



Bio root

Replace Plastic with Cassava



About us

Bio Root is a brand dedicated to providing **sustainable**, **compostable**, and **plastic-free** packaging solutions tailored for the Scandinavian market. Our brand was founded in response to the high consumption of **single-use plastic bags**, which contribute significantly to environmental pollution.

Our mission is to reduce plastic waste across Scandinavia by offering **high-quality, biodegradable alternatives** that align with both **consumer demand for sustainability** and **regulatory shifts toward eco-friendly packaging**. With a strong focus on **innovation** and **compliance with EU environmental standards**, we ensure that our products meet the highest levels of performance while supporting a **circular economy**.

The Impact of Plastic Pollution in Norway

- **Rising Plastic Bag Consumption:** In Norway, the per capita consumption of lightweight plastic carrier bags (less than 50 microns thick) increased from **146 bags per person in 2018** to **238.2 bags per person in 2021**, indicating a growing reliance on single-use plastics.
- **Packaging Waste Recycling Rate:** In 2022, Norway achieved a **63.1% recycling rate for packaging waste**, marking an improvement from previous years. However, this also highlights that nearly **37% of packaging waste** was not recycled, underscoring the need for more sustainable packaging solutions
- **Success in Bottle Recycling:** Norway's bottle deposit scheme has been highly effective, with a **97% recycling rate for plastic bottles**. This demonstrates the potential success of well-implemented recycling initiatives.



Commitment to a Sustainable Future

At **Bio Root**, we recognize the pressing need to address plastic pollution in Norway. Our mission is to provide **compostable and biodegradable alternatives** to traditional plastics, aiming to reduce the nation's dependence on single-use plastic bags and packaging. By offering eco-friendly products, we support Norwegian retailers in meeting environmental goals and responding to the increasing consumer demand for sustainable solutions.



Competitive Landscape: Alternative Bag Solutions

- **Recycled Plastic Bags**

- ✓ Well-established & weather-resistant.
- ✗ Less durable, still plastic-based, and subject to **Norwegian plastic tax**.

- **Paper Bags**

- ✓ Partially eco-friendly.
- ✗ Weak durability, **not waterproof**, and **costly** for retailers & consumers.

- **Reusable Bags**

- ✓ Multi-use alternative.
- ✗ Often plastic-based, **non-recyclable**, and environmentally challenging.



Why Bio Cassava Bags?

- ✓ **100% biodegradable & compostable** – no microplastic waste.
- ✓ **Durable, waterproof, and strong** – practical for retail use.
- ✓ **Cost-effective & tax-exempt** – sustainable savings.
- ✓ **Aligns with Norway's green initiatives** – future-proof solution.



Towards sustainability

As the only company in Scandinavia offering **100% eco-friendly and durable all-natural bags**, **Bio Root** aims to lead the movement to replace plastic bags with sustainable alternatives.

Switching to **plant-based shopping bags** directly addresses the growing issue of plastic waste, offering a **complete, sustainable solution** to eliminate plastic bags from the market.

The Impact in Simple Terms:

1 Cassava Bag - 1 Plastic Bag = **0 plastic bags improperly disposed of in nature.**

By choosing **Bio Root cassava bags**, your company can significantly reduce its plastic waste footprint. This not only positions you as a leader in **environmental and social responsibility**, but also works proactively for any future regulatory changes in the retail sector regarding plastic use.



A close-up photograph of hands holding a piece of green and white patterned material, which is a cassava starch bag. The material has a repeating geometric pattern of green squares and white lines. The hands are positioned at the top and right edges of the frame, holding the material taut. The background is blurred, showing a person's arm and a smartphone.

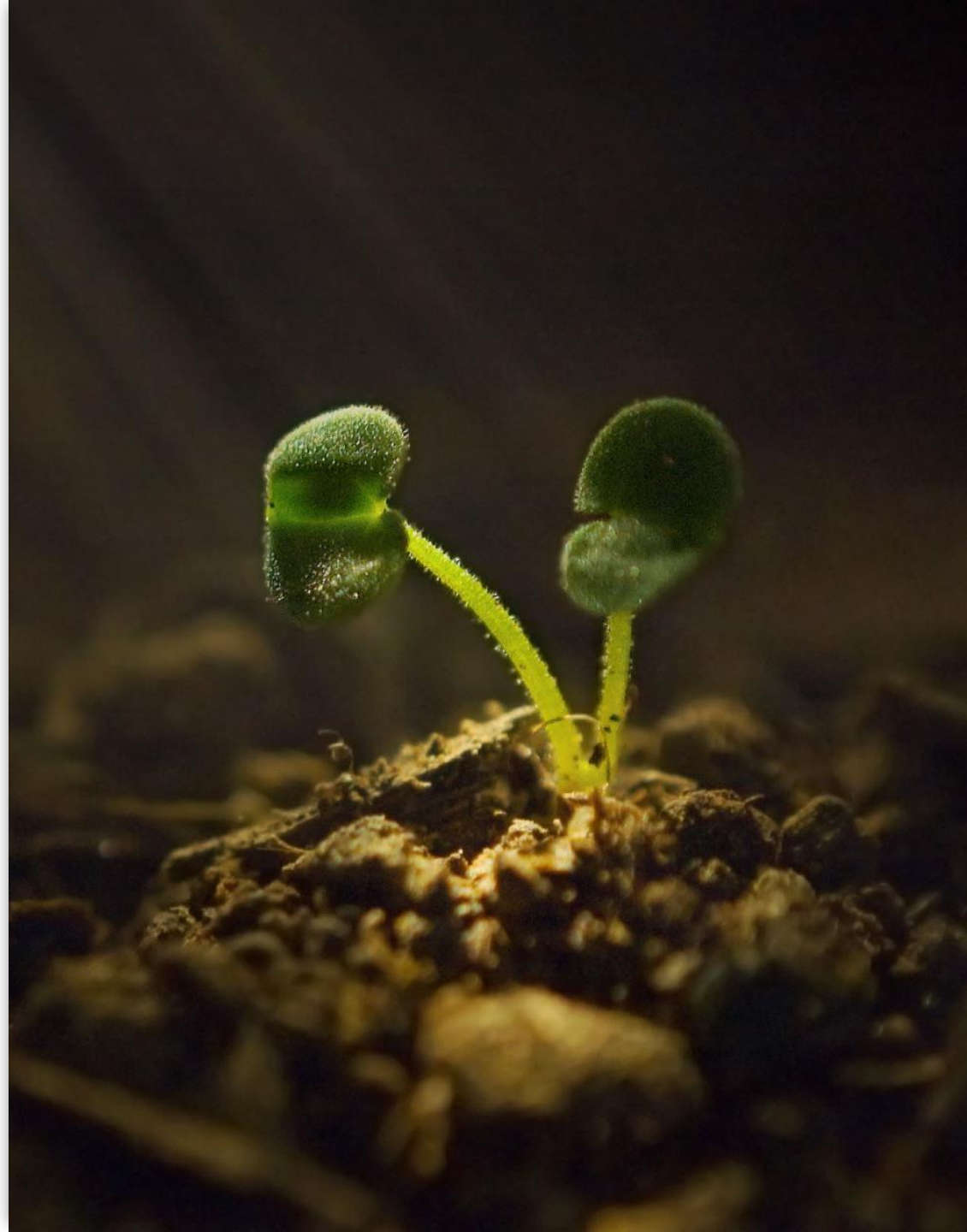
Product Information

Bio Root cassava bags are made from **100% bio-based materials**, primarily **industrial-grade cassava starch**—a nutritionally inert component—along with **vegetable oils** and other natural ingredients.

These bags are **easy to use** and can be **home-composted** alongside organic waste, offering a **sustainable, eco-friendly disposal option** for consumers.

Characteristics of Cassava Bags

- **Weight Capacity:** Can hold **2 kg to 8 kg**, depending on bag size.
- **No Special Composting Facilities Needed:** Fully **home-compostable**.
- **Biodegradable:** Breaks down in **3-4 months**.
- **Eco-friendly:** **Non-toxic** to the environment, animals, and plants—**zero microplastic**.
- **Versatile Use:** Ideal for **dry products** and reliable for **humid products** for up to **4 hours** (weather-dependent).
- **Cost Benefits:** **Zero environmental tax** or other duty taxes.





Bio root Cassava Bag

Our **Bio Root Cassava Bags** offer a sustainable alternative to environmentally harmful single-use plastic bags. These bags allow your customers to carry groceries with ease, while providing the same **strength and performance** as plastic bags, but with **eco-friendly, all-natural materials**.

Available Sizes :

- **Small:** 26/16 cm x 30 cm, 40-micron
- **Medium:** 40/28 cm x 45 cm, 40-micron
- **Large:** 49/35 cm x 55 cm, 50-micron

Custom sizes available, including rolls up to **60/100 cm** for bags with logos and **60/160 cm** for plain bags, all made from **durable 50-micron material**.

CASSAVA BAG



cassava bags are purely made from bio-based material utilizing industrial grade cassava starch, vegetable oil derivatives and other natural materials. Avani utilized industrial grade cassava starch which has been processed and can be categorized as a byproduct due to the lack of nutrition content.

Fortio AS

Business Model

Bio Root offers an eco-friendly, scalable solution for retailers, delivering both **profitability and sustainability**:

- **Duty Tax Exemption:** Achieve **substantial profit margins** with **duty tax exemptions**.
- **Customization:** Choose from **12 base colors** and **16 printing colors** for personalized bags.
- **Minimum Order:** **100,000 pcs** for bags with customized logos.
- **Scalable Supply:** Flexible ordering to meet demand with long-term supply agreements.
- **Sustainability Edge:** Position your business ahead of future plastic regulations by offering **eco-friendly packaging**.

Marketing Strategy

Our goal is to **reshape the market** by making **sustainable packaging solutions** more visible and impactful. Key strategies include:

- **Certifications & Lab Testing:** Proving the **biodegradability** and **non-toxicity** of our bags.
- **Environmental Impact Reports:** Showcasing **reduced waste** and **carbon emissions**.
- **Educational Campaigns:** **Workshops** and **webinars** to educate retailers about sustainable alternatives.
- **In-Store & Online Presence:** **Promotions**, **website**, and **social media campaigns** to engage customers and retailers.



Gallery

A photograph of a cassava plant with its characteristic green, lobed leaves and thick, light-brown, knobby roots. The roots are piled on a patch of dry, brown earth. In the top left corner, there is a small orange rectangular graphic element.

About Cassava plant

For Indonesians, cassava is commonly used as a main source of carbohydrate to replace rice. Cassava can be turned into `tiwul`, substitute for rice, which is made from dried cassava, `gaplek`. This was especially important during Japanese colonization in Indonesia when Indonesians mainly ate `tiwul` as their main source of energy. Today, it grows commonly everywhere around Indonesia, where it can be easily collected for industrial purposes.



Our company

All **Bio Root products** are distributed through **Fortio AS**, a socially responsible, family-owned company specializing in **distribution services** in the Oslo region.

While we aim for business expansion, our **core commitment** remains focused on **tackling environmental challenges**. **Fortio AS** oversees the entire import process, ensuring the **timely delivery** of our products to valued customers.

For more information, visit: fortio.no

Our Time is Now

Join us in being part of
the solution!



Fortio AS

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