

Norsk Kylling: Pioneers of higher welfare and sustainable chicken production

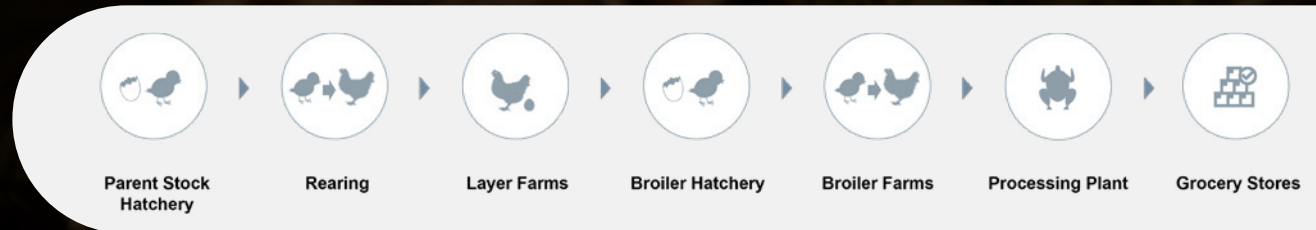


NORSK KYLLING - Company Background

Norsk Kylling is a Norwegian food company with 350 employees that produces and markets poultry products. In 2021, the company contributed 18% of the 72 million chickens produced in Norway.

Nearly all the meat from Norsk Kylling is sold through REMA 1000 Norge AS stores in Norway, and most of the products are branded 'Solvinge'. REMA 1000 is a discount retail chain, owned entirely by the Reitan Group (Reitangruppen), with 671 stores in Norway. The retailer acquired Norsk Kylling in 2012, and the Hugaas Rugeri hatchery in 2015, making the chicken meat supply chain a fully integrated one. REMA 1000's fresh, frozen and processed chicken all comes from Norsk Kylling. Fourteen dedicated rearing and laying farmers take care of the parent flocks, and the eggs are delivered to their local hatchery for incubation and hatching. These chicks are then reared by one of its 120 broiler farmers.

In August 2022, Norsk Kylling became the first company in the world to transition the whole of its broiler production to be fully compliant with the requirements of the [European Chicken Commitment \(ECC\)](#). These requirements include lower stocking densities, the use of slower growing breeds demonstrating improved welfare outcomes, the provision of natural light and environmental enrichment, and the use of more humane slaughter methods without conscious inversion of birds.



Animal welfare pioneers

Norsk Kylling and its owner REMA 1000 have an ambition to deliver world-class animal welfare and have worked closely with the Norwegian Animal Protection Alliance (Dyrevernalliansen) since 2015 to help achieve this. Veterinarians and agronomists were invited to visit Norsk Kylling's farms, hatchery and slaughterhouse and assessed production methods against scientific research and best practice in animal welfare. This provided important input during the process of changes throughout the value chain and culminated in the key welfare improvements we see today.

Norsk Kylling now has its own animal welfare team with 10 veterinarians, two farmer contacts, one agronomist and one farm advisor. They are responsible for ensuring that its animal welfare policy is implemented throughout the value chain, safeguarding the welfare of the chickens from the start to the end of their lives.

For Norsk Kylling, animal welfare is about much more than health. In order to have a good life, animals must also have the opportunity to engage with their environment and display natural behaviours. While measures of positive welfare and behaviours are less commonly monitored than health parameters in commercial farms, the company continues to develop new methods to include positive welfare parameters in its measurement of chicken welfare.



The importance of breed change

In Norway, most chicken producers use the Ross 308, a breed which, like all other fast-growing breeds, is prone to suffer from a multitude of health and welfare issues including cardiovascular and metabolic diseases, poor immune system, poor walking ability, inability to express natural behaviours and higher mortality rates.

In 2018, Norsk Kylling announced its transition from Ross 308 chickens to a slower growing breed, the Hubbard JA787, which is approved by the ECC. **This change of breed was considered one of the best ways to improve chicken welfare in Norsk Kylling's supply chain.**

The Norsk Kylling farmers report that the slower growing Hubbard JA787 chickens are more active, robust and livelier, playing and exploring in the barns. This anecdotal evidence is further corroborated by the development and use of software with camera surveillance which enables Norsk Kylling to identify positive welfare indicators with a greater degree of certainty, such as running, dustbathing and playing.

The vets in Norsk Kylling now primarily work to prevent disease or injury rather than needing to treat the birds. The key outcomes indicate that this new breed is improving animal welfare and health in many ways:

- In 2021, there was a 40% lower daily mortality rate in the Hubbard JA787 flock compared to conventional chickens used in Norway despite the 41% longer life of the JA787 birds¹
- Footpad lesions were 29% lower
- Average mortality during transport was down 76%¹
- Ascites rates were down 80%
- A footpad score 29% lower than the national average
- 15% less daily growth¹
- 41% longer life
- 58% better health¹

“The slower growing Hubbard breeds are chickens that have a totally different life. You can see it on the bird, and you can hear it in the sounds they make and how they respond to what we do in the barn.”

Sølvi Øvergård, farmer for Norsk Kylling



The Hubbard JA787 chickens are slaughtered at 45-48 days of age, when they have reached an average slaughter weight of 1,650–1,700 grams.

Because the chickens grow more slowly, challenges common to fast-growing birds such as poor bone health, heart problems and leg injuries are virtually absent.

Following Norsk Kylling's conversion to Hubbard's slower growing broilers, the proportion of these birds increased to 20% in Norway. Through this change of breed, along with other measures in the supply chain, Norsk Kylling and REMA 1000 have improved the welfare of around 32% of the total retail chicken market in Norway.

32% of Norway's retail chicken market now has improved welfare thanks to Norsk Kylling and REMA 1000

Welfare begins in the hatchery

Norsk Kylling wants its chicks to hatch in a calm and comfortable environment. In the summer of 2023, it opened a broiler hatchery using latest hatching technology. The chicks are provided with water and feed as soon as they hatch - a completely new solution in Norway. The chicks remain in the same box in which they are hatched until they are delivered to the farm. The solution reduces stress levels for the birds by reducing handling. Its upgraded system provides climate control for air quality, improved uniformity and a more user-friendly process – resulting in stronger and healthier chicks.

Norsk Kylling is looking for the best solutions for each farm, including on-farm hatching when possible, and this has been tested on selected farms.

From Norway's only privately owned chicken hatchery, Norsk Kylling delivers 13 million day-old-chicks annually to Norsk Kylling's broiler producers. They are transported in isolated trucks with air conditioning, running on 100% renewable energy. The chicks have access to feed from the moment they hatch until they arrive at the farm. Animal welfare training encourages gentle handling of the chicks and there is a veterinarian and hatchery technicians with special expertise in incubation.



Giving the birds more room

Norsk Kylling has given its chickens extra room, recognizing the positive impact of increased space allowance on birds' welfare. More room allows chickens to exercise and engage in behaviours that are important to them such as:

- Exploring
- Dustbathing
- Grooming
- Playing
- Resting undisturbed.

The maximum allowable density in Norway is 36kg/m². Norsk Kylling does not carry out any thinning of its flocks and has reduced the stocking density in its barns to 30kg/m².

Stocking density
in Norsk Kylling's barns is
30kg/m²



Adding enrichments

All Norsk Kylling chickens have access to environmental enrichments designed to help them stay active and express natural behaviours. This includes straw bales, roughage, peat or wood shavings for dustbathing, pecking stones, platforms and perches. The Hubbard birds are well-proportioned, robust and more active so they can make the most of these enrichments for an improved quality of life. Norsk Kylling covers all costs related to this and through control of all orders ensures that all chickens have equal access to them.

Initially many of the farmers were a bit sceptical about introducing all the environmental enrichments as they require a bit of extra work and, in their experience, the Ross 308 birds were not using them. However, after experiencing them with the Hubbard JA787 birds, the farmers see that they are using the enrichments more and they enjoy watching the birds play and explore their environment.

“The Hubbard JA787 is a healthy and active chicken and needs stimuli to encourage play and activity which is why all our farmers provide a specifically designed package of environmental enrichments allowing them to live out their natural behaviours. They are much more active, alert and curious which is something that we are all pleased to see.”

Hilde Talseth, CEO, Norsk Kylling



Working closely with the farmers

Norsk Kylling collaborates with 134 farmers who benefit from the company's strong focus on financial and operational security and predictability, as well as its pride in animal welfare. A cornerstone of this collaboration is the economic model Norsk Kylling has adopted. This model provides farmers with flexibility on major costs, such as feed and energy, adding an extra layer of assurance. This financial strategy not only offers confidence and willingness for farmers to invest in upgraded coops but also played a pivotal role in the successful process of transitioning to a slower growing breed.

By ensuring a competitive and stable income for farmers while maintaining consumer prices, Norsk Kylling has made farmers more inclined to actively support and participate in the implementation of the new welfare criteria on its farms.

"We have world-class animal welfare, which of course means that we are also very proud to be ECC-compliant farmers! Our decision to choose the Hubbard chicken breed has also led to a better daily life for all of us."

Frank Vidar Harstad, farmer and head of the producer board for broilers at Norsk Kylling

"ECC compliance is excellent because we notice that it improves well-being, both for the chicken and for us farmers."

Marianne and Kai Moxness, farmers for Norsk Kylling

The farmers' commitment and knowledge is valued, and there is a high level of communication and involvement in decisions, for example around improvement measures. The animal welfare team supports farmers in their daily operations and each farmer has their own contact veterinarian employed by Norsk Kylling. Every farmer must attend a competence school approved by the Norwegian Food Safety Authority, as well as completing Norsk Kylling's own courses on the animals' needs and what they can do to give chickens a better life. A programme was launched in 2018 that ensures anyone in the value chain handling the chickens – from hatchery employees to drivers – has passed an animal welfare education programme which focuses on raising awareness about the intrinsic value of each animal.

Norsk Kylling has also developed a comprehensive set of operating guidelines which were introduced in 2017 to help the farmers run their barns more efficiently. These were developed alongside a set of technical requirements for the equipment used on the farms.



Improving welfare during transport

Norsk Kylling works closely with its transporter, catchers and farmers to improve animal welfare during catching. The farmers can only use certified personnel trained by experienced catchers and organised in a catching team contracted to Norsk Kylling. The broiler chickens can only be picked up by both feet or in an upright position, and the catchers are encouraged to support the birds by the breast regardless of catching method.

All the farmers who supply Norsk Kylling are located in Mid-Norway. No chickens are transported for more than four hours (one third of the national legal maximum), and the average transport time is 90 minutes. To safeguard welfare during transport, the trucks have air conditioning cabinets with backup systems to ensure a stable temperature and air quality. Sensors with live monitoring allow the drivers to have full control of the environment in the truck during transport.

A stocking density of 52 birds per container crate (compared to a national maximum of 72 birds per container crate) with 28% more space means the chickens have more room to lie down. All trucks are insulated with active ventilation systems and heating. Since 2022, trucks have CO₂ sensors with an alarm function to ensure good climatic conditions during transport. Everyone involved in moving the chickens from barns to transport containers has completed practical and theoretical courses learning about gentle handling and how to reduce the animals' stress. The company always records the conditions of the chickens when they arrive at the slaughterhouse, and feedback is given to farmers, catchers and transporters.

These efforts have led to tangible results: **in 2022, Norsk Kylling reported a transport mortality rate that was 76% lower than the national average².**

² 2022 production results from Animalia

Controlled Atmospheric Stunning solutions

The Controlled Atmospheric Stunning (CAS) system is a more humane alternative to the commonly used electrical water bath stunning systems which require individual handling, conscious inversion of the birds and do not guarantee effective stunning.

Norsk Kylling's slaughterhouse and processing plant features a CAS system. The chickens are introduced to a reception room specially crafted to minimize stress with a reduced noise level and blue light to create a soothing effect. The chickens undergo a CO₂ gas stunning process in five phases, ensuring they are progressively rendered unconscious before they are slaughtered. The chickens are stunned directly in their transport crates, eliminating any handling prior to stunning.

Meat quality

The selection pressure for fast growth and high meat yield (especially breast meat) not only has detrimental consequences for birds' welfare, but also affects the quality of their meat. The composition of the carcass and the amount of meat that is acceptable for consumption has been shown to be heavily influenced by the fast metabolism of the fast-growing breeds.

Norsk Kylling believes that animals reared in good conditions result in better quality meat. This is backed up by a recent study led by Forseth et al., published in Scientific Reports in 2023.

The findings revealed that in Ross 308 birds, 30% of carcass condemnations were due to ascites, a cardiovascular condition that causes accumulation of liquid in the abdomen. In the Hubbard JA787 chickens, 15% of carcass condemnations were due to ascites.

The prevalence of ascites in the Ross population was 0.661% and in the Hubbard population it was 0.093%. Additionally, despite the Hubbard JA787 being the heaviest broiler, issues such as wooden breast - a condition affecting the breast muscles, making the meat tougher and less nutritious but also affecting the walking abilities and wing movement of the birds - were significantly lower in Hubbard than in Ross. The proportion of carcasses condemned due to hepatitis was also considerably lower for Hubbard JA787 birds, and condemnations from skin lesions were three times higher in the fast-growing broilers.

Transparency in the value chain

Norsk Kylling has been proactive in enhancing transparency within its operations to tell its story. In 2021, it inaugurated its first visitor centre at one of its farms. And now, Norsk Kylling has equipped three broiler houses and one parent stock house with visitor centres, used for lectures and to demonstrate the on-farm production, allowing visitors to get a closer view of the birds.

The company's slaughterhouse contains a competence center with the capacity to accommodate 250 people. This space serves as a hub for all internal training and lectures. It also acts as an educational resource for others eager to understand more about Norsk Kylling's chicken production.

In 2022 alone, they welcomed more than 300 visitors from school children to politicians. And 2,000 people visited its production facility in Orkanger.

Auditing is key to this transparency. Norsk Kylling contributed to the development of the audit criteria standards aligned to the ECC by Animalia – the country's leading professional and development community in meat and egg production. Norsk Kylling subsequently became the first company to be audited and to sell products marked as compliant with the ECC.



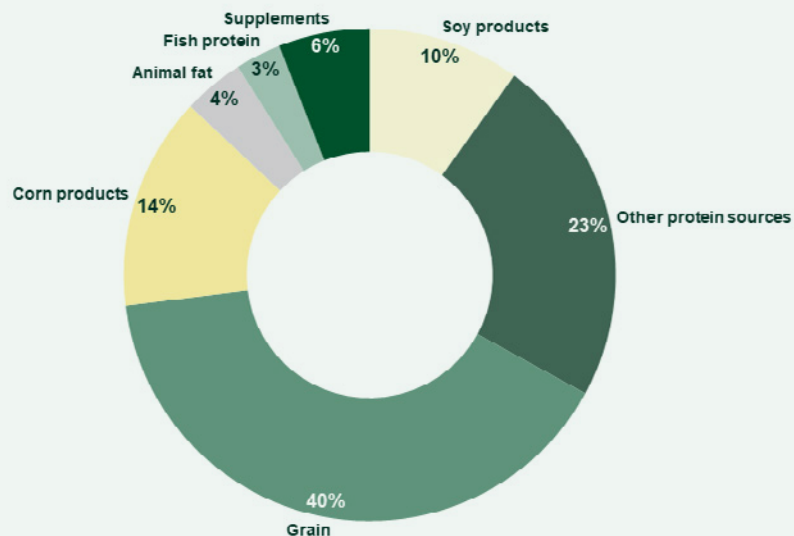


Focus on sustainability

Feed

Norsk Kylling believes good quality feed is important for animal health and has a dedicated project manager for feed development who works closely with veterinarians, farmers and local feed mills sharing production results and tweaking the feed to ensure the slower growing birds receive an optimal diet to suit their needs throughout their lives. Norsk Kylling strives to put together a feed consisting of different raw materials produced responsibly and with sustainable ingredients that allow the chickens to grow and stay healthy.

Norsk Kylling feed consists of:



Norsk Kylling has a Department of Sustainable Innovation which aims to set new environmental standards for the future of the food industry with efficient and innovative production. As part of this project, it is looking to find alternative, locally sourced and sustainable chicken feed ingredients that require less land use, as 70% of its carbon footprint comes from feed. This includes working towards a 50% reduction in the feed's carbon footprint and 30% reduction in land use for feed production by 2030. Although the soy used in Norsk Kylling's value chain is certified and deforestation-free, the feed now includes only 10% soy, marking a significant reduction of nearly 50% since 2020. This decrease aligns with the company's ambitious goal that the feed will be produced entirely without imported soy by 2030, relying on alternative, local and sustainable protein sources instead.

Antibiotics

The rise of antibiotic-resistant pathogens and the need to reduce the use of antibiotics is an important topic for human, animal and environmental health. Norsk Kylling aims to use as few antibiotics as possible and never preventatively – only for the treatment of sick animals – and it vaccinates to stimulate the chick's immune systems. The choice of a slower growing breed also contributes to this reduction in the use of antibiotics.

According to the 2022 SDa report ³, slower growing breeds in the Netherlands use nine times fewer antibiotics than fast-growing breeds.

³ [Source](#)

How does breed affect carbon footprint?

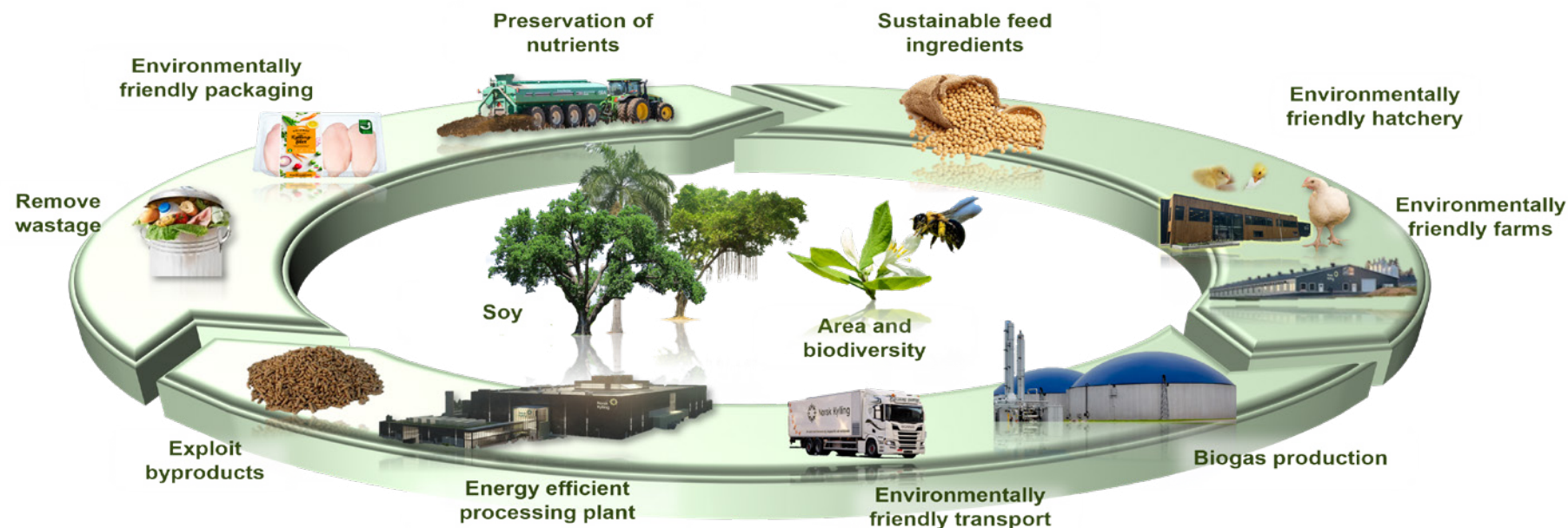
The switch to a slower growing breed means the feed conversion rate is higher and more feed is needed to achieve the same weight. Despite this, in 2021 a life cycle analysis audited by Norwegian Institute of Bioeconomy Research (NIBIO) on the effects of switching to Hubbard JA787 birds concluded that the transition did not increase the carbon footprint.

When switching to slower growing chickens:

- the amount of feed consumed in rearing and broiler breeders was reduced
- the composition of broiler feed changed (with a lower percentage of protein)
- mortality was reduced
- transport requirements were reduced

As a result, Norsk Kylling saw an increase in animal welfare without increasing its carbon footprint.





Innovative and efficient production

In October 2021, Norsk Kylling started operating its new production facility in Orkanger, Trøndelag. The facility is designed to be at the forefront of animal welfare and food safety, while also focusing on efficiency, environmental friendliness and contributing to the circular economy. Its design emphasizes energy efficiency. It uses surplus heat from a neighboring smelting plant for heating, seawater for cooling, and solar panels to generate electricity. A sophisticated energy storage system has been developed for the surplus heat and cooling. The facility operates entirely on renewable energy, cutting CO₂ emissions.

“As a fully integrated value chain for white meat, we have a unique opportunity to develop sustainable food production. Through innovation and circular solutions, we are helping to achieve the UN Sustainable Development Goals.”

Hilde Talseth, CEO, Norsk Kylling

- Norsk Kylling has established its own biogas station
- Three biogas vehicles use 100% renewable energy generated from waste in the value chain
- Over 20,000 tons of by-products were utilised for biogas production in 2022
- 21% of Norsk Kylling’s transportation freight relies on renewable fuel, but the goal is to increase this to 30% by 2025 and make a full transition to 100% renewable fuel by 2030
- An innovative approach to waste is being explored in a project aimed at converting manure into biogas



Green Solutions

Norsk Kylling has started the work of defining environmental guidelines for farmers. This is considered an important step in reducing the CO₂ emissions and increasing the sustainability of the entire value chain. In recent years, many farmers have switched to renewable energy sources such as wood chips, solar cells and pellets. An increasing number of farmers are recovering heat from the air in the farmhouse using heat recovery systems. Since 2020, Norsk Kylling has increased the total farmhouse area by 30%, while total emissions from farmhouses have reduced by 35%. At present, 60% of its farmhouse area is run on green solutions such as biofuel burners, heat exchangers and solar cells.

Efforts are underway to introduce more environmentally-friendly packaging solutions. In 2022, 44% of Norsk Kylling's packaging was made from recycled materials.

Biodiversity considerations are also key. Since 2021, the company has been working with Felleskjøpet and NIBIO on a research project to examine how flower hedgerows along grain fields can enhance insect diversity. As part of the project, 21 farmers have sown flower hedgerows.

And another 10 hectares of the area surrounding the processing plant have been transformed into a meadow the size of 15 football pitches, providing food sources for insects.

Norsk Kylling has been certified as an Eco-Lighthouse since 2017, which is Norway's leading certification of environmental efforts and corporate social responsibility. And in 2022, Solvinge was named the most sustainable brand in meat production, and the 14th most sustainable brand in Norway in the Sustainable Brand Index - Europe's biggest independent brand survey on sustainability.

Marketing the change

The 2023 [Eurobarometer](#), the official European Commission poll, showed that 84% of the 26,376 Europeans surveyed want the welfare of farmed animals to be better protected. And 60% of respondents were willing to pay more for welfare-friendly products.

Consumer trust in Norwegian agriculture and chicken production is higher than in many European countries, but Norsk Kylling's earlier consumer research showed that none of the retailers in Norway, nor the chicken brands, had claimed a market position in terms of higher animal welfare. With this insight in mind, in 2020 Norsk Kylling and REMA 1000 developed a marketing campaign to:

- Strengthen the poultry category in REMA 1000 by focusing on the Solvinge brand values and promoting the higher animal welfare benefits
- Promote the slogan: "We think that chickens living better lives, taste better". This has now been superseded by the promotion of an ECC animal welfare mark on all their packets.
- Establish Norsk Kylling and REMA 1000 as pioneers in animal welfare

This was a multi-channel marketing campaign using different types of media such as TV, print ads, cinema, outdoor advertising, social media and other online platforms. The campaign was twofold - one part focusing on profile marketing and brand awareness and the other on tactical sales with product and price communication.

84% of the 26,376 Europeans surveyed want the welfare of farmed animals to be better protected



Mitigating costs

When working on the business case for its transition to slower growing, higher welfare chicken, calculations showed that the increased productivity of the parent flocks was significant. The females in these flocks were living longer and producing more eggs, resulting in a greater yield of chickens per female and offering a direct contribution to overall cost-effectiveness.

It was also noted that in the Hubbard JA787 broiler production phase, larger slaughter weights, higher yield rates and decreased mortality further improved efficiency. By 2021, the daily mortality decrease amounted to 40% compared to the conventional breeds used in Norway. In addition, 2022 saw a 76% reduction in mortality during transport and a reduction in carcass rejections due to myopathies resulting in a 26% reduction of food waste in the slaughterhouse compared to 2020.

These advancements effectively offset the higher costs associated with a longer lifespan of the bird and the increase in the feed conversion ratio. **REMA 1000 was able to offer its customers a higher welfare product without increasing the price, which is an important part of its business proposal.**

Norsk Kylling now needs **3 million** fewer broiler chickens each year to produce the same amount of meat





Commercial impact

To date, REMA 1000 and Norsk Kylling have received very positive feedback from consumers. Brand awareness for the Solvinge brand increased from 67% in May 2018 to 72% in November 2019. In the same period, the brand awareness for Hubbard increased from 0% to 21%.

In 2022, Norsk Kylling began displaying an ECC mark on its products. The company's pioneering approach is setting a new standard and influencing the market - with many other producers expressing interest in learning about and adopting these improved welfare standards

REMA 1000 became the world's first grocery chain to sell only ECC-compliant fresh, frozen and processed chicken. And since this switch to ECC-compliant chicken, its market share has been 6-7% higher. In addition, REMA 1000's targeted marketing campaigns have actively contributed to increasing the market share for the Solvinge brand from 28% to over 30%.

Working with Compassion in World Farming

Compassion's Food Business team visited Norsk Kylling's broiler farms in August 2018 to discuss its transition to higher welfare production and made recommendations on provision of natural light and a reduction in stocking density in preparation for the introduction of the Hubbard JA787 chickens.

In 2020, Norsk Kylling was presented with Compassion's Good Chicken Award which recognises companies who have signed up to the ECC and are addressing stocking density, breed and the need for environmental enrichments for broiler chickens. Norsk Kylling went on to receive Compassion's Special Recognition Award in 2022 for its innovative, responsible and sustainable solutions that have animal welfare at their heart.

With the support of Norsk Kylling, Compassion actively assists other producers in meeting the ECC criteria. This collaborative effort extends beyond Europe, with significant contributions to working groups in both the USA and Thailand.



Want to know more?

For more information, please visit
our website or contact us.

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