

GNT Advances Transparency in Natural Food Colours with ISO 14067-Verified Carbon Footprint Methodology

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GNT Group, a producer of plant-based EXBERRY colours made from fruits, vegetables and plants, has taken a step towards greater transparency by having its Product Carbon Footprint (PCF) methodology independently verified against ISO 14067



Akshat Rawat, Senior Sustainability Specialist, GNT Group

As food and beverage manufacturers strengthen their sustainability commitments and Scope 3 emissions reporting, reliable environmental data is becoming increasingly important in ingredient sourcing and product development. GNT Group, a producer of plant-based EXBERRY colours made from fruits, vegetables and plants, has taken a step towards greater transparency by having its Product Carbon Footprint (PCF) methodology independently verified against ISO 14067. In this interview with NUFFOODS Spectrum, Akshat Rawat, Senior Sustainability Specialist, GNT Group, discusses the significance of independently verified carbon footprint data, the factors influencing emissions across the plant-based colour value chain, and the company's efforts to improve resource efficiency, promote biodiversity and strengthen responsible sourcing. He also highlights how collaboration between ingredient suppliers and food brands can help translate sustainability commitments into measurable environmental progress.

GNT has become one of the first food color manufacturers to have its Product Carbon Footprint methodology independently verified against ISO 14067. What does this milestone mean for GNT and for greater transparency in the food ingredients industry?

At GNT, we aim to be as transparent as possible and to reduce the carbon emissions across every part of our operations.

To this end, we developed our own internal methodology around three years ago to calculate the Product Carbon Footprint of our EXBERRY colors. The PCF accounts for the total greenhouse gas emissions across every stage of color production.

EXBERRY colors are all made from non-GMO fruits, vegetables, and plants, and the figures cover everything from growing the crops through to transporting the finished products. This is important because our customers want comprehensive data for their internal reporting and sustainability ambitions, and some also use it to support sustainability communications about their products.

Until now, whenever we shared PCF information with our customers, we included a disclaimer stating that the calculations were based on an internal methodology that was aligned with international standards. After using this methodology for three years and seeing consistent results, we decided to take the next step and have it independently verified by an external agency against ISO 14067.

This is an important milestone for us because it adds another level of credibility and confidence to the data we share with our customers. We see that this transparency is very much welcomed in the food industry as customers work toward their own sustainability targets.

The EXBERRY PCF calculations cover emissions from agriculture, production, and transportation on a cradle-to-gate basis. What are some of the key factors that influence the carbon footprint of plant-based coloring ingredients, and how does GNT work to reduce emissions across its value chain?

Our approach is to look at the entire value chain and identify where we can make the biggest improvements, rather than focusing on just one part of the process.

We offer a full spectrum of plant-based EXBERRY colors made from more than 30 different raw materials, including carrots, radishes, pumpkins, safflower, and sweet potatoes. The carbon footprint for different raw materials will vary depending on factors such as fertilizer and irrigation requirements and the type of machinery used. Transportation also plays a role. Around 80% of the crops come from fields located within approximately 200 km, but others travel longer distances and some need to be kept in frozen conditions. Also, some raw materials require more energy-intensive processes to produce the color concentrates.

We've developed an emissions reduction strategy aligned with climate science. The targets cover all areas of production: scopes 1 and 2 comprise emissions at our factories, while scope 3 is about our supply chain and includes agricultural emissions.

At the agricultural level, we're committed to constantly finding ways to make farming practices more sustainable, improving crop yields, and exploring more eco-friendly fuels for transportation and agricultural activities.

Within our factories, we focus on improving energy efficiency and identifying practical opportunities to reduce energy losses. We also explore ways to make use of waste and side streams for energy generation. In addition, all our factories use green electricity.

The PCF information means our customers can track how our emission reduction efforts are reflected in the carbon footprint of the products they purchase over time.

How can independently verified Product Carbon Footprint data help food and beverage manufacturers make better sustainability decisions?

I strongly believe in the saying, "If you can't measure it, you can't manage it."

Climate change is happening now and we're already seeing its effects around the world. As a result, consumers want to buy responsibly and food and beverage manufacturers are increasingly recognizing the importance of reducing their own footprint.

This is where reliable and independently verified carbon footprint information becomes valuable. Having specific, product-focused data allows manufacturers to make more informed decisions when selecting ingredients and evaluating their environmental performance.

By sharing our PCF data with customers, we help them understand the environmental value of choosing these products, and how our emission reduction efforts can contribute to their own sustainability targets.

Do you see demand increasing for quantified environmental data from ingredient suppliers as companies strengthen their Scope 3 reporting?

We're certainly seeing growing demand for this information. The bigger companies are still leading the way, but we're now receiving more requests from medium-sized companies as well.

Interestingly, customers are not only asking for the numbers but are also showing interest in how we calculate them. They ask questions about our methodology, assumptions, and processes, which shows that they're taking this information seriously.

I see this as a positive development because it means sustainability discussions are becoming more focused on measurable results rather than just commitments.

GNT sources fruits, vegetables, and plants for its EXBERRY colors through a closely managed supply chain. How important are ingredient sourcing, agricultural practices, and supply-chain traceability in reducing the environmental impact of food color production?

The way our raw materials are grown, the farming practices used, the amount of fuel and energy consumed, and the opportunities to switch to greener alternatives all influence the carbon footprint of our products.

Having a clear understanding of our supply chain is absolutely essential. It enables us to understand the areas in which we're excelling as well as potential areas for improvement. For example, can we reduce the use of fossil fuels in agriculture? Can we improve farming practices? Can certain processes be powered by renewable energy?

At the same time, any changes we make must not compromise the quality of our raw materials or finished products. Finding this balance is one of the challenges we continuously work on.

We also collaborate closely with our suppliers to explore alternative crops and varieties that can deliver the colors we need with a lower carbon footprint.

An important part of this collaboration is helping suppliers who may not yet have a clear understanding of the emissions associated with their own products. We help them identify emission hotspots within their processes and explore ways to improve their production practices.

Ultimately, traceability and transparency are not just about knowing where our ingredients come from. They help us understand the environmental impact of our supply chain and then work together with our partners to reduce it.

Beyond carbon footprint reduction, how is GNT approaching sustainability across its plant-based coloring portfolio? What role do areas such as resource efficiency, biodiversity, packaging, renewable energy, and responsible sourcing play in the company's broader sustainability strategy?

All these areas are important parts of GNT's sustainability strategy, and we're actively working on improvements across each of them while ensuring we maintain the quality of our products.

We continuously work to improve crop yields in the field as well as resource, energy, and water efficiency in our factories. Better yields and improved product quality help us make more efficient use of resources and reduce waste. We also use side streams from our production processes as animal feed or for energy generation and explore opportunities to upcycle them into other food ingredients.

Biodiversity is another key priority for us. Our projects include working with some of our key farmers to grow flower strips that support pollinators on their fields. We then carry out annual impact assessments to understand the results and plan further improvements. We also organize tree-planting activities every year in the Netherlands, working together with other organizations to help restore native forests.

All our factories and our external warehouses in the Netherlands and Germany use green electricity, and we actively encourage our supply chain partners to do the same.

Packaging is another area where we're making improvements. We've set a target to use 30 per cent recycled content in our EXBERRY jerrycans by 2030, and we're well on track to achieve it.

Responsible sourcing is equally important. We carry out assessments and work closely with our suppliers to support their compliance with both the environmental and human rights aspects of our responsible sourcing policies.

Looking ahead, what do you see as the next priorities for sustainable food ingredients and natural colors? How can ingredient manufacturers and food brands work together to move from sustainability claims toward measurable and independently credible environmental performance?

I believe the next priority should be stronger collaboration between ingredient manufacturers and food brands, with a common goal of reducing carbon emissions in line with climate science.

Every company within the supply chain has an environmental impact, and understanding how these impacts are connected is important. Having a shared vision and working towards common goals can make emission reduction efforts much more effective.

I also see this as a push-and-pull process. Consumers are becoming increasingly concerned about the environmental impact of the products they purchase. This creates pressure on food brands to provide more transparency and demonstrate that they are taking meaningful action.

This is why ingredient manufacturers need to be transparent about their environmental performance and provide credible, measurable data. Such information allows food brands to make better decisions when developing products and helps them communicate their sustainability efforts with greater confidence.

Of course, this is easier said than done. It requires cooperation, investment, transparency, and a willingness to improve across the entire value chain. But I believe this is the direction the industry needs to move towards. After all, climate change is a shared challenge, and meaningful progress will only be possible if we work together.