattle, pig and chicken farming

The principles already outlined – in relation to animal housing, breeding, mutilations, transport, stunning and slaughter, and the relationship between people and animals – apply for all sectors within livestock farming, although each individual sector has its own specific characteristics. Read on for our outline of how we would like to see the future by 2050 for the three largest sectors of Dutch livestock farming: cattle, pig and chicken farming.

Cattle farming

By 2050, cattle farming will have switched completely to robust dual-purpose cattle breeds; in other words, cattle that can be used to produce both milk and meat. Dairy cows will then produce less milk than the roughly 9,000 litres per year produced on average by one dairy cow in 2020. They will therefore have more energy to resist illness, for example, and will suffer fewer production-related diseases such as lameness and mastitis, which will also mean that they can be kept for longer.

All cattle will have year-round access to pasture land, which will offer natural screening (such as trees and bushes) so that all cattle can shelter from heavy rain and bright sunshine. A loose housing system designed with animals in mind will be available and cows will always be free to choose whether they want to be indoors or outdoors. Dehorning will no longer be necessary because all animals will have enough room.

Calves in cattle farming will come from dairy farms in the Netherlands, Germany and Belgium and will stay with their mothers for at least three months. Calves will remain on the dairy farm where they were born until they reach the age for slaughter, or they will be sent directly (in other words, not via collection centres) to

specialised veal producers as close to their place of birth as possible once they are at least three months old. Calves will have access to pasture land and their housing will be designed with animals in mind.

All animals will be stunned before slaughter. Cattle will be stunned and slaughtered in a mobile abattoir that visits the farm, or in an abattoir as close to the farm as possible. Only rose veal or beef from adult and young animals will be produced. In addition to milk from their mothers, calves will be fed grass and other roughage from the age of two weeks.

All of these measures will mean that mortality rates and antibiotic usage in calves will be dramatically lower than in 2020.

Cycles will be on as small a scale as possible. Farms will be completely land-bound; in other words, manure will be deposited on the farm's own land or within a radius of 20 km, provided that a relevant contract has been agreed, as per [the definition provided by the Netwerk Grondig](#) (the organisation representing the interests of land-bound dairy farming). Sales of veal and beef, including meat from calves, will be restricted to Northwestern Europe.

Monocultures of English rye grass, for example, will be completely replaced by grass containing a diverse mix of

herbage. Harmful pesticides will no longer be used. Landscape elements such as trees, hedges and wetlands will be added within and along the edges of this grassland. These and other measures will have significantly improved the soil structure, soil life and biodiversity and farmers will be appreciated for creating and maintaining this landscape.

Animals will be fed grass wherever possible, supplemented with feed made from waste flows from the food industry and, if necessary, with protein cultivated in Northwestern Europe for animal feed, such as feed peas and lupines.



Corné Ansems

Owner of de Ruurhoeve, a dairy farm where calves can stay with their mothers

On my farm, I try to focus on maintaining a balance and on making sustainability an integral part of how we operate. One of the strategies I use for that is agroforestry, which is good for nature and for the animals, because the trees in the pasture provide shade. This kind of approach involves thinking in terms of solutions rather than problems. You could think 'trees, how am I going to mow around them?', but instead you just have to come up with a way of making it work. Here on my farm, the calves stay with their mothers. Using this approach on a dairy farm is still pretty new, so I had to try out lots of different styles of pen until I found this system that works for us. Farmers who keep calves with their mothers need to be more open to sharing their knowledge. That's something I want to do, because we're stronger if we work together.

Transparency is really important to me. It needs to be more than just a nice story, all the different links in the chain need to fit together as well. That's the only way to achieve a genuine true price for farmers. We need to take an open and honest approach to changing the system and we can only do that if everyone is on board, from consumers right through to the government who need to create the appropriate legislation.

I've learned to keep my ideals in check, because the system also has to be affordable. But my head is full of plans for the future. I want to make nature an important part of the farm and I want a future where all my animals are slaughtered right here in a mobile abattoir. Challenging goals, but I've never been one to take the easy road and I want to make sure our farm continues to stand out from the rest.

Pig farming

Pigs will be kept in systems of family pens that are designed to be integrally sustainable. Each litter will contain **fewer piglets** than in 2020 and sows will raise their litters for at least 42 days in farrow to wean pens where a small number of sows and their piglets live together as a group. Sows will then move into communal pens with other sows where they will be impregnated in the group. Piglets will remain in the farrow to wean pens for as long as possible, and will subsequently be mixed and moved as little as possible. The rate of growth of pigs raised for meat will be slower than in 2020 and use of antibiotics will have fallen to almost zero.

All pigs, whatever their ages, will have **access to outdoor** spaces in the form of pasture land where they can root around and take mud baths, **to ensure their needs are met**. Sows used for breeding will be robust, so they will not suffer from production-related diseases such as lameness and mastitis.

Pig pens will have natural ventilation with mechanical ventilation and cooling systems as backup when required. The pens will have plenty of daylight, but light levels will also be varied to create **functional areas** where animals can eat and drink, rest, root around, and urinate and defecate. Manure and urine will be separated immediately and removed on a daily basis. Most of the floor area in the pens will be covered with **a thick layer of straw** for animals to lie on and root around in.

As the farm will meet the pigs' primary needs, tail biting will no longer be a problem and **docking will not be required. Castration will also be a thing of the past**. Breeding, food and management will be designed to prevent boar taint in entire male pigsⁱⁱⁱ and the small number of remaining affected pigs will be separated out in the abattoir and used for processed products such as cold meats.

Pigs will be stunned and slaughtered in a **mobile abattoir** that visits the pig farm, or in an abattoir as close to the pig farm as possible.

The **feed** will consist solely of waste flows from arable farming and the food industry, supplemented where necessary with minerals and proteins of European origin, such as legumes, lupine and soya. Both the feed and the method of feeding will be designed to suit the animals in terms of nutrition and behaviour. Manure from pig farms will be used as fertiliser for arable land.

ⁱⁱⁱ Once male pigs reach sexual maturity, they begin to emit boar taint to attract female pigs. Boar taint smells like a mixture of manure, urine and sweat. When meat from a sexually mature male pig is heated, boar taint is released. Although the flavour of the meat is not affected, the odour is unpleasant and that is why male pigs almost everywhere in the world are castrated soon after birth. These days, correct breeding, diet and care can prevent boar taint from occurring in 94% of male pigs and the remaining affected pigs are separated out in the abattoir. This percentage will continue to increase in the future.





Annechien ten Have-Mellema

Keeps pigs in Beerta near Groningen. Agricultural entrepreneur of the year 2019.

We keep our free-range pigs in animal-friendly Dartelstal pens and we have been awarded two stars under the Beter Leven keurmerk (Better Life label) operated by the Dutch Society for the Protection of Animals. When we were building the pens, we explored a range of design options that focused on the animals, always with the goal of integrating the primary needs of the pigs into the new pens. We're extremely happy with our new pens and wouldn't dream of going back to the old ones – and we're pretty sure that our pigs would agree.

We are also working to create a closed cycle, so our free-range pigs eat wheat and lupine that we mainly grow ourselves and ground up bread that is a waste flow from supermarket bakeries. The biogas plant converts manure into electricity and heat, and the digested manure goes back onto the land to feed the crops. And that closes the circle.

It's all very well having new animal-friendly pens, but we really need every link in the chain from farmers and abattoirs through to retail and consumers to work together, because that is the only way we can create a new livestock farming system. The more we work together and build a support base, the greater our chances of ensuring that two stars becomes the new normal.

We support the plan drawn up by the Dutch Society for the Protection of Animals because its vision for the future is supported by practical examples of how to achieve it, so it isn't just a theoretical wish list. I think that's great because it makes the plan tangible and understandable.

In the future, we'd really like to convert the rest of our standard farrowing pens to free-farrowing ones, so the whole farm would be at the two-star level. Whether we manage that depends on sales of our Hamletz pork. We'd also like to see other pig farmers getting involved. From our point of view, we intend to create a real Hamletz chain to improve life for pigs, farmers and consumers.



Chicken farming

In 2050, poultry farms will focus on breeding **robust birds**. Removing the focus on specialised production will gradually blur the distinction between broiler chickens and laying hens and we'll see more and more farmers keeping **dual-purpose breeds**. The hens will lay fewer eggs than in 2020 but will produce more meat. As they produce fewer eggs and grow more slowly, they will suffer less from production-related problems such as fractures, feather pecking, and chronic hunger in the case of parent stock. This will mean that they can also be kept for longer than the current 18 months without forced moulting being required^{iv}. If farmers opt to allow cockerels to hatch, they will be kept for their meat.

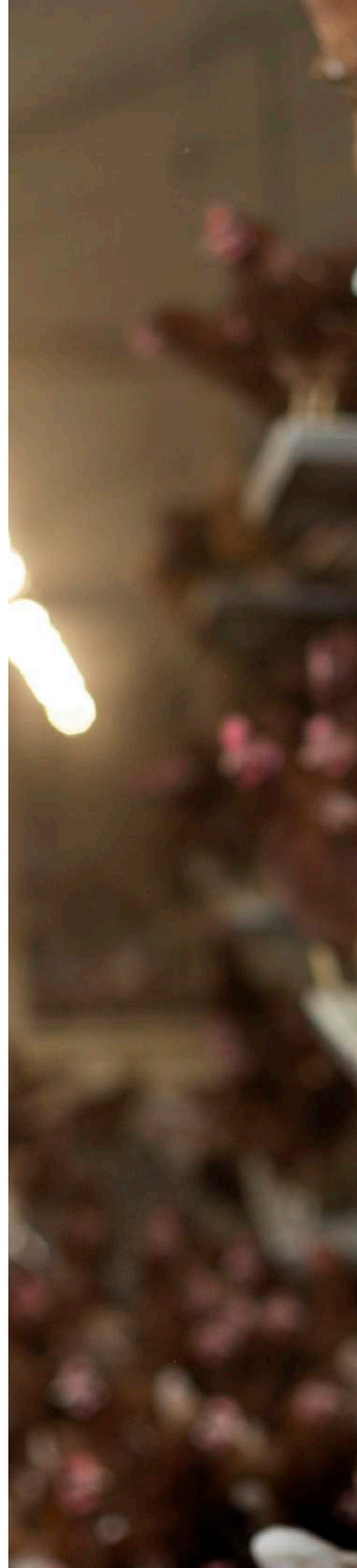
All chickens (including the parent stock) will be kept on the **same farm**; in other words, they will hatch in the house where they will spend their entire life. The sex of the chicks will be determined before hatching, so that one-day-old chicks do not have to be handled by people to separate hens and cockerels. All chickens will have access to water and feed as soon as they hatch.

All pens will be designed in an integrally sustainable manner. To ensure that the needs of the animals are met, the stocking density will be lower, based on the space that chickens need to be able to behave naturally. The houses will also have plenty of daylight and fresh air, with varied environments to create **functional areas** where the birds can rest, eat, drink, forage and enjoy dust baths. A large proportion of the manure that is produced will be removed daily from houses in this system, reducing the emission of ammonia and of particulate matter containing endotoxins.

All chickens will have **access to outdoor space designed with their needs in mind**. This outdoor space will have trees and bushes, supplemented with shelter areas and panels to protect against the sun if necessary. This will ensure that the outdoor space is a varied environment for the chickens, offering them protection against poor weather and bright sunshine and enabling them to forage without having to worry too much about birds of prey.

If birds have to be handled – for slaughter, for example – then **the Swedish method** will be used to catch them. This involves picking each bird up around the breast and keeping them upright, rather than carrying several chickens upside down by their legs in each hand. Alternatively, a system will be used that is better for the welfare of the birds than catching them by hand.

^{iv} Like all birds, chickens moult once a year – a spontaneous process that can take a couple of months. If poultry farmers want to keep chickens for longer than one laying season, forced moulting is a way of standardising and speeding up the process. The amount of light that chickens are given is restricted and their feed is rationed, which puts the chickens under stress.





All animals will be stunned before slaughter. They will be slaughtered on the farm using **mobile abattoirs**. If the birds do have to be transported to an abattoir, this will be located as close as possible to the poultry farm (no more than a four-hour drive away). Poultry farms will no longer be located near large bodies of water, where the risk of avian influenza is higher. The risk of avian influenza will be significantly reduced because the birds will be more robust and a vaccine will have been developed against most strains of the influenza virus.

Poultry **feed** will consist only of waste flows from arable farming and the food industry, supplemented with the necessary nutrients, such as minerals and possibly proteins of European origin, such as legumes, lupine and soya. The feed will be suitable for the birds in terms of nutrition and behaviour and will be provided in a way that supports their natural eating and foraging behaviour.



A close-up, slightly blurred background image of a chicken's head and neck, showing its red comb and brown feathers. The image is used as a backdrop for the text overlay.

David Janssen

Poultry farmer in Veulen in Limburg. His free-range laying hens have been awarded three stars by the Better Life label

Our farm has diversified into different areas: we run a care farm that supports the needs of older people with physical, mental and/or social needs, we keep sheep that help us to manage the natural environment, and obviously we keep chickens. Our chickens have an outdoor area where they are free to roam, where environmental enrichment. We stopped beak trimming a long time ago. I try to vary when I scatter grain for the chickens, to keep life interesting for them. It's great when they all come running at me when I appear with the grain – that's one of the things I really enjoy about my work.

Around six years ago, we decided to change our approach and try and make the feed soya-free. We've more or less managed that for the rearing phase. When chickens come to our farm, we gradually decrease the amount of soya in their feed and once they reach the age of 26 weeks, we give them our own soya-free feed. The barley and corn in that feed are all grown within a radius of 50 km from our farm. Although that costs a bit more, I think it's important that land resources are used sparingly.

The plan drawn up by the Dutch Society for the Protection of Animals tallies with our vision because it's based on respect for people, animals and the environment – a very positive combination. It's important that we all work together, otherwise we won't achieve anything. I don't know of any farmers who don't look after their animals properly; we're all happy to go the extra mile. But that all costs money, so it's important that this is covered by the legislation and that retail makes sure that farmers are paid a fair price.

My brother and I often talk about the things we'd like to change on the farm. A slightly lower stocking density would be even better for the birds. We'd also really like to see a different kind of chicken and I have talked to breeding organisations several times about this. A more robust 'dual chicken' that doesn't lay quite as many eggs but lives longer and produces a bit more meat would be great – like the Lohmann Sandy. But that breed lays champagne-coloured eggs and people aren't familiar with that, so we'd need retail to sell that to consumers.

4. Sustainable livestock farming, including for farmers, the public and the environment

The section 'Animals at the heart' discusses the primary needs of animals. In this section, we look at the needs of farmers, the public and the environment. For a livestock system to be tenable, it must be integrally sustainable. In other words, it must be based around the needs of the animal but also take the needs of farmers, the public, and the environment and nature into consideration. Integrally sustainable livestock farming results in win-win situations. Good animal welfare can only be achieved if that goes hand in hand with a strong earning model for farmers and with a product that aligns with public values and benefits the environment and biodiversity.

What do livestock farmers need?

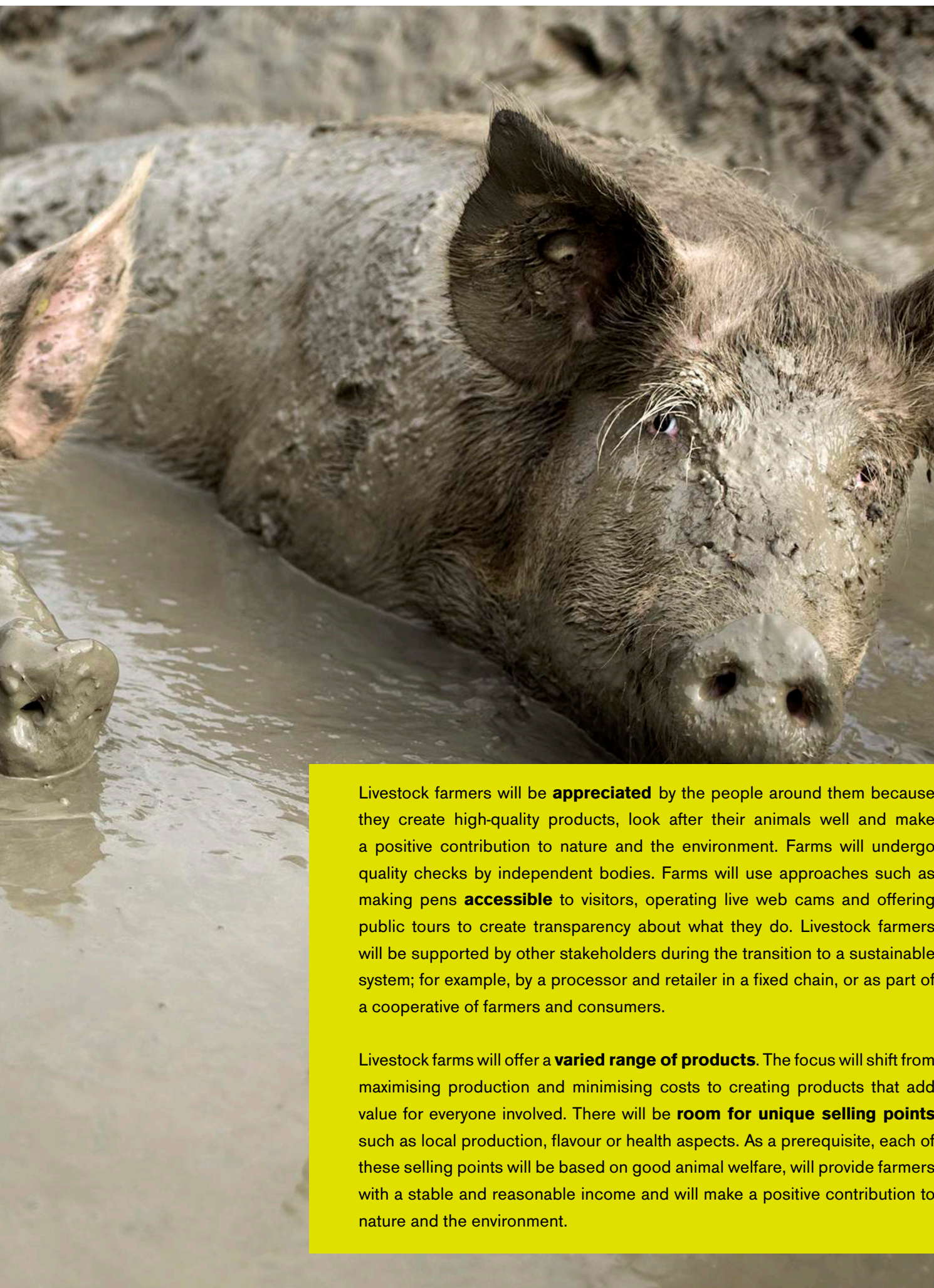
The design sessions held by WUR on integrally sustainable livestock farming systems resulted in the identification of the following primary needs of livestock farmers:

- Good overview of the animals
- Proper working conditions (for example, good air quality in pens, safe machinery)
- Job satisfaction
- Positive contact with the animals
- Flexibility to serve a range of markets (room for entrepreneurial spirit)
- Normal working hours with some time off
- A stable, adequate income
- Being appreciated by society
- Business continuity
- Healthy animals
- Producing meat/eggs/dairy

The Dutch Society for the Protection of Animals has used practical knowledge and research findings to outline a scenario for livestock farmers that meets the requirements listed above.

In 2050 all livestock farmers will have a **stable, good income**. Farmers will be part of **short, fixed chains** where all the links are familiar with one another. This will ensure every link in the chain is in a strong general and financial position. Working together in fixed chains will safeguard the future of individual farms in the longer term. The pressure to maximise production and minimise costs will have vanished and farmers will be able to prioritise quality over quantity. **Work** will be **less of a burden** and **more of a pleasure**. The working environment will be more enjoyable (more daylight, better air quality, plenty of time spent outdoors) and farmers will have enough time for meaningful contact with their animals.





Livestock farmers will be **appreciated** by the people around them because they create high-quality products, look after their animals well and make a positive contribution to nature and the environment. Farms will undergo quality checks by independent bodies. Farms will use approaches such as making pens **accessible** to visitors, operating live web cams and offering public tours to create transparency about what they do. Livestock farmers will be supported by other stakeholders during the transition to a sustainable system; for example, by a processor and retailer in a fixed chain, or as part of a cooperative of farmers and consumers.

Livestock farms will offer a **varied range of products**. The focus will shift from maximising production and minimising costs to creating products that add value for everyone involved. There will be **room for unique selling points** such as local production, flavour or health aspects. As a prerequisite, each of these selling points will be based on good animal welfare, will provide farmers with a stable and reasonable income and will make a positive contribution to nature and the environment.

What do the environment and nature need?

If livestock farming is to take nature and the environment into consideration, we need to identify the issues that are important to that end. According to design sessions held by WUR, the primary issues are as follows:

The air that comes out of livestock farms must be just as clean or even cleaner than the air that goes in

- Farms must be neutral in terms of energy or even generate energy
- Farms must use water efficiently
- Farms must not cause harmful substances to accumulate in the soil (excess nutrients, heavy metals and other residues)
- Farms must ensure that soil life is healthy and incorporate organic material into the soil
- Farms must minimise greenhouse gas emissions, with the aim of making livestock farming climate neutral
- Farms must use animal feed ingredients that are grown nearby in a circular system and that do not damage biodiversity in the Netherlands or beyond
- Farms must ensure waste, including manure, is put to good use (ecological and economic added value)
- Farms must ensure they use appropriate landscaping
- Farms must help to maintain and/or restore biodiversity in and around their premises

Achieving these objectives will involve a range of measures. It should be possible for livestock farms to become **CO₂-neutral**, for example, by generating their own green energy and by using cattle feed made primarily from waste streams from arable farming and the food industry. Manure will be used as a fertiliser (creating a cycle) instead of being burned, for example.

The current agricultural system puts pressure on biodiversity and the natural assets of the Netherlands. It is important that small nature areas that are currently isolated within the largely agricultural landscape are reconnected with one another. Agriculture must also become more nature-inclusive; an approach that combines food production and natural assets in a way that strengthens both. This will allow agriculture to make more use of ecosystem services, such as natural pest management and pollination, rendering it more robust and sustainable. Nature will become more of a priority for farmers, which will then make it more diverse and sustainable. Although productivity may be the same or lower for nature-inclusive agriculture than under the current systems, this approach does ensure that production is safeguarded in the long term as production systems are resilient and able to cope with disruption.

Co-existence with animals that may be classed as pests is a specific area of animal welfare that requires consideration as part of making agriculture more nature-inclusive. It is important that more animal-friendly alternatives are used for pest prevention and control, both in livestock buildings (where mice and rats are an issue) and in case of damage to land (e.g. by geese). Hunting as





a hobby and for food purposes will be abolished. Using professional wildlife managers to limit damage will eliminate any reliance on volunteer hunters. These wildlife managers will focus on avoiding excess damage by working with farmers to implement no-kill preventive measures. Taking a more nature-inclusive approach will also reduce the impact of wild animals, as they will be viewed as fellow users of the system and any associated costs will be covered by the prices charged for the agricultural products.

The Dutch Society for the Protection of Animals believes it is important that natural and environmental aspects are integrated into the overall approach. More specific measures to achieve natural and environmental goals can be found in reports such as Voedselvisie 2030 (A Vision of Food 2030) by the NGO Natuur en Milieu and the Deltaplan Biodiversiteitsherstel (Delta Plan on restoring biodiversity) – both only available in Dutch.

It is possible that society's current focus on the environment and climate will produce single-issue solutions that do resolve some or all of the environmental and/or climate problems but to the detriment of animal welfare. Taking an integrated approach would create a win-win situation for all stakeholders – that means animals, farmers, nature and the environment, and the public. The Dutch Society for the Protection of Animals does not support measures that negatively impact animal welfare, such as increasing animal productivity or keeping them in closed housing systems so that outgoing air can be filtered. The prerequisite for all environmental measures needs to be that they also either improve animal welfare or at least do not diminish it. Examples of this include changing feed rations and modifying housing systems. Reducing livestock populations will also help to achieve environmental, nature and climate objectives. This reduction is not an end in itself from an animal welfare perspective, but is a consequence of choices such as giving individual animals more space, creating closed cycles across Northwestern Europe with a focus on concepts that add value, operating in a more nature-inclusive way and moving away from animal protein as a main food source.

What do the public need?

Although different public and consumer groups have needs that vary greatly, these are the primary needs for most people:

- Affordable food
- Fresh, flavoursome products that are easy to prepare
- Safe and healthy products with a high nutritional value
- Good production conditions that can be verified (animal welfare, environmental impact, product origins, fair trade, impact on public health)
- Livestock farms that are appropriate to the landscape
- A system where farmers and animals live together in harmony
- Natural living conditions for animals who have a good life
- Livestock farms that are not a nuisance to their immediate surroundings
- Local products

In 2050, the public will not be affected by issues such as unpleasant odours or emissions of particulate matter from livestock farms. Instead they will appreciate livestock farms for the work that goes into creating high-quality products, ensuring good animal welfare and making positive contributions to nature and the environment.

The ratio of plant-based to animal protein in their diets will have changed from 30:70 in 2020 to 50:50 in 2025, 60:40 in 2030 and 70:30 in 2050, with total protein consumption having fallen to the recommended 0.8 g per kg of bodyweight. As a result, the average maximum daily consumption of animal protein per day in 2050 will be 19 g ($78 \text{ kg bodyweight} \times 0.8 \times 30\% = 19 \text{ g}$).

This will have positive health benefits and will help to achieve objectives relating to animals, farmers, and the environment and nature. If people eat fewer animal products, they will have more freedom to choose high-quality products when they do eat them. Charging higher prices for these products will ensure a good income for farmers, allowing them to invest in animal welfare, nature and the environment.

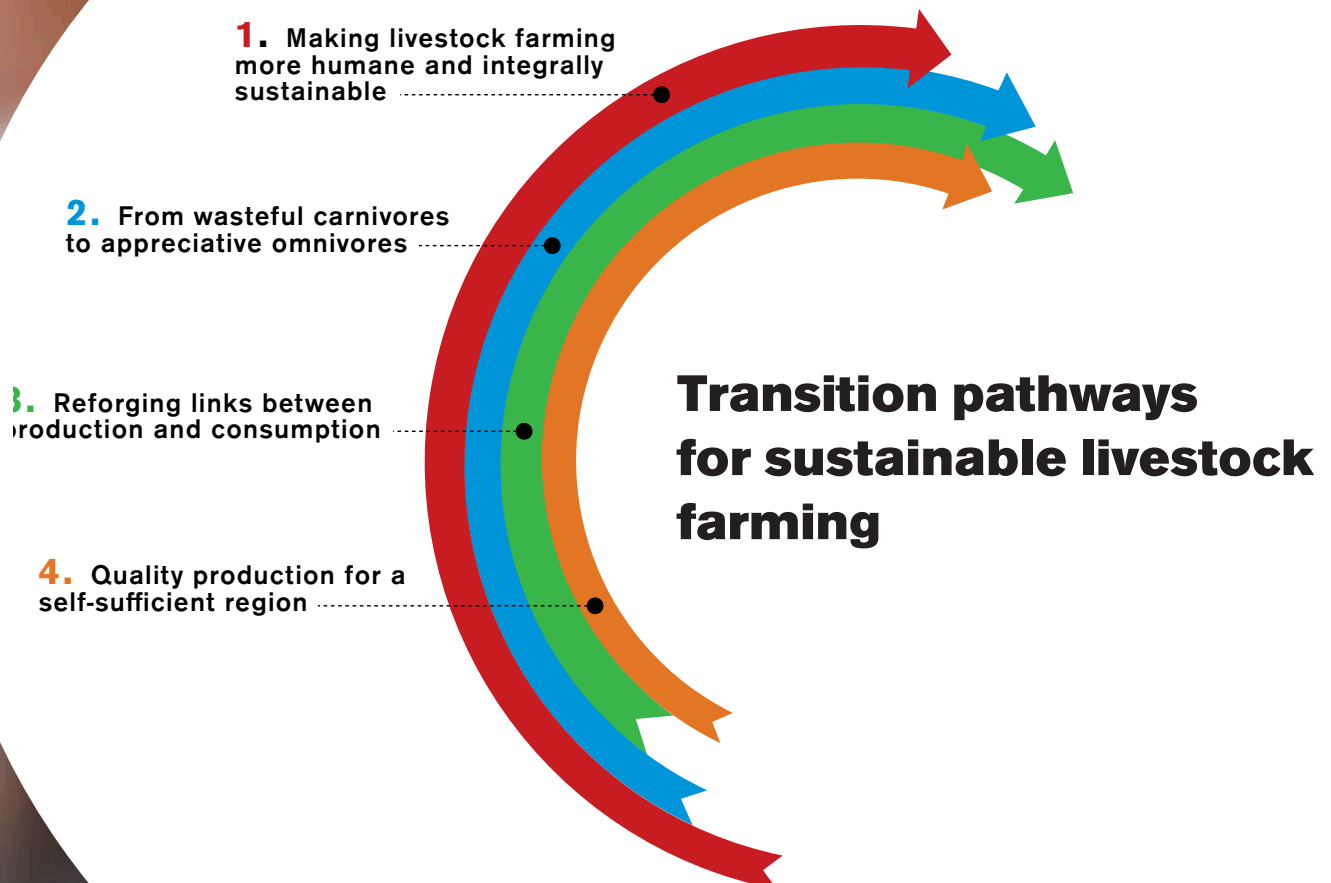
Every part of the animal will be used, from nose to tail, and this will be done in the same region where the animals are reared wherever possible. This means people will also eat animal parts that are still mainly exported in 2020. This will help to **reduce food waste**, not only at consumer level but also higher up the chain. Consumers will be more conscious of how they manage food, so there will be less food waste. Any leftover food will be reused as food for humans or animal feed.

Consumers will be more involved in how their food is produced, they will buy animal products from their own **region** and they will know where these products come from.



5. A plan for the long term

Previous sections set out the needs of animals, livestock farmers, the public, and the environment and nature, along with the relevant visions for the future. But how are we going to make those visions reality? The answer is by using four transition pathways. We all need to embark on these pathways at the same time and we all need to play our part – and that means retail, the government and scientists, not just livestock farmers and the public. That is the only way to achieve the result that we all want. We have provided examples of good practice and win-win situations for each transition pathway to inspire you.





Transition pathway 1: Making livestock farming more humane as part of an overall sustainability strategy

We need to redesign and rethink livestock farming, moving away from a system that focuses on maximising production and efficiency towards prioritising the fundamental requirements of animals, livestock farmers, the public, the environment and nature. Rather than selecting animals based on their productivity, we need to focus on factors such as robustness and social behaviour. Live transport is incredibly stressful for animals, so systems must be designed to make it unnecessary; by increasing farms that cover the full life-cycle, for example, or developing mobile abattoirs. Slaughter without stunning must be prohibited as a matter of urgency, and stunning methods improved to minimise animal suffering. These points are discussed in more detail below.

Animal-oriented and integrally sustainable reform of livestock farming

Objective

By 2050, all animals will be kept in integrally sustainable systems that are adapted to their needs. Associated sectors – such as breeding, transport, stunning and slaughter – must also view integral sustainability as a priority.

Strategy

Wageningen University & Research (WUR) has developed a methodology called 'Reflexive Interactive Design (RIO)', also known as integrally sustainable design. This involves assessing if new facilities as well as the redevelopment and adaptation of existing ones – not only livestock housing but also abattoirs, for example – meet the demands of

animals, farmers, the public and the environment. These needs act as a set of requirements for the (re)design of livestock farming systems. Such assessments could, for example, be incorporated into funding applications. Integral sustainability design sessions have already been held for various livestock farming sectors using this methodology. The knowledge and skills required to apply the methodology need to be shared widely among everyone working in livestock farming (including farm advisers, designers of animal housing systems, livestock transporters, abattoirs, consultants etc.).

The research policies of both private and public institutions must

focus on pioneering more humane and sustainable livestock farming practices and on the effects of this approach. When allocating public research funding, research objectives must meet specific key criteria and civil society organisations must also be involved in this process. Rather than focusing on increasing productivity or improving efficiency, livestock farming research should look into integrally sustainable systems for the future. This also applies to research carried out by private firms.



Examples of positive developments

Windstreekstal housing for broiler chickens promises 'a healthier environment for birds and people'.

At **Kipster**, laying hens live in an environment designed to simulate woodland, with plenty of daylight and access to outdoor space.

Several farms in the Netherlands use **loose housing systems**, where dairy cows are free to move around to their heart's content.

A comfortable straw bed and access to outdoor space – what more could a pig want? And that's what pigs in the **Dartelstal** get.

Breeding robust animals

Objective

Livestock in 2050 will be **robust**. Dual-purpose animals will be standard in cattle and poultry farming, producing both milk and meat, or eggs and meat, for example, rather than being bred to produce large quantities of just one of these.

Strategy

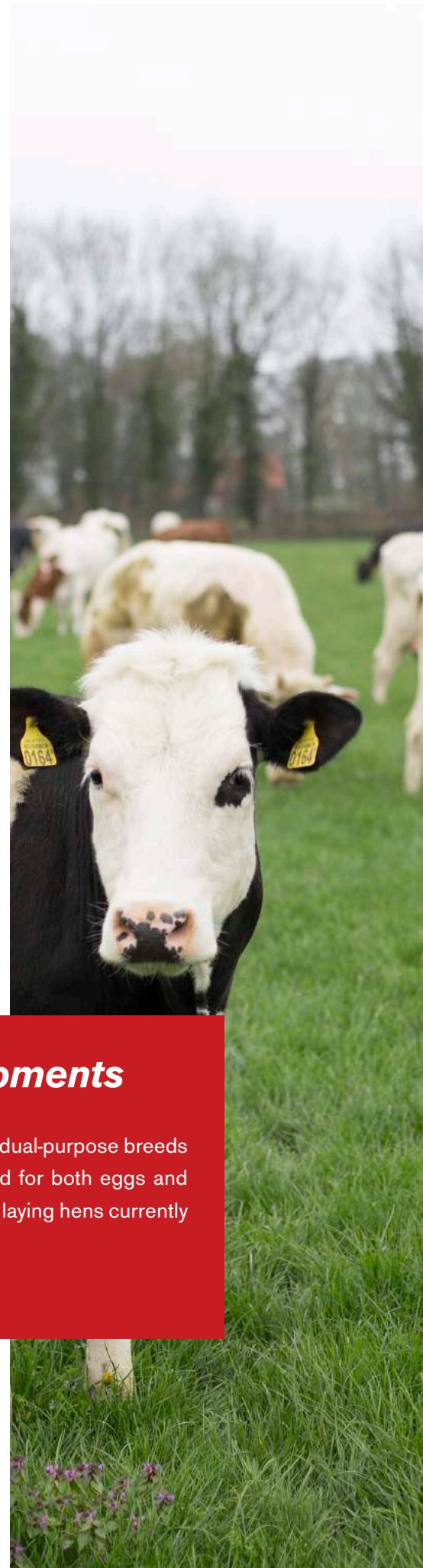
Breeding organisations need to move away from their current primary goals of increasing production and efficiency in favour of focusing on issues including resistance to diseases, and ensuring that animals have a strong constitution that allows them to behave naturally and socially, for example by giving birth naturally and raising their own young. Lower yields per animal can be offset by reducing costs caused by disease and death, and by reducing consumption of animal products and increasing prices; for example, by using more robust animals that grow more slowly. Quality systems within the production chain can also play an important role here by setting out the requirements that breeds must meet to be covered by the quality system.

As there are very few breeding organisations worldwide, they are hugely influential and this has reduced diversity in terms of breeds and breeding lines, and has resulted in inbreeding and vulnerability. The number of breeding organisations needs to increase to make the range of animals more diverse. Smaller breeding organisations focusing on more robust animals should receive general and financial support from governments and other organisations so they can scale up and so that more robust animals can be kept.

Examples of positive developments

The goal of the Delta plan is to encourage the use of robust dual-purpose breeds like the Lohmann Dual. This breed of chicken can be used for both eggs and meat and is far less prone to feather pecking than breeds of laying hens currently being used.

Putting breeding goals aside, some breeding techniques are also detrimental to animal welfare. Techniques such as embryo transplantation, superovulation and ovum pick up are extremely invasive and are known to potentially cause discomfort in animals. Therefore, these techniques will no longer be used.



Minimal live transport

Objective

In 2050, animal products will be transported as standard instead of live animals. Live transports will only cover short distances and the number of times each animal is transported will be drastically reduced. Unweaned animals and one-day-old chicks will no longer be transported.

Strategy

Wherever possible, animals must remain on the farm where they were born. This will require more farms that cover the full life-cycle with room to accommodate different age groups of animals. There are already pig farms that use this model, but poultry and dairy farms still tend to take a more specialised approach. Whatever the animal, we need farms that bring together as many of these different branches in one place as possible.

Transporting live animals is no longer necessary as the latest chilling and preserving techniques make it very easy to transport animal carcasses, meat, dairy and eggs instead. Live transports are still common, however, for slaughter, processing or breeding purposes; for example, if animals are to be slaughtered and then processed so the end product can be sold as a traditional, typical national or regional product. We need to address these and other reasons for live transports because they negatively impact animal welfare and the environment, and because alternatives are available. Abattoirs and processing industries can help to support this change by identifying or creating potential markets for animal products from the Netherlands.

The government can implement a range of measures, including tightening up the export approval process and, in some cases, imposing a ban on imports and exports (like the temporary ban on the export of young calves that was imposed in 2015–2017). Retail, catering and hospitality can help to reduce live transports by buying products from animals that were born, reared and slaughtered in the same country.

Mobile slaughtering means that animals can be slaughtered on the farm itself instead of being transported to an abattoir. Although this presents challenges in terms of government oversight, food safety and the number of animals that can be slaughtered per day, mobile slaughtering also creates new opportunities in conjunction with the focus on adding value, which eliminates the need to keep scaling up. It is also possible for animals not to be fully processed on their farm of origin, but still to be stunned, slaughtered and bled there in mobile abattoirs, after which they are transported to a slaughterhouse for further processing. Creating this new system will require the different stakeholders to take responsibility for their areas. The government will have to offer room to experiment and/or amend legislation and regulations if they appear to be a limiting factor and any new stunning methods that are developed must include the option of operating the systems on a mobile basis.



Making closed loops as small as possible can also mean fewer live transports. If closed loops for nutrients were operated within Northwestern Europe, for example, exporting animals outside this region would mean breaking that loop. Making smaller, closed loops could also mean that less animal feed was available, or that fewer animals could be kept in certain areas based on manure production, which would reduce livestock population and require fewer live transports.

While animals are still being transported, extra care must be taken for live transports at high ambient temperatures. Most animals can struggle with the effects of heat once ambient temperatures reach 21°C, so transport arrangements must be modified accordingly. Additional measures must be taken to ensure animals remain comfortable and transports must not take place at ambient temperatures of 30°C and above. See the report 'Op de bres tegen hittestress' ('Standing up against heat stress', not available in English) for more specific measures.

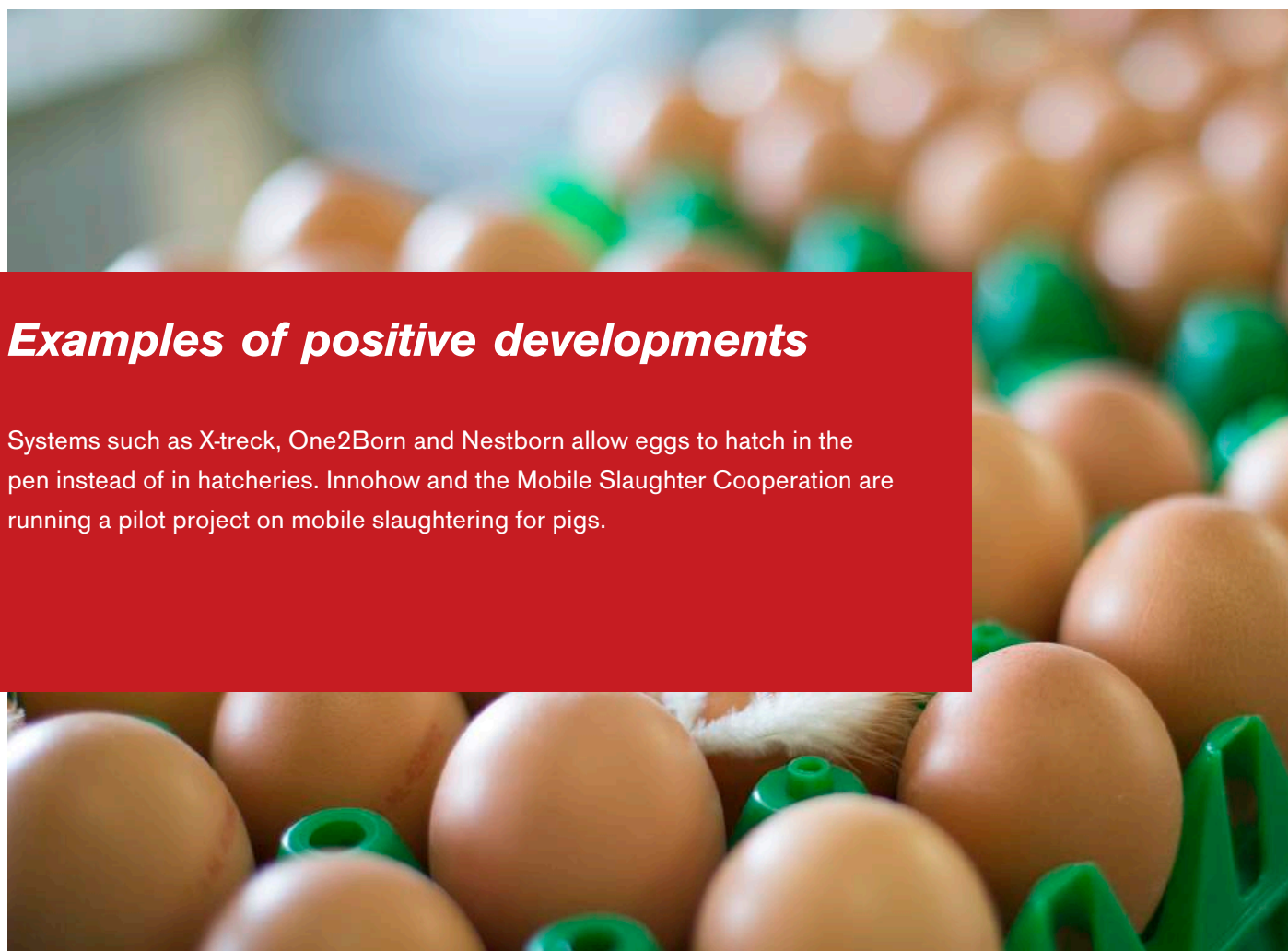
Killing of animals

Objective

Slaughter without stunning will be eliminated in the Netherlands by 2030 at the latest. All used stunning methods will be effective and non-aversive for animals.

Examples of positive developments

Systems such as X-treck, One2Born and Nestborn allow eggs to hatch in the pen instead of in hatcheries. Innohow and the Mobile Slaughter Cooperation are running a pilot project on mobile slaughtering for pigs.



Slaughter without stunning must be eradicated. In order to achieve this it should be banned as quickly as possible, which is being done in more and more EU member states (Denmark, Sweden, Finland, Latvia and soon in Belgium as well). The Islamic and Jewish communities will also be encouraged to amend their slaughter practices. Part of the Islamic community is open to this: some halal quality marks for meat already permit reversible stunning, while others don't yet. Changing minds in the Jewish community is proving more difficult, although projects such as DIALREL^v may be able to help.

Until slaughter without stunning is eradicated, animals must at the very least be stunned as soon as the carotid artery is severed, to ensure that their suffering is minimised. This is already the case in other EU member states, such as Austria and Estonia.

More effective stunning methods must be developed, both for permanent and mobile abattoirs and for euthanising sick animals on the farm itself. Current stunning methods that are aversive for animals, such as water bath stunning for poultry and CO₂ stunning for pigs, must be phased out. It is important that abattoirs, manufacturers of stunning equipment and other businesses are involved in these projects, which should also be co-financed by the government and/or other parties.



Examples of positive developments

There is plenty of room for improvement in the stunning of animals before slaughter. Thankfully, existing methods are being refined. New methods are being developed as well, such as 'Low Atmospheric Pressure Stunning' for broilers. This involves gradually reducing air pressure and oxygen concentration so that the birds lose consciousness.

^v DIALREL was a European project intended to encourage dialogue about religious slaughter practices, in order to find a sustainable consensus on ritual slaughter procedures and thus improve animal welfare. <https://cordis.europa.eu/project/id/43075>



Transition pathway 2: From wasteful carnivores to appreciative omnivores

New methods are also being developed, such as low atmospheric pressure stunning in broiler chickens. and we currently eat more protein, including animal protein, than we actually need. In our vision for the future, people will need to eat less protein overall and more plant-based protein in relative terms. This will reduce the number of animals that we have to keep and ensure that livestock farming can focus on quality instead of quantity, increasing appreciation for animal products so that people are prepared to pay a fair price for them. Eating more plant-based protein will also benefit people's health and the climate. We will also have to significantly reduce the amount of food waste from the current level of around 30%.

The transition to less, better quality protein

Objective

The Dutch Society for the Protection of Animals has set the goal of achieving a consumption ratio of 70% plant-based to 30% animal protein by 2050. In 2020, the average adult in the Netherlands eats more protein than they need to: The Dutch Society for the Protection of Animals has set the goal of achieving a consumption ratio of 70% plant-based to 30% animal protein by 2050. This means that total protein consumption needs to fall by an average of 20%. In 2050, the average adult in the Netherlands will therefore eat a maximum of 19 g of animal protein per day^{vi}.

^{vi} This excludes any consumption of cultured meat. If cultured meat has a significant market share in 2050 (some studies predict that it will have a market share of 35% by 2040 [AT Kearney, 2019]) and if it can be produced in an animal-friendly way, i.e. without using calf serum, cultured meat can be included in the share of non-animal protein from an animal welfare perspective.





Strategy

Many businesses are already working to develop meat replacement products, and others have already launched alternatives for dairy (mainly milk, yoghurt and cream) and some fish products. Although no good and/or wide-spread alternatives for cheese and eggs (processed and unprocessed) are available yet, these may be developed by commercial businesses in the next few years. There is also still plenty of scope to use protein sources such as seaweed, algae and microbial protein in food.

Cultured meat is another potential alternative to meat from animals. Although this is currently still produced in serum from unborn calves, creating a new animal welfare problem, work is already under way to develop a plant-based culture medium. There is still no fixed date for launching cultured meat on the market. When this does happen, it is likely that the texture, taste and range will continue to develop so that cultured meat can replace more and more meat from livestock farming.

The government could support the protein transition by including the move from animal to plant-based proteins in its policies, such as the Prevention Agreement on Public Health, as increasing consumption of plant-based proteins can also benefit people's health. Legumes are one example of a good source of plant-based proteins and they also reduce cholesterol.

As well as making plant-based products more attractive, we also need to reduce the amount of animal proteins being consumed. One way of doing that is to make animal products more expensive, so having retail and catering on board is crucial. This price increase is easier to justify for products that are integrally sustainable. Increasing the price, in relative terms, of animal proteins can also be done in other ways; for example, by raising the tax rate for animal products – known as a 'meat tax' – and reducing the tax rate for plant-based products.

True and fair pricing must reflect the actual costs of investing in animal welfare, nature and the environment, as well as a good income for livestock farmers, which means that the price of the end product will have to go up. But this is only the start; once the actual prices of products have been calculated, it is important that the concept of true pricing is integrated along production chains, and that supermarkets and catering businesses actually charge these prices for the products. Quality marks are another way of supporting true pricing and ensure that the additional costs involved in improving animal welfare are covered.



Examples of positive developments

Companies like [Alpro](#) and [The Vegetarian Butcher](#) are demonstrating that creating meals without animal products doesn't have to be difficult, and more and more initiatives such as [World Meat Free Week](#) and [the Green Protein Alliance](#) are encouraging consumers to eat less meat. The annual Beter Leven (Better Life) week organised by the Dutch Society for the Protection of Animals also raises consumer awareness of the importance of making more animal-friendly product choices in the supermarket, in line with its message of buying fewer and better-quality animal products.

Preventing food waste

Objective

In 2050, less than 5% of food will be wasted (the percentage having halved every ten years).

Strategy

One of the goals set by the United Nations is to reduce food waste by 50% by 2030 and this goal has been adopted by EU agriculture ministers. One government strategy is to give the hospitality industry and supermarkets more freedom to donate their excess food to food banks and they are also providing money for research into improved measures to avoid food waste.

Businesses can take a range of approaches to helping to reduce food waste, such as developing better conservation and storage techniques, reducing prices on food that is close to its use-by date and reducing pack sizes or selling loose products so consumers can decide how many they want to purchase. If products can no longer be sold but are still in good condition, supermarkets can donate them to food banks or to restaurants who can incorporate them into their menus.



The first step is to encourage consumers to avoid creating surplus food; for example, by not buying and cooking over-large portions. Any leftovers should be used up wherever possible – potentially by designating a day for this in your weekly meal plan. You can use online recipe finders like the one from [Tesco](#) or [BBC Good Food](#) by typing in the ingredients that you already have and looking for a recipe to use them up.

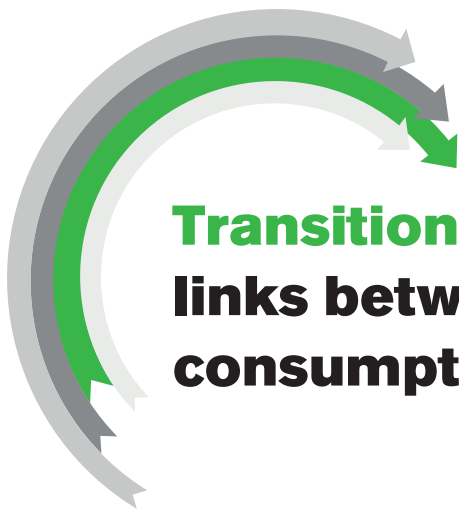
Increasing appreciation for food will reduce waste and every link in the food chain has a part to play in this. One way to boost appreciation is to create transparency about how farms operate, for example by having pens that are accessible to visitors, offering home delivery of products or running farm open days. Creating concepts is another important strategy and redesigning packaging or raising prices can be used to rebrand products as luxury items.

In the past, every bit of an animal would be used and sold, from nose to tail. Nowadays, the markets in the Netherlands focus on processed products and cuts that don't take long to prepare, with the rest being sold abroad, for example, or used in other products. Encouraging Dutch consumers to start eating the less popular cuts again may help to prevent some parts of an animal carcass from being devalued or even destroyed and meat processing businesses can support this by developing new products.



Examples of positive developments

Some companies are now taking this a step further and coming up with a range of different ways to rescue food from the bin. The best-known example is the 35% discount sticker on products that are close to their use-by date. Individuals can contribute by using the [Too Good To Go](#) -app and restaurants are also getting in on the act, like with [InStock](#). And [de Verspillingsfabriek](#) simply turns it all into soup. The [No Waste Network](#) platform brings all these initiatives together in one place.



Transition pathway 3: Reforging links between production and consumption

The need for a fresh approach goes beyond redesigning animal housing systems and covers the livestock farming system as a whole. The default system in 2020 of mass production of homogeneous products, which frequently makes livestock farmers the vulnerable link in the chain, has to change drastically. Instead of being shrouded in anonymity, livestock farming will regain its former status as a valued industry because it guarantees good animal welfare, environmental protection and the production of high-quality and safe food, all in a transparent manner.

From randomly-organised collaboration to short, tightly knit chains

Objective

In 2050, farmers will hold a position of power in short, tightly knit chains where the individual links work together to produce safe, high-quality and sustainable food.

Strategy

Improving collaboration within the chain means that parties enter into long-term agreements and that the individual links in the chain are familiar with one another and consult regularly. Improving collaboration within the chain creates more opportunities to add value, to generate a good income for the individual links, and to make the entire chain more sustainable and more reliable. Collaboration within the chain must therefore be encouraged.

Buyers in the Food and Hospitality industries and Retailers are looking for suppliers who can guarantee the prevention of as many problems and scandals in the Food supply chain as possible. However, any problems that do occur must be resolved quickly without causing significant economic disadvantages and without damaging any reputations. Short, tightly knit chains



and good quality assurance systems offer greater certainty of being able to prevent problems relating to integrity and quality (such as the animal feed and horse meat scandals) and to quickly identify and tackle them if they do occur.

However, at present not all of the links in the chain are familiar with one another. The livestock farmer may well know the feed supplier and the abattoir, for example, but not the other links, like the meat processing company, the retail outlet, and the end consumer. So there is still room for improvement here. Maintaining contact (such as company visits or get-togethers) and sharing information between the different links in the chain makes sure that they appreciate and understand each other's perspectives and operating methods. If retail, hospitality and catering companies understand where their animal products come from, they can put more appreciation and passion into selling them; in turn, if livestock farmers are aware of where their products are being sold, this can instil a sense of pride in them.

Supermarkets must focus far less on price and far more on selling their service, sustainability and quality. Supermarket buyers and category managers with a bonus component to their salary must be rewarded for achieving sustainability goals instead of purely on sales results. This will also encourage a shift in priority from price to sustainability when buyers select products.

Examples of positive developments

The supermarket chain Plus has earned itself a bonus point in this respect, as it has agreed to a permanent collaboration with 17 one-star Beter Leven (Better Life) pig farmers, creating a short and tightly knit production chain. It is not just supermarkets who can start such collaborations, producers can also set up a production chain or sales cooperation, just like **Biomeerwaarde eggs** and **chicken**.





Fair distribution of profit margins across the chain

Objective

All the parties involved in a chain will make enough money to cover their costs and also receive a profit that allows them to earn a good income.

Strategy

Food prices have fallen steadily in recent decades, largely as a result of cheaper raw materials and increased efficiency. But the till receipt isn't a true reflection of all the costs involved. All kinds of external negative effects are passed on to society, from environmental damage and loss of biodiversity to animals who are forced to live in poor conditions. Farmers frequently receive an income that is neither fair nor enough to live on.

Short, tightly knit chains that create long-term relationships are required before the parties in the chain can be transparent about their costs and reach agreement on prices, margins and a fair distribution of profits.

Examples of positive developments

Thankfully there is an independent supervisory body, **the Dutch Authority for Consumers and Markets**, that investigates whether or not livestock farmers are reimbursed for the additional cost involved in meeting these non-statutory animal welfare and sustainability requirements.

Breaking out of the negative financial spiral

Objective

In 2050, livestock farmers will have more room to invest in animal welfare, nature and the environment. Creating innovative concepts will be easier, which will also put farmers in a stronger financial position.

Strategy

Production chains involving animals and the individual links in these chains must be helped to escape from what is referred to as 'path dependence'^{vii}, so they can break the spiral of ever increasing production requirements at ever decreasing cost prices.



Examples of positive developments

The government is happy to nudge livestock farming in the right direction with the **Maatlat Duurzame veehouderij** or 'Yardstick for Sustainable Livestock Farming'; a tool that offers tax benefits for sustainable animal housing systems. **The Ministry of Agriculture, Nature and Food Quality** is on board as well, offering a credit guarantee for risky investments that support sustainability.

One potential approach is to help them access financing and increase their sales. In 2020, many livestock farmers are trapped in a system that requires them to maximise their output of the same products and minimise prices. Financing and secure their sales. Finance providers feel the associated risks are too high and buyers are reluctant to make long-term commitments, which means that sales cannot be guaranteed. Moving towards fixed chains can also make investment easier, as sales are guaranteed over a longer period. If livestock farmers come up with solid concepts, buyers must play their part in helping to make them a reality.

Existing financing channels must be tailored to support sustainability, rather than simply focusing on reducing cost prices and/or increasing production efficiency. Revolving funds are one example of how livestock farmers who cannot provide finance upfront can access investments that will be recouped. Once one livestock farmer has repaid their loan in instalments, the money is then available for loan to another livestock farmer. New and innovative financing channels must also be developed to incentivise high-risk investments; for example, using private money to set up funds such as the **Open Philanthropy Project**.

vii For many farmers, most of the choices they make about their farm have become increasingly inevitable. This is the result of an accumulation of past choices, both on the part of the farmer and the other parties around them. Path dependence means that not only farmers but also banks, suppliers and buyers view continuing along the path already taken as more attractive than changing direction. Taken from: Naar een wenkend perspectief voor de landbouw [Towards Inviting Prospects for Agriculture]. PBL Netherlands Environmental Assessment Agency, 2018.

Education and training

Objective

'Green education' (secondary, college and university-level courses linked to agriculture) and training courses for the hospitality industry will be designed to prepare people to take a fresh approach and to adapt to constantly changing circumstances. Providing training in critical thinking, communication, collaboration and creativity will be required alongside simply teaching skills.

Other stakeholders (consumers, finance providers, civil servants and so on) will have enough knowledge to play their part in making livestock farming more sustainable.

Strategy

The education system must take the opportunity to prepare students for the future by paying structural attention to issues including the climate, animal welfare and the market for sustainable products and animal welfare must be an integral part of the courses available. Although many livestock farmers and even vets interpret animal welfare primarily as good animal health and many also link the concept to good production, this is at best a limited interpretation of animal welfare and at worst completely incorrect – fast-growing broilers are the perfect example of this. This illustrates the need for courses to pay more attention to other aspects of animal welfare, such as natural behaviour, the importance of positive experiences and animals' emotional states.





Knowledge and education must teach people to be flexible and creative. Livestock farming is developing all the time so courses must focus on methods that can keep pace with these developments and remain relevant. If people's jobs bring them into direct contact with livestock farming, their training must ensure they have sufficient knowledge to help make it more sustainable. That means that agricultural secondary schools, colleges and universities must include issues such as animal welfare and other animal-related topics on the curriculum, as well as entrepreneurial skills, a broad knowledge of sustainability and the skills to handle the challenges that the future is expected to bring.

One potential strategy would be to involve different parties from the industry – livestock farmers/interest groups, NGOs, government, retail, breeding organisations, etc. – to help develop teaching materials. Course providers can also try to make more use of the practical knowledge gained by existing practitioners; for example, bringing in guest lecturers, arranging visits to businesses or organising placements.

It's important that students continue learning once they complete their education or training, as the world is changing all the time and businesses cannot keep doing things the same way for 40 years. Organising knowledge days, conferences and study clubs are all ways of sharing knowledge and keeping up with the latest developments. Supply chain managers, vets and animal feed manufacturers are among the parties who can organise this kind of activity for their customers/ producers and quality marks and quality systems can expand their criteria to require continuing professional development.

Every member of the public should have a basic knowledge of what livestock farming means for animals. Primary and secondary schools should make this part of the education they provide. However, this information can also be provided by other sources, such as public awareness campaigns by civil society organisations, the government or the business world, via supermarkets/hospitality/catering outlets where animal products are bought, via influencers on social media and in documentaries and newspaper articles.

Examples of positive developments

We're learning more and more about sustainability and animal welfare and it is important that we keep focusing on personal development. The **Smaakacademie Achterhoek** initiative is an excellent example of this, bringing together practising specialists with educational institutions to develop and promote new sustainable products. They call this 'from farm to fork' and the initiative supports the food industry in the Achterhoek area, collaboration between the links in the chain in the region and the circular economy.

Making livestock farming a valued industry

Objective

In 2050, livestock farming will be a valued industry because it guarantees good animal welfare, environmental protection and the production of high-quality and safe food, all in a transparent manner.

Strategy

Livestock farming in 2020 is an industry that regularly comes under fire, for issues ranging from sustainability shortcomings in relation to animal welfare, the environment and farmers' incomes. The gap between livestock farming and society is widening all the time. The livestock industry frequently responds negatively to criticism and attempts to downplay it, while the fear that the changes requested by society will fail and/or will not pay for themselves, or that rule changes will simply be imposed on the industry, means that these changes are often opposed or delayed. The image of the livestock industry held by the average member of the public is not based on actual facts and this division is not helped by negative reports spread on social media and undercover cameras smuggled into animal pens and abattoirs. Even the people who are trying to improve livestock farming are affected by this.

The challenge is to use facts and existing practices to get different parties to talk to one another, so they can work together to identify solutions to the criticism or to correct inaccurate images. Rather than going on the defensive when faced with criticism, the livestock farming industry must take public concerns seriously. The industry must be clear on what it is and isn't able and/or prepared to cooperate on, it must share its dilemmas in relation to achieving sustainability and it must indicate how it can be helped to tackle those dilemmas and to obtain the desired developments.

In the long run, livestock farming as a whole must become integrally sustainable, incorporating animal-friendly design, and must help the public to understand that sustainability is actually being put into practice rather than simply being words on a page (including any claims relating to animal welfare). Short chains and greater transparency will help to achieve this goal.

Examples of positive developments

It is important for us to be aware of the origin of the meat on our plates, as this is the only way for us to grasp the need to improve animal welfare in livestock farming. We also need the same level of transparency and clarity about the position of farmers. Initiatives like [@de BoerBurgertweet](#), where a different farm uses Twitter to give a glimpse behind the scenes of farming life every week, are a good example of this.







Transition pathway 4: Quality production for a self-sufficient region

Where Dutch livestock farming in 2020 is focused on bulk production for the entire world, by 2050 it will have shifted to producing sustainable and distinctive products for Northwestern Europe. Products that can be sold as more animal-friendly, better for the environment, ensuring a fair price for farmers and/or healthier for consumers can generate added value and increase profit margins. As a result, livestock farmers will be able to keep fewer animals and still generate the same income, so the livestock population in the Netherlands will be significantly smaller in 2050 than in 2019. Closed loops will be maintained that are as small as possible and many of the products people consume will come from the local area.

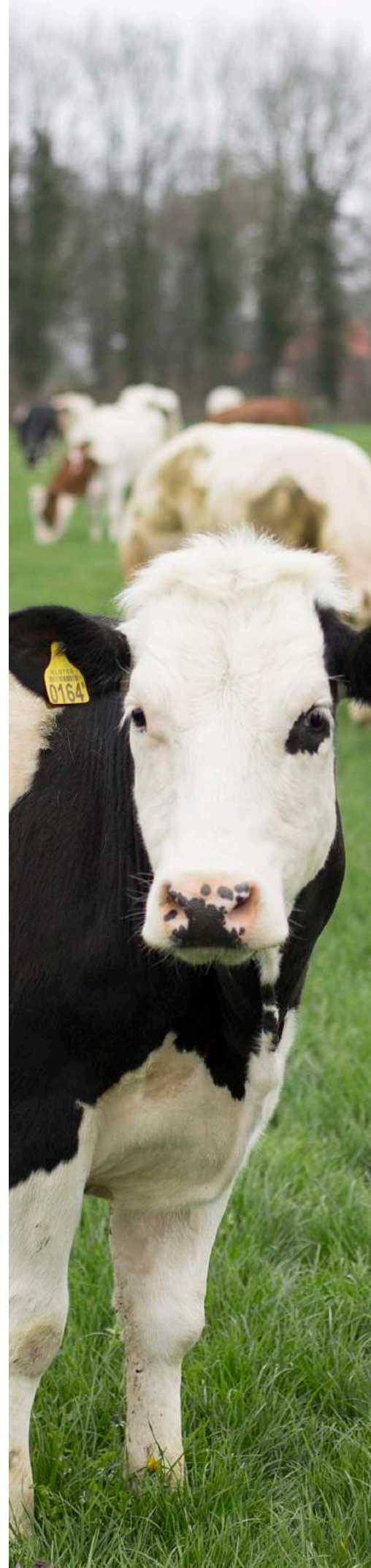
Stimulating added value production

Objective

Livestock farming will focus on creating animal products with added value.

Strategy

Livestock farmers have already spent years in a race to the bottom, maximising production and minimising costs. This approach has created low profit margins for the individual links in the chain, so scaling up is the most common option for generating more income. The result is little or no room to invest in animal welfare and other aspects of sustainability. A small number of livestock farmers are starting to shift their focus to creating added-value products; for example, products that can be sold as more animal-friendly, better for the environment, ensuring a fair price for farmers and/or healthier for consumers, which can therefore generate added value (true pricing) and increase profit margins. Focusing on added-value products means that livestock farmers can keep fewer animals and still generate the same income.





Although individual livestock farmers can try to create an added-value concept on their own initiative, for many of them it is probably easier to act as a group and/or via a supply chain manager, such as an abattoir, meat processing company, egg packing plant or animal feed manufacturer. This is definitely the case if they will have to sell the concept via more anonymous sales channels like supermarkets, rather than via home delivery or the local farm or delicacy shop selling regional products. Operating as a group – for example, as a cooperative – gives the livestock farmers more market power. It may be easier to implement small concepts by using home delivery or more regional channels.

Buyers such as supermarkets, hospitality and catering outlets must give added-value products room to establish themselves properly on the market. Consumers can play an important role here, by choosing added-value products in the supermarket or restaurant, or by buying them directly from farmers or shops selling regional products, and by demonstrating a degree of consumer loyalty.

Examples of positive developments

We're always happy when we see people acting responsibly. Some supermarkets are taking the initiative and choosing to only sell pork with the one-star Better Life label and above, for example, or not to sell eggs that don't carry the Better Life label. This all helps to make more animal-friendly products the new normal.

Exchanging sustainable products (Northwestern Europe) and knowledge (globally) on an international level

Exchanging sustainable products

In 2050, the Netherlands will be the primary exporter of knowledge about integrally sustainable livestock farming and Northwestern Europe will be the hotspot for trade in integrally sustainable products.


Strategy

Livestock farming must shift its primary focus to creating added-value products, including ones that taste better, are healthier and have less of an impact on animals and the environment, along with alternative products. These products will find a market among consumers in Northwestern Europe who are becoming increasingly discerning, increasingly well-educated and increasingly prosperous.

Products bearing quality marks that have international equivalents can help to expand the market for added-value products. To give an example, a Dutch pig farmer could keep pigs with one, two or three stars under the Better Life label and export their meat to Germany, where it could be sold under an equivalent German animal welfare quality mark, so the pig farmer can also recoup the additional costs for his investments by selling in Germany. This should be a simple system for consumers to understand, ideally using letters or straightforward concepts. The Dutch Society for the Protection of Animals believes an integral and international method of production (MoP) labelling system – similar to the egg code but including certain animal welfare criteria – is another way of adding value here. It should also provide a good assurance of quality and have scope for additional environmental and biodiversity requirements, as well as requirements relating to a good income for farmers.

It is important that imports also become more regional, not just exports; for example, by only importing calves from Germany and Belgium, or by replacing soya from South America with European proteins and waste flows. Limiting imports from far-off countries, particularly if these countries are outside the EU and are not subject to the same animal welfare standards as the Netherlands, requires the government to create the relevant policy. Trade agreements must include rules on animal products, stating that they cannot be imported if they do not meet EU standards for animal welfare and other non-statutory sustainability standards. Alternatively, an import duty must be imposed that cancels out the financial benefit of not being required to meet the animal welfare and other sustainability standards.





Instead of the vision of 'we must feed the world by exporting as many animal products as possible', we need to focus on making the Netherlands a knowledge exporter. We need to share knowledge on an international basis about increasing sustainability and about the most animal-friendly, modern and sustainable livestock farming systems, rather than about maximising efficiency. Given that feeding the world is an issue rooted in poverty and distribution of food and wealth, it cannot be solved by increasing production and/or exports. This means that we need to approach it by applying the knowledge we have gained from our own experiences to help other countries to develop agricultural systems that are as sustainable as possible.

Examples of positive developments

The Dutch Society for the Protection of Animals believes an integral and international method of production (MoP) labelling system – similar to the egg code but including certain animal welfare criteria – is another way of adding value. This should be a simple system for consumers to understand, ideally using letters or straightforward concepts.

Consuming local products

Objective

Animal products that are bought by consumers will originate from Northwestern Europe and increasingly from their own region. Additionally, consumers will know where their food comes from.

Strategy

The benefits of local food are regularly used as a marketing tool, helping to increase the proportion of food that consumers buy from their own region. This helps to close the gap between farmers and consumers and – if products are sold through farm shops – gives farmers the opportunity to get a fair price. As well as home delivery, farmers can also sell their products to local hospitality and catering outlets, although checks and guarantees are required to ensure that they are adding value in terms of animal welfare, environmental aspects and income for farmers.

Community supported agriculture (CSA) is a form of agriculture that is supported by the community. Participants pay a fixed price in advance, which means that farmers have a guaranteed income and know how much they can invest. In return for payment of this fixed amount, participants receive a weekly or monthly delivery from the farmer and/or harvest their fruit and vegetables themselves. These are often relatively small-scale businesses that apply a specific added-value concept and/or a specific philosophy, such as organic farming. Local allotments and urban agriculture schemes are alternatives to CSA that allow consumers to get involved in growing their own food.



Examples of positive developments

More and more shops are offering sustainable local products as part of their range. Consuming regional products has become popular. Some projects take this one step further and let people try their hand at being a farmer. You can volunteer at **Burgerboerderijen**, which is a network linking people with local farms, and **Herenboeren** is a cooperative farming movement that gives you the option of becoming a part-owner.

Closing loops at the smallest possible level

Objective

Loops will remain local, or otherwise regional, but will not extend beyond Northwestern Europe.

Strategy

Limiting closed loops to Northwestern Europe has many benefits, such as:

- Making it easier for consumers to know where their food comes from and for livestock farmers to know where their products end up, as chains are shorter.
- Reducing the livestock population, which creates more space for the remaining animals – helping to improve animal welfare as well as making aspects like nature a priority again. This also contributes to achieving environmental and climate goals.
- Reducing the livestock population also reduces the amount of manure that is produced. This makes a surplus of manure less likely, which in turn addresses related issues such as over-fertilisation and manure fraud.
- The globalisation of trade flows means that they are frequently too complex to be properly controlled, resulting in problems including risks to public health.

Scaling trade down from a global level and implementing fixed trading relationships can help to reduce these risks.

Examples of positive developments

The **de Zeeuwse Kip** chicken farm is most definitely a small closed loop – their chicken feed even includes grains and beans they grow themselves.

Measures that can be taken to close loops on a smaller scale may relate to the maximum distance that the manure can be transported before being spread (in conjunction with the requirement to use manure on the land and not to burn it), for example, the maximum size of the area within which animal feed can be purchased, or the maximum distance for transports of live animals and their products. Although these measures can be imposed by the government, quality marks can also contribute by including similar measures in their criteria.

6. Everyone has a part to play

It's the people who work with animals who will ultimately change animal welfare for the better. There's certainly no shortage of willingness to make improvements, but livestock farmers, transporters, abattoir workers and other stakeholders cannot do this alone. If we want a future-proof livestock farming system that is focused on animal welfare, then the entire system has to change; from farmers to supermarkets and from consumers to politicians. Although change can be difficult, it will ultimately improve the situation for everyone, so we need to take action on various pathways, all at the same time. That is the only way to make the transition a success. We have to work together.

What is the Dutch Society for the Protection of Animals doing?

The Delta Plan for Livestock Farming will be the common thread that runs through all the topics and projects we will be working on in the years ahead. We will choose topics that are aligned with our organisation and where we can make a relevant contribution, such as projects relating to designing and improving availability of housing systems or individual modules with a focus on animal welfare, or even assessing existing financing tools that can help livestock farmers to become more sustainable. Here at the Dutch Society for the Protection of Animals, we want to support positive initiatives and people who are setting new trends in animal welfare.

Our Better Life label is an example of a measure we have already implemented, but this quality mark can still become even more active in getting our message out to consumers. We will also continue our existing activities: educating, lobbying, running publicity campaigns and supporting scientific research that contributes to achieving the goals set out in this plan.

The Dutch Society for the Protection of Animals' Better Life label is a successful tool that uses the market to improve animal welfare in livestock farming by educating producers and consumers on the actions they can take. The Better Life label was launched in 2007 with six farms raising chickens for meat and is now the largest and best known animal welfare quality mark in the Netherlands. In 2019, 38.3 million animals were kept under the Better Lifelabel on more than 1800 livestock farms and the rest of the chain was also certified, from abattoirs to supermarkets. In 2019, 38.3 million animals were kept under the Better Life) label on more than 1800 livestock farms

The Better Life label has already established a range of criteria aimed at improving animal welfare in livestock farming systems. We will continue to develop the quality mark gradually over the coming decades. We will prioritise building and maintaining a strong working relationship with all stakeholders. The speed at which change is brought about will depend on what is feasible and realistic in practical terms.

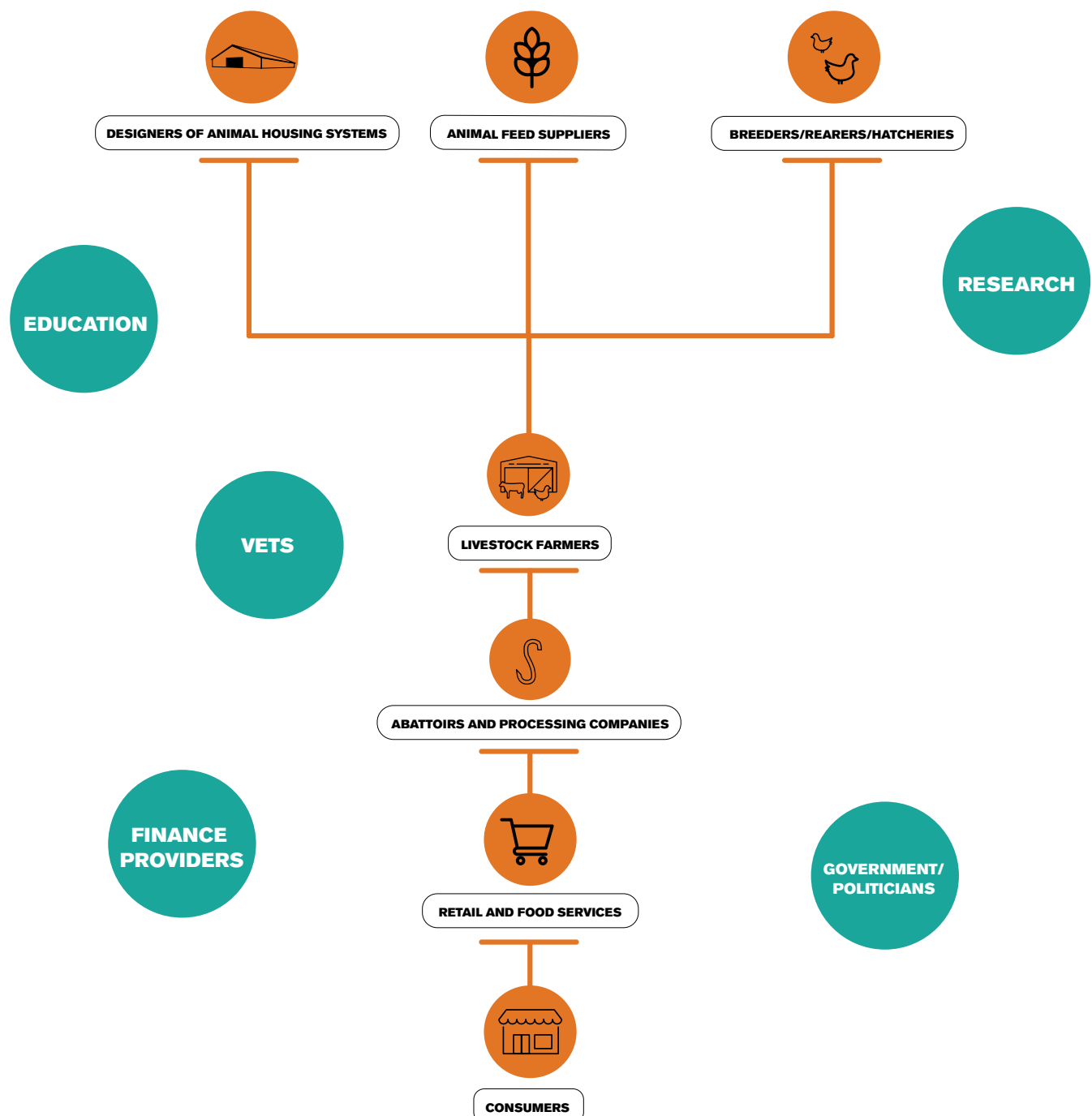
The Better Life label is a vital tool in highlighting improvements and thus ensuring that they are paid for. The quality mark itself is not a silver bullet and cannot achieve results in isolation: all the relevant groups in society must get involved to bring about change and to create a future-proof livestock farming system that is focused on animal welfare.

7. What can you do?

If we want an integrally sustainable livestock farming system that is focused on animal welfare, we must all work together – from livestock farmers to retail outlets and from the public to politicians. To help with this, we have listed how each stakeholder can contribute; you may already be doing some of these activities, but hopefully we can inspire you to keep making progress.

The Dutch Society for the Protection of Animals wants to work with stakeholders to create a future-proof livestock farming system that is focused on animal welfare and that offers win-win situations for everyone involved. We would love to hear your thoughts, comments and suggestions and you can email us at veehouderij@dierenbescherming.nl.

Visit www.deltaplanveehouderij.nl to find out about other things you can do to help.



The public

People's consumption habits can significantly affect the process of making livestock farming more sustainable. When people choose products with reliable and ambitious sustainability quality marks, they are helping more livestock farmers to be able to switch to more sustainable livestock farming systems. You can find more information about sustainability quality marks using the [Keurmerkenwijzer](#) quality mark index maintained by the Milieu Centraal sustainability foundation (website only available in Dutch). Eating more plant-based products instead of animal ones is healthy and will reduce the number of animals that have to be kept on livestock farms. If people do want to consume animal products, they can opt for smaller portions and choose products with a sustainability quality mark. In other words, buy fewer and better-quality products. As well as changing their consumption habits, there are also other ways for people to make a difference; for example, by voting for animal welfare. In other words, buy fewer and better-quality animal products.

Livestock farmers

Livestock farmers can help to make livestock farming more animal-friendly and integrally sustainable by assessing the impact of new facilities and the redevelopment of existing ones on the primary needs of animals, farmers, the public and the environment. They can also consider any improvements that can be made to existing housing systems to better meet these needs. They can investigate the potential for creating added-value products; for example, by joining an existing added-value chain or by setting up a producers' association with a group of colleagues. They can try to make investments that will pay for themselves in the short term or that can be implemented on a flexible basis. This approach will allow livestock farmers to continually redefine what they need to do to fulfil society's wishes. Being transparent about how they operate will help local residents and other members of the public to better understand and appreciate livestock farmers. Another strategy is to collaborate with interested parties from another area of expertise; for example, working with a local nature organisation to investigate ways of making farms more nature-inclusive.

Retail and catering

Retail has made progress in recent years by expanding its range of more sustainable products. It is important that this range continues to grow and that supermarkets focus more on sustainability, including animal welfare, than on low prices as a marketing tool. Food service businesses in hospitality and catering, for example, are lagging behind when it comes to using more sustainable products and need to catch up. Sales of plant-based products must be boosted by making them more attractive and affordable to consumers. All sales channels must also agree long-term contracts with their suppliers, so operators including livestock farmers know that there is a reliable demand for their products and they can also invest in better animal welfare and other sustainability goals.





Government and politicians

Clarity about the situation is crucial; recent years have featured one scandal after another and each one has provoked more and more new regulations.

At the same time, the government is the only involved party that can create clear frameworks and standards and meet the demand for clarity and a long-term perspective. The government can facilitate and encourage pioneers whilst also setting clear boundaries for underperformers; this is an important role because they can set standards regardless of financial interests and incentives. They can ask specific questions such as: which breeds are strong and resilient and which ones are no longer acceptable? Which mutilations can be phased out? Or: at what throughput speed in abattoirs can animal welfare still be guaranteed? They can answer specific questions such as: which breeds are strong and resilient and which ones are no longer acceptable?

Governments can also encourage the transition; for example, by setting up a transition fund for farmers who want to become more sustainable so that they can construct housing systems designed with animal welfare in mind and that have outdoor space, but also by raising the bar and supporting the consumer movement that is under way.

Vets

They can balance stimulating sustainability initiatives at the all-important local and regional level with imposing standards here by assessing animal welfare when they issue permits, as the provinces of Brabant and Gelderland already do. Although this close relationship has many benefits, vets should watch out for tunnel vision; for example, by encouraging farms to switch to a different permanent vet at regular intervals and by consulting properly with other colleagues. It is important that vets consider all aspects of animal welfare when they give advice – in other words, also looking at nutrition, housing and behaviour, not just general health – and these aspects must be covered properly during their training and continuing professional development.

Finance providers

Finance providers can make a significant contribution to a more sustainable livestock farming system that focuses on animal welfare by only financing businesses that create sustainable products that are more animal-friendly. Businesses that take additional steps to become more sustainable should receive financial benefits such as rate subsidies and finance providers should also provide risk capital for promising but uncertain investments that can still make an important contribution to making livestock farming more sustainable. Finance providers can also play a part in creating added-value concepts, as bringing all the interested parties together – from livestock farmers to sales channels such as retail outlets – can create more space for livestock farmers who are interested in investing in becoming more sustainable.

Educational institutions

Agricultural courses must properly cover all aspects of animal welfare, from nutrition and housing to health and behaviour, as well as other challenges relating to sustainability, including nature, the environment and climate. This also applies to CPD courses available to livestock farmers. It is a well-known fact that when farmers think about animal welfare, they tend to focus on whether animals are healthy and growing properly. Although nutrition and health are important aspects, they don't give the full picture, so it's important that enough knowledge is provided about other aspects, such as natural behaviour, the significance of having room for positive experiences and designing systems to meet animals' natural needs, as well as about things like sustainable entrepreneurship.

Researchers

Research should be carried out in areas where knowledge is lacking about animal welfare; Researchers in scientific institutions as well as pharmaceutical companies, animal feed manufacturers, animal housing system designers and breeding organisations, for example, play an important role in the transition to a future-proof livestock farming system that is focused on animal welfare. Researchers should be looking for new production systems and ways of implementing them in livestock farming; for example, increasing the number of farms that keep their animals from birth to death, so live transports are no longer required. Researchers should also try to loosen financial constraints for more fundamental research into social questions about animal welfare, even if this doesn't produce results that can be put into practice immediately.

Designers of animal systems

Whether they work on animal housing systems, livestock trucks or abattoirs, for example, designers and builders have a direct impact on animal welfare and other aspects of sustainability, so it's important to make sure that all their work is integrally sustainable and considers the primary needs of animals, farmers, the public and the environment. Designers and builders should support livestock farmers who are installing integrally sustainable systems or modules, so they are used properly, and should also make sure that the systems are flexible, so livestock farmers aren't tied to them in the long term and can make changes along the way without having to make substantial investments or build new systems.

Animal feed manufacturers

Animal feed manufacturers should make sure that animal feed meets not only safety and nutritional requirements but also the animals' behavioural needs, such as grazing, foraging and rooting – and that it tastes good. Raw materials in animal feed should be replaced wherever possible with waste flows from arable farming and the food industry and the options for using swill should be investigated. Working with other parties in fixed chains can foster mutual appreciation and understanding. Encouraging contact between the different links in the chain means that people can respond quickly and appropriately to issues that arise along the chain and animal feed manufacturers can help to



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close loops by bringing together livestock and arable farmers, for example, to make it easier to dispose of manure. Animal feed advisers should have sufficient knowledge and skills so they can advise livestock farmers about sustainability and animal welfare.

Processing companies

Processing companies, such as abattoirs, meat and dairy processing companies, and egg packing plants, often act as supply chain managers. They play an important role in creating short, tightly knit chains and added-value concepts and should involve all the links in the chain in this endeavour, from livestock farmers to buyers. They must maintain adequate contact and make sure that information is shared between the links, fostering appreciation and understanding for people's different working methods. They should also actively look for markets for sustainable and animal-friendly concepts and develop new sustainable products, such as plant-based meat replacement products, and products that use less popular parts of the carcass, to ensure nothing is wasted. For abattoirs specifically, their design and operating methods must pay sufficient attention to animal welfare given that they handle live animals.



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