

Management summary

THE BOTTOM LINE

Economic analysis of the transition to nature-inclusive, regenerative and organic dairy farming and the conditions for a viable business model

June 2026

A photograph of a Dutch dairy farm landscape. In the foreground, several black and white cows are grazing in a lush green field. To the left, a dense line of tall, leafy trees stands against a blue sky with scattered white clouds. In the background, a traditional Dutch farm building with a thatched roof is visible, surrounded by more trees. The overall scene depicts a typical Dutch rural landscape.

The context of Dutch dairy farming

For decades, the Netherlands has combined limited land availability with highly intensive and technologically advanced agriculture, becoming one of the world's largest agricultural exporters. The Dutch dairy sector plays a central role in this system, characterized by high livestock densities and high levels of productivity. At the same time, the environmental impact of intensive livestock farming has become an increasing concern.

In recent years, challenges related to nitrogen emissions, water quality, climate targets, and declining biodiversity have intensified debate about the future of Dutch agriculture and the need for more extensive forms of dairy farming. This has led to growing interest in nature-inclusive and organic farming systems, which aim to reduce external inputs and environmental pressures while strengthening biodiversity, soil quality, and landscape values.

INTRODUCTION, CONTEXT & APPROACH

An increasing number of dairy farmers are exploring the possibilities of adopting nature-inclusive farming practices or switching to organic farming. A key question they face is what costs and investments of such a transition entails, and how this will impact their business model and profitability. **Nature-inclusive or extensive farming often involves a smaller herd, lower milk production and therefore lower income. At the same time, however, it also means doing less: less (artificial) fertilizer, less concentrate, less overproduction of manure. This not only reduces costs but also creates space for nature and soil restoration. Organic farming can help achieve a price premium for milk.**

This study focuses on understanding the costs and benefits of nature-inclusive and organic farming, as well as the associated success factors and challenges. We examine the conditions required for a viable business model: what is feasible in different contexts, what opportunities and challenges different environments present, and what support is needed from the market and society. In addition, we analyze the motivations of three farmers who have undergone such a transition, along with the costs and benefits they experienced in the process.

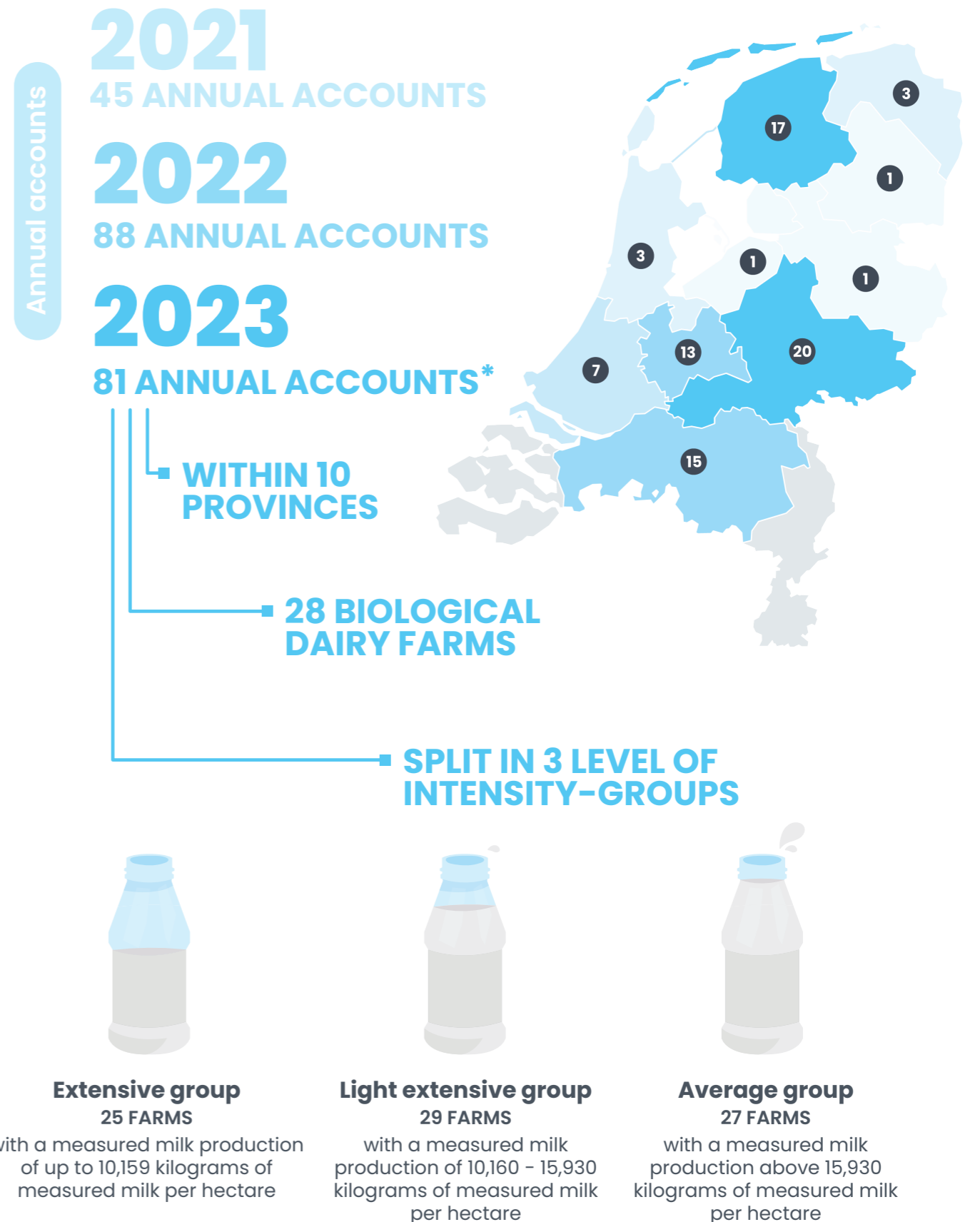


IMAGE: WIJ.LAND

> Approach

This project is carried out by a consortium of Wij.land, De Natuurverdubbelers (Nature^Squared), regional partners (Boeren Natuur Fryslân, Brabants Bodem, Vruchtbare Kringloop Oost), and business economics consultants (Countus, Dirksen Management Support). As part of this national study, Nature^Squared maps the business model of nature-inclusive and organic dairy farming using economic, environmental, and demographic data from 88 participating dairy farms for the 2022 and 2023 financial years. A standardized method to calculate KPI's for farm costs, gains and income was developed in previous cycles of this project and is again applied in this research. This study builds on previous work in which similar analyses were carried out with data from 45 dairy farms.

The participating farms are relatively extensive compared to the Dutch average. For the purposes of this study, the dairy farms have been classified into three groups based on intensity, measured in milk production per hectare: extensive, lightly extensive, and average. Additional analyses were performed by comparing organic and non-organic farms. For both classifications, developments in profitability over time were assessed. In addition, economic and environmental data from 2019–2023 were examined for three farms that have recently transitioned, e.g. by converting to organic farming.



* For 7 out of 88 companies, the figures for the 2023 financial year were not yet available at the time of compiling this report.

THE BUSINESS MODEL OF NATURE-INCLUSIVE AND ORGANIC DAIRY FARMING

> Nature-inclusive performance of extensive and organic farms

To operationalize nature-inclusivity, this report examines which key performance indicators (KPI) for nature-inclusive farming are mentioned in various studies. The performance of participating farms on these indicators is then compared with target values from provincial sustainability monitors. In general, extensive and organic farms score higher on studied nature-inclusive indicators compared to conventional dairy farming:

- They practice more grazing (extensive: avg. 2,700 hours; organic: avg. 2,830 hours).
- They have lower ammonia emissions per hectare (extensive: avg. 33 kg NH₃/ha; organic: avg. 37 kg NH₃/ha).
- They manage a larger share of species-rich grassland (extensive: avg. 48%; organic: avg. 53%).

There are exceptions: for some indicators, no clear link with intensity was found. In some cases, variation in the indicator in question appears to be due to other factors, such as soil type in the case of nitrogen surpluses. Performance on a given KPI also strongly depends on the unit of measurement chosen, e.g., per hectare, per cow, or per kilogram of milk:

- Greenhouse gas emissions per kilogram milk are higher in the extensive group (1.27 kg CO₂-eq/kg milk) than in the average group (0.91 kg CO₂-eq/kg milk).
- Per hectare, however, more intensive farms have higher absolute emissions (8.5 tons CO₂-eq/ha for extensive vs. 17.9 tons CO₂-eq/ha for average).

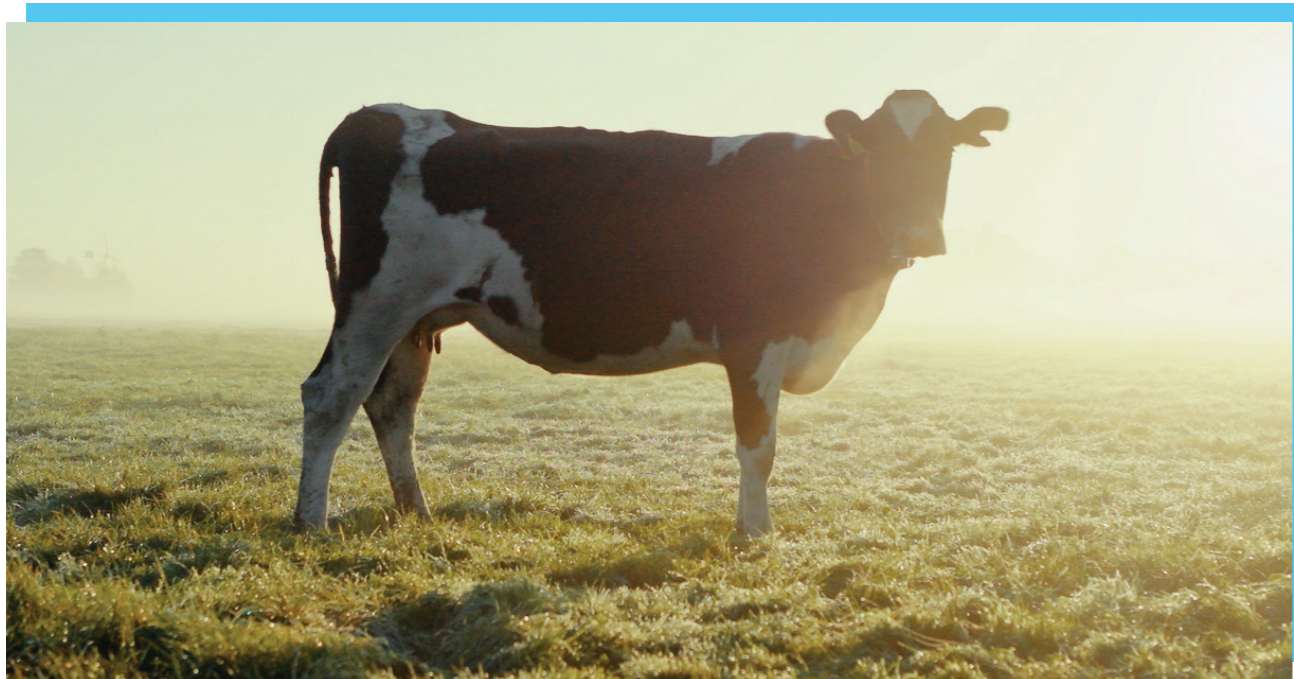


IMAGE: WIJ.LAND

> The business model of nature-inclusive farms

Extensive farms typically have small herds of robust dual-purpose breeds, kept mainly on grassland and natural areas. These farms save costs by using relatively little concentrate feed and by managing their land extensively, with minimal interventions and a strong emphasis on grazing. As a result, expenditures on fertilizer, contracting for land management, and fuel are lower. They also save costs on manure disposal¹ and animal health expenses. Additional income is generated through price premiums (e.g. for organic milk), local sales of products, compensation for nature management, and sometimes profitable secondary activities (e.g. managing a farm shop, renting out meeting rooms).

¹ Many dairy farms produce more manure than they are allowed to place on their land, which leads to costs for disposing of manure.

The main challenge for the nature-inclusive business model is covering the high overhead costs, such as depreciation of barns, machinery costs, and general expenses. This appears to be mainly because many of these costs are not directly related to the intensity of milk production, but rather to other factors such as the housing capacity for livestock or the total hectares of land.

> The business model of organic farms

Although nature-inclusive farming has many similarities with organic farming (such as no synthetic fertilizers and emphasizing grazing), the two are not the same. Nevertheless, most of the participating extensive farms are organic, which creates considerable overlap between the organic and extensive business models. Farms that succeed in developing a strong business model within organic dairy farming typically do so by keeping costs low and capitalizing added societal value. Their variable costs—such as feed, manure disposal, and livestock—are significantly lower. While the cost per kilogram of organic concentrate feed is higher than for conventional feed, total feed costs at the farm level are lower in organic systems due to the smaller herds and limited concentrate use. A larger share of income also comes from non-milk sources, such as side activities, meat sales, and eco-scheme payments. The main challenges for the organic business model are the lower milk revenues caused by lower milk production, despite the higher milk price. In addition, relatively high fixed costs—similar to those in the extensive model—remain difficult to cover when milk production is lower.

> The effect of external developments on earning capacity

The earning capacity of nature-inclusive and organic dairy farming is influenced by external factors such as market developments, price fluctuations, and policy. Extensive and organic farms appear to be less sensitive to fluctuations in milk and input prices (such as concentrate feed), partly because they are less dependent on external inputs. On the other hand, they are more affected by rising 'uncontrollable costs', such as interest rates and land prices, especially now that demand for land is increasing due to more stringent rules for manure production and other competing forms of land use. Taking these developments into account, the earning capacity of extensive and organic farms within this study, study group, and period appears to be more stable over time than that of average farms. Their income fluctuates less and shows a gradual increase between 2021 and 2023.

Costs and benefits of transition

The three farms studied that completed a transition to nature-inclusive or organic systems emphasize the importance of a gradual, multi-year process. This allows investments to be spread and operations to adapt gradually through natural progression or experimental measures.

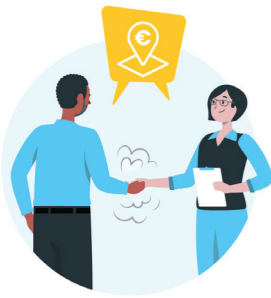
The financial position and stage of the business are crucial: farms without recent major investments have more room to take risks. Access to leased land—particularly from conservation and forestry organizations—enables expansion without heavy financial burdens. Alternative feeding strategies and regional collaborations also improve cost efficiency and reduce dependency on external inputs.

CONDITIONS FOR A VIABLE BUSINESS MODEL

Extensive and organic farms with strong earning capacity succeed in seizing opportunities to save costs and generate additional revenues, while managing the challenge of keeping fixed costs low. However, in order to earn a decent living with a nature-inclusive business strategy, farmers are largely dependent on the presence of the right conditions. These conditions cover both the physical environment and the economic system in which a farm operates. Below, we describe the four main themes of these conditions.

1. AFFORDABLE LAND AVAILABILITY THROUGH CONSTRUCTIVE COOPERATION

> **Affordable land is available for nature-inclusive farming through cooperation between landowners, such as land management organizations, municipalities, and (retiring) farmers, based on a constructive and transparent approach.**



Attention is paid to the (lower) productive capacity of land that is managed in a nature-inclusive way. This can be achieved, for example, by allowing nature-inclusive farmers to lease land designated for nature purposes, where they can graze young cattle, harvest natural grass, and carry out cost-efficient management. It is also important that nature-inclusive performance is given significant weight when allocating leased land, in order to bring the land costs in line with the productive capacity of the land. In addition, land can be designated where only grassland is permitted, for example along streams.

2. REWARDING ECOSYSTEM SERVICES AND SOCIETAL VALUES

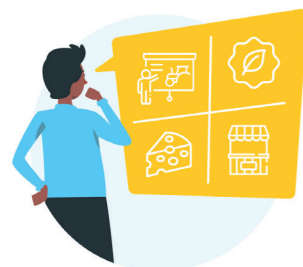
> **Ecosystem services and societal values delivered by farmers are rewarded, and externalization of non-market valued benefits is prevented.**



This allows the business model of dairy farming to be decoupled from milk production alone, enabling farmers to be paid for the additional value they deliver beyond legal requirements. This requires a system in which various parties – such as governments, water boards, drinking water companies, and market actors – jointly take responsibility for providing such payments. These payments can complement each other: for instance, CO₂ reduction or sequestration could be rewarded by the market, water quality improved by water boards or drinking water companies, and biodiversity enhanced by the province. It is important that one payment does not come at the expense of another value.

3. OPPORTUNITIES FOR DIVERSIFICATION OF FARMERS' BUSINESS MODELS

> **Farmers are provided with physical, social, and legal opportunities to diversify their business models.**



Farmers can diversify their business model by, for example, organizing sales through short supply chains, and thereby becoming price setters rather than price takers. In this way, the added value generated by the farm – for example for biodiversity or society – can be paid directly through higher purchase prices. This also includes opportunities for developing side activities where the nature-inclusive added value is capitalized on by consumers who are willing to pay for farm tours, regional products, or meeting spaces in a nature-inclusive setting. The feasibility of such side activities depends, among other things, on local policies, such as municipal spatial planning policy. In addition, there must be a sufficient local market for these products.

4. SPACE FOR DIVERSE FARM TYPES TO ENHANCE REGIONAL RESILIENCE

> **Space for different farm types within agricultural regions to increase resilience.**



A resilient agricultural region requires space for diversity. Within areas, different types of dairy farms must be able to coexist and develop at their own pace. Not every farm needs to follow the same path toward nature-inclusivity, or become nature-inclusive at all. By allowing and encouraging variation in business models within area-based processes, a system is created that is more resistant to shocks in markets, society, and policy. It is thus important that policies and area-based cooperation provide sufficient flexibility to enable tailored solutions. It also helps if there is room for cooperation between different agricultural sectors, such as between dairy farming and arable farming for the exchange of manure and crops.

For nature-inclusive and organic dairy farming to be profitable, it is essential that there is scope for multiple sources of income, that societal value is capitalized, that farmers have long-term security regarding affordable land, and that diversity in regions is guaranteed. When these conditions are met, farmers are provided with the space to earn a decent living as agricultural entrepreneurs through nature-inclusive and organic dairy farming. There is a clear mandate for political leaders and policymakers to help fulfill these conditions.





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