

Colruyt Group

Colruyt Group, is a prominent Belgian retail group that works in several sectors, including food distribution, food services, and green energy production. In all its activities, Colruyt Group is dedicated to sustainable entrepreneurship. They have committed to over 150 sustainable initiatives encompassing various impact areas, including reducing their environmental footprint.

In 2020, Colruyt Group obtained the permit to build the first commercial sea farm in the Belgian part of the North Sea: Zeeboerderij Westdiep (Westdiep Sea Farm). Together with the financial support of partner DEME, the first longlines for mussel cultivation were commissioned in 2022. Today, the Westdiep Sea Farm is preparing itself for its second harvesting season in the summer of 2024. The farm is located off the coast of Nieuwpoort and Koksijde.



Regional Context

The Belgian part of the North Sea is a compact region currently serving multiple purposes, encompassing offshore renewable energy production, shipping, ports, sand extraction, nature conservation, fisheries, tourism, and other activities. Due to its limited coast size, the Belgian Marine Spatial Plan (MSP) underscores the significance of adopting a multi-use approach as the primary standard for concurrent activities within the same area. To promote multi-use practices, authorities will, in the future, assess concessions for new renewable energy applications

by considering proposed multi-use activities such as aquaculture, restoration projects, or passive fisheries as evaluation criteria. Consequently, new bioeconomy applications can be expected in the coming years, mainly by implementing extractive aquaculture within offshore wind farms.¹

Value Chain

Around ten years ago, Colruyt Group started investing in aquaculture research in the North Sea. With the implementation of the

¹ European Commission, European MSP Platform, [MSP Country Information Profile – Belgium](#). Accessed 29 January 2024.

MSP in 2020, which opened the Belgian part of the North Sea to commercial activities, the Westdiep Sea Farm obtained permits for cultivating mussels, oysters and seaweed. At the beginning of 2022, Colruyt Group started the construction of the first mussel-cultivating structures near the coast of Nieuwpoort and Koksijde. The farm is located approximately 5 kilometres off the coast, in one of the five zones for commercial and industrial activities provided in the Belgian MSP (2020-2026).

Colruyt Group's venture into mussel farming involves a comprehensive value chain that starts from the cultivation of mussels in the North Sea using [the longline or suspended](#)



© Colruyt Group



The Colruyt Group Mussels Farm contributes to valorising products and by-products from the bivalves value chain.

[rope culture method](#). This technique allows the mussel lines to move along with the powerful currents. The lines furthermore serve as shelter for fish and other marine life, increasing biodiversity in and around the cultivation area, and when harvesting, the seabed is not damaged.² The longline design installed at the Westdiep Sea Farm was designed to respond to the challenging conditions posed by the currents in the North Sea.³

The first phase of the farm covers one-quarter of the designated cultivation area, equal to one square kilometer. The sea farm is currently equipped with 32 operational longlines. The lines are maintained by Colruyt Group's very first mussel-cultivating vessel: the Smart Farmer. The sea farming team consists of four full-time team members and a group of offshore freelancers, who are supported by the Colruyt group's back office. The aim is to install up to 150 lines to complete the first phase of the farm installation.

The first harvest, presented in June 2023, consisted of approximately 10 tonnes of mussels and was sold in the [four CRU markets](#),

² Colruyt Group, [Construction of the sea farm, Factsheet](#). Accessed 29 January 2024

³ Colruyt Group, [Colruyt Group harvests first Belgian mussels from its commercial sea farm, Press Release](#). Accessed 29 January 2024.

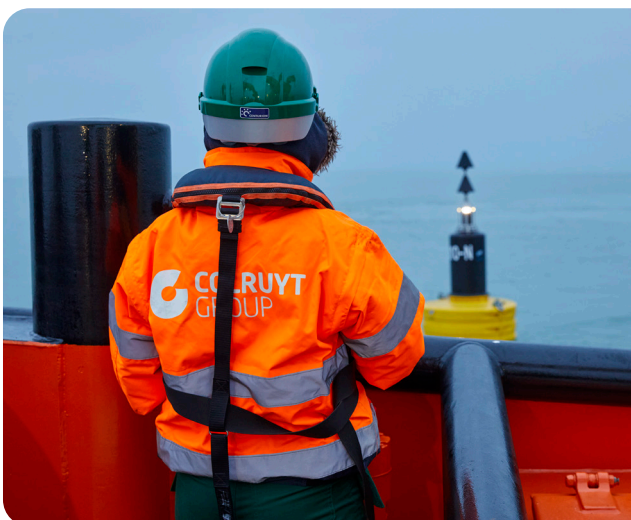
the experience markets of Colruyt Group.⁴ For the upcoming second harvest, the West-diep Sea Farm anticipates a manifold production increase over last year's yield.

The Colruyt Group initially began their sea farm production with mussels, owing to the high demand for mussels in Belgium and their extensive research and development in mussel cultivation. However, in addition to mussels, the group is now exploring the possibility of producing oysters and seaweed as well.

Regional and Local Enabling Conditions

The Belgian North Sea is ideal for cultivating mussels due to its nutrient-rich waters, suitable temperatures, and excellent water quality. Although natural mussel seed is abundant in these waters, mussels were never farmed successfully. Initiatives to farm mussels in this region face specific challenges, including the presence of strong waves and storms and robust currents that can reach up to three knots in strength, as well as tidal currents that shift

4 Colruyt Group, [Importance of aquaculture in Belgium, Factsheet](#), Accessed 29 January 2024



© Colruyt Group



© Colruyt Group

four times a day. However, some of these adverse conditions have desirable effects on mussel cultivation. For example, strong currents ensure higher quantities of plankton, which helps bivalves grow faster and results in richer flavour mussels and better quality.

The Colruyt Group's research and development efforts allowed the team to take advantage of these critical enabling conditions. In fact, adopting the longline method will enable mussels to grow twice or three times faster than in bottom culture, limit the amount of sand inside the mussels, and provide a final product with more 'meat'. Additionally, the farm is an example of extractive aquaculture, and effectively removed excess nutrients from the water and contributing to the health of marine ecosystems.⁵ These enabling conditions, combined with the region's evolving regulatory framework, particularly the MSP, created a conducive environment for pioneering aquaculture projects like those initiated by Colruyt Group.

Nevertheless, the initiative has faced opposition from local groups. Since October 2020, the city of Nieuwpoort has opposed the per-

5 Colruyt Group, [Innovative research on aquaculture, Factsheet](#), Accessed 29 January 2024.



© Colruyt Group

mit granted by the authorities, expressing concerns about its potential impact on the movement of fishing vessels and recreational boats. The city, along with local fishermen and three sailing clubs, approached the Council of State to challenge the environmental permit granted by the North Sea Ministry.⁶ Nevertheless, the Council of State, Belgium's highest court, denied the petitions of these groups against the permit.⁷

Impact on Regional Development

Colruyt Group's establishment of the Westdiep Sea Farm will propel aquaculture development in Belgium and offer multiple opportunities for the region's economy and social development.

Colruyt Group's involvement in numerous research projects over the years, such as [AquaValue](#), [SeaConomy](#), and [North Sea](#)

[Aquaculture](#), provided them with valuable practical experience. This experience has demonstrated the feasibility of aquaculture in the region. Moreover, Colruyt Group collaborated with universities and private companies on projects like [Edulis](#) and [Value@Sea](#) and European innovation projects like [United](#) to expand the knowledge base further and demonstrate the viability of ocean multi-use practices.⁸ Hence, the Colruyt Group's continued investment in aquaculture research and innovation demonstrates their long-term commitment to developing the sector in Belgium.

The environmental benefits of Colruyt's mussel farming are also critical. The farm uses extractive aquaculture, effectively absorbing excess plankton from the water and contributing to the health of marine ecosystems. Moreover, the sea farm also serves as a shelter and nursery for fish and other marine life, increasing populations and bio-

6 The Brussels Times, [Belgium receives first-ever mussels harvest from controversial North Sea farm](#). Accessed 29 January 2024.

7 The Brussels Times, [Bid to block Colruyt's commercial sea farm project fails](#). Accessed 29 January 2024.

8 Colruyt Group, [Importance of aquaculture in Belgium. Factsheet](#). Accessed 29 January 2024.

diversity there.⁹ Colruyt Group is also aware that aquaculture innovation can contribute to meeting the rising demand for balanced and sustainable protein sources.¹⁰ Mussels have the lowest carbon footprint (about 0.6 kg CO₂ per kg of mussel meat) of all cultivated animal protein sources, making them a highly sustainable source protein (17.2 g protein/100 g), low in calories, fat, and rich in vitamin B12 and omega 3.¹¹

9 Colruyt Group, [Innovative research on aquaculture. Factsheet](#). Accessed 29 January 2024.

10 Colruyt Group, [Importance of aquaculture in Belgium. Factsheet](#). Accessed 29 January 2024.

11 Colruyt Group, [Mussels: sustainable and nutritious. Factsheet](#). Accessed 29 January 2024.

The farm is looking to expand its production in mussels and to include oysters and seaweed in the future. This expansion will create new job opportunities and pave the way for a new regional industry – contributing to the local job market. Colruyt Group's investment in offshore research helps lower other players' entry barriers. By absorbing significant initial costs in research and development, the Group effectively streamlines the path for smaller entities to enter the market with reduced financial and technological burdens. This will catalyse the growth of the aquaculture sector as a whole.



© Colruyt Group