



©IFAD/Aubrey Wade

## IFAD POLICY BRIEF

### BURKINA FASO

# BIOFERTILIZER – A KEY TOOL TOWARDS FOOD SOVEREIGNTY IN BURKINA FASO

## ABSTRACT

*This policy brief explores the potential of biofertilizer to support the sustainable transition of Burkina Faso's agricultural sector, making the case for their integration as a sustainable solution to the country's soil fertility and productivity challenges. Drawing on evidence from primary data collection, academic studies, and analysis conducted by IFAD in collaboration with local consultants and partner organizations, the brief examines opportunities and presents actionable recommendations for the development of Burkina Faso's biofertilizer sector.*

## KEY RECOMMENDATIONS

### For policymakers:

I. Support the development of a strong domestic biofertilizer sector by enabling private sector growth through targeted financial incentives, market stimulation, and integration into national food sovereignty strategies.

II. Enhance the sector of domestically produced biofertilizer by increasing the scope of biofertilizer integration into government subsidy programmes.

III. Establish and promote quality standards and accessible certification procedures for biofertilizer at national level.

IV. Prioritize technical assistance and capacity building for farmers on the use and benefits of biofertilizers as a key component in integrated soil fertility management and agroecology.

### For development operations:

I. Provide support for capacity building and professionalization of Burkina Faso's biofertilizer sector.

II. Invest in the development of local biofertilizer production and its integration into distribution channels and the broader market.

III. Facilitate farmer access to biofertilizers by supporting pilot initiatives, demonstration plots, and farmer-to-farmer learning networks that showcase the effective use and benefits of biofertilizers.

## BACKGROUND

Organic and biofertilizers (hereafter biofertilizer, see Box 1) present a significant yet underutilized opportunity for Africa's agricultural transformation and rural development. By recycling nutrient-rich organic waste such as crop residues, animal manure and market waste, these sustainable inputs help

reverse chronic soil degradation by improving the biological, biochemical and physical quality of the soil. They promote crop development and plant nutrition and reduce dependence on costly synthetic fertilizers<sup>1</sup>, fostering productive farming systems resilient to climate change. Moreover, by enhancing the integration of organic matter into the soil, the use of biofertilizers contributes to the mitigation of greenhouse gas emissions and improves the water holding capacity of the soil. To unlock their full potential, biofertilizers must be embedded within broader agroecological strategies such as Integrated Soil Fertility Management (ISFM).

#### Box 1.

**Organic and biofertilizers** include a variety of materials derived from plant or animal sources and may also contain living organisms such as algae, bacteria, and fungi. They are used to provide nutrients for plant growth and defence systems. The term encompasses compost, vermicompost, biochar, bokashi, frass fertilizer, bio-stimulants, inoculants, bio-growth promoters, and others. **In this policy brief, the term biofertilizer is used in a broad sense to cover all of these inputs.**

The ongoing global fertilizer crisis following the pandemic and the war between Russia and Ukraine has underscored the vulnerability of African countries to international supply shocks. In Burkina Faso, where over 95% of synthetic fertilizers are imported<sup>2</sup>, rising prices have caused a 23% drop in fertilizer imports between 2020 and 2021<sup>3</sup>. High dependence on synthetic fertilizers not only strains farmer livelihoods and national budgets but also exacerbates long-term soil degradation. At the same time, soil degradation costs the country an estimated 26% of its GDP annually<sup>4</sup>. Locally produced biofertilizers can help address these challenges. Burkina Faso has strong potential to develop biofertilizers from its organic resources, including crop residues, animal manure, forest by-products, and urban biowaste, yet these resources remain largely underutilized. The country's fertilizer policies have historically prioritized synthetic inputs and national policies offer far too little support for biologic alternatives despite their alignment with agroecological principles and the potential for improving soil health and long-term agricultural productivity.

[1] Chemical substance or material that is used to provide nutrients to plants.

## FINDINGS

### I. Burkina Faso's Biofertilizer Demand and Production is Growing

According to available data, the off-farm biofertilizer sector in Burkina Faso encompasses approximately 50 production units, present in all 13 regions, with the highest concentrations in the Centre and Hauts-Bassins regions. The sector has mainly developed through urban and peri-urban agriculture, particularly in vegetable farming (*maraîchage*), where most biofertilizers are used. Most products are compost-based, with limited quantities of liquid biofertilizers. A 2024 market study combining official data and field research estimates national off-farm production at around 275,000 tons of solid and 122,000 liters of liquid biofertilizers. The study also indicates that production has been growing over the last years (data available from 2021), evidence of an ever-growing demand. In fact, survey on input demand show that nearly all farmers in Burkina Faso use agricultural inputs, with synthetic inputs being more widely applied. However, inputs are typically used only in specific areas of production that often have high economic potential—for example, compost is mainly applied to market gardens rather than across all cultivated land. Sales figures of biofertilizers at the national level are difficult to estimate, with significant variations between production systems and regions.

Biofertilizers currently on the market in Burkina Faso are priced at approximately 7 000 CFA per 50 kg bag for solid biofertilizers (mainly compost) and 4,500 CFA per liter for liquid bio inputs. In comparison, the price for synthetic fertilizers like NPK (different compositions) and urea range from 30 000 to 32 500 CFA per 50 kg bag (prices as of 2025). Considering current agricultural practices, greater quantities of biofertilizers are required compared to synthetic fertilizers, which increases overall costs. While biofertilizers are nominally cheaper, it is the economic distortions created by subsidies for synthetic fertilizers – and the absence of similar support for biofertilizers – that primarily make synthetic options more affordable and accessible for farmers. However, the vast majority of these subsidies fuel imports that primarily benefit foreign companies.

## II. Opportunities for the development of Burkina Faso's biofertilizer sector in support of Food sovereignty

### At government level - Support through subsidy programmes, policy framework improvement and enhanced certification

Burkina Faso's agricultural subsidy programmes have traditionally focused on synthetic fertilizers, particularly for the cotton sector, which receives the majority of support. For the agricultural seasons 2024, the volume of subsidized inputs (fertilizers and pesticides) for the cotton sector was estimated at 383 144 tons, with estimated costs of 10.9 billion FCFA (approx. 18 Mio. USD). Data for other agricultural sectors was not made available. It is noteworthy, however, that farmers often divert subsidized inputs intended for cotton to other crops, particularly maize and other cereals such as sorghum and rice.

The **share of biofertilizers in the subsidy programme** is very small, making Burkina Faso's agricultural sector heavily reliant on synthetic fertilizer and thus vulnerable to price fluctuations and supply chain disruptions. Indeed, over 95% of the subsidized fertilizers are imported. Since 2022, the government has started to integrate biofertilizers in subsidy programmes and public purchasing programmes, however, to a very limited extent. Two major barriers for a more substantial integration of biofertilizers in public programmes were identified. Firstly, the limited integration of biofertilizers in national policies and strategies. The *National Agroecology Development Strategy SND-AE (2023-2027)* and the *Local Agroecological Transition Plans (PLTAE)*, which translate national strategies into local action plans, include biofertilizer distribution and thus provide a policy basis for future implementation. Their implementation, however, remains weak due to low policy prioritization and limited funding. In 2023, stakeholders within the consultation framework on ecological and biological inputs, led by the National Council for Organic Agriculture (CNABio), developed a strategy and action plan for the period 2023-2026 to promote ecological and organic inputs, including biofertilizers (*Stratégie et Plan d'Actions des Bio-Intrants*).

This strategy and the adoption of the action plan are expected to contribute to strengthening the role of bio-inputs, including biofertilizers, in Burkina Faso. The current lack of appropriate certification mechanisms for locally produced products is the second barrier. As part of this action plan of bio-inputs, CNABio is leading the participatory process to define a national **certification mechanism for locally produced biofertilizers**, called **reconnaissance**. The aim is to establish a locally tailored standard—approved by both public and private stakeholders—that aligns local requirements with national regulations. The *reconnaissance* mechanism will include accessible quality control protocols, with a particular focus on nutrient content, to ensure product quality. Once certified, local biofertilizer production units will receive official national recognition, enabling them to participate in public procurement programs, and thus giving them access to an important market to sell their products. Additionally, Participatory Guarantee Systems (PGS) offer a low-cost, locally adapted alternative for quality assurance.

### At biofertilizer production units level - Professionalization and enhanced Market Access

Biofertilizer production units in Burkina Faso often operate with limited **financial capacity**, lacking the financial resources to invest in research, marketing, distribution, or to manage delayed payments. This hampers their ability to modernize and scale. The sector also faces a need for **professionalization**, as most units remain artisanal, with manual labor and inconsistent product quality undermining competitiveness and farmer trust. Market development is further constrained by weak distribution networks. Biofertilizers represent less than 1% of products stocked by distributors. **Awareness raising and market development** are therefore key for biofertilizers to take up their due share of the market.

### At farmer level - Strengthen Awareness and Adoption

Data collected in December 2024 from 547 farmers in the Centre-West region<sup>5</sup> highlights the significant advantages of certified biofertilizers. Nearly 88% of farmers using certified biofertilizers observed at least moderate improvements in soil fertility, compared to 68% of non-users.

These figures hint that certified biofertilizers significantly increase the likelihood of achieving widespread soil fertility gains. Nevertheless, many farmers remain skeptical. This is often due to previous bad experiences with low-quality products or lack of information. A potential incentive for farmers to integrate biofertilizers into their systems is by making their use a prerequisite for accessing subsidized synthetic inputs, as is the case in Mali.

Biofertilizers offer long-term benefits to soil structure, water retention, and nutrient cycling, especially when combined with integrated soil fertility management (ISFM) practices such as *Zaï*, half-moons, and stony strips. These practices have shown high returns on investment for cereal farmers and play a critical role in building resilience. Technical assistance is key to unlocking these benefits and scaling adoption. According to the questionnaire, farmers that had received technical assistance in the last 2 years reported far better outcomes on soil fertility improvement: 84% of farmers with assistance observed at least moderate improvement of soil fertility on their farms, versus only 54% without assistance (Figure 1). This underscores the transformative impact of technical assistance in enabling proper biofertilizer application, improving timing, dosage, and integration into farming practices. Without such guidance, even high-quality biofertilizers fail to deliver optimal results, leading to inefficiencies and farmer scepticism.

**Figure 1.**

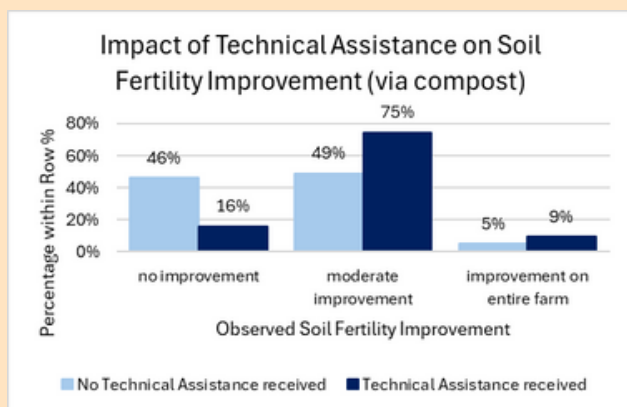


Figure 1: Impact of Technical Assistance on Soil improvement, via compost. Source: Field Survey in Central-West region, 2024, n=547<sup>6</sup>

## RECOMMENDATIONS

### FOR POLICYMAKERS

**I. Support the development of a strong domestic biofertilizer sector by enabling private sector growth through targeted financial incentives, market stimulation, and integration into national food sovereignty strategies.**

Policymakers should prioritize the growth of Burkina Faso's biofertilizer sector as a priority strategy for rural development, economic resilience and food sovereignty. Expanding the availability and accessibility of biofertilizers will require financial assistance, such as competitive grants and affordable loans, to help enterprises modernize and scale production capacity, enhance distribution networks, and reach underserved farming communities, eventually integrating technical assistance for farmers in their business model. Tax incentives and other financial measures can further encourage production, fostering a reliable and competitive market. Public authorities should also play a central role in stimulating demand by incorporating locally produced biofertilizers into public procurement programs and integrating their use into agricultural extension services by raising awareness of their agricultural and economic benefits among farmers and stakeholders. Like this, the government can stimulate a competitive and self-sustaining biofertilizer industry that creates jobs, benefits farmers, strengthens the national economy and reduces the dependency on imported synthetic fertilizers.

**II. Enhance the sector of domestically produced biofertilizer by increasing the scope of biofertilizer integration into government subsidy programmes.**

The economic and logistical support for synthetic fertilizer distorts the market, making synthetic inputs a preferred choice for the wrong reasons. Meanwhile, biofertilizer production units face difficulties in finding buyers willing to pay higher, unsubsidized prices, limiting their competitiveness and market reach. The Burkinabe government started in 2022 to integrate biofertilizers in its

subsidy programs, marking an important first step toward more balanced support mechanism. The scope of the integration of biofertilizers in these programmes could be extended to provide equitable support for biofertilizers, thereby reducing economic distortions that do not benefit the country. A hybrid policy approach, which integrates biofertilizers in government programs can prove to be effective. Drawing on lessons from other countries, Mali, for example, conditions the distribution of synthetic fertilizers on the concurrent use of organic inputs, enhancing soil structure and fertility. This model prevents the inefficiency and environmental risks associated with applying synthetic fertilizers on degraded soils, ensuring more sustainable and productive outcomes.

### **III. Establish and promote quality standards and accessible certification procedures for biofertilizers at national level.**

To ensure trust and efficacy in the adoption of biofertilizers, Burkina Faso must establish and enforce quality standards targeted to the biofertilizer sector. The certification system needs to be accessible, both in terms of logistics and price, ensuring that only quality products reach farmers. Public awareness campaigns should inform farmers on the importance of using certified biofertilizers, while technical training programs can help production units adhere to quality requirements. Partnerships with private-sector stakeholders and international organizations can enhance these efforts through funding, expertise, and oversight.

### **IV. Prioritize technical support and capacity building for farmers on the use and benefits of biofertilizers as a key component in integrated soil fertility management and agroecology.**

Biofertilizers are most effective when applied together with Integrated Soil Fertility Management (ISFM) practices. It is therefore essential that farmers receive sustained technical support and training in ISFM and other agroecological practices for long term agricultural success. By prioritizing technical assistance and capacity-building programs on agroecology, the government can empower farmers to adopt practices that sustainably enhance soil fertility and ensure sustainable agricultural productivity.

## **FOR DEVELOPMENT OPERATIONS**

### **I. Provide support for capacity building and professionalization of Burkina Faso's biofertilizer sector.**

It is strongly recommended to strengthen the technical and business capacities of biofertilizer production units through targeted financial support, technical assistance and business coaching, and access to certification mechanisms, enabling them to scale up production and improve product quality.

### **II. Invest in the development of local biofertilizer production and its integration into distribution channels and the broader market.**

In the same way, it will be important to strengthen biofertilizer value chains by improving distribution networks. To achieve this, it is necessary to strengthen the links between supply and demand through technical and commercial partnerships to improve the accessibility of these products.

### **III. Facilitate farmer access to biofertilizers by supporting pilot initiatives, demonstration plots, and farmer-to-farmer learning networks that showcase the effective use and benefits of biofertilizers.**

Development actors can play a key role in promoting the use of biofertilizers by supporting on-the-ground initiatives that demonstrate their benefits integrated with other soil fertility management practices. Through pilot projects, field demonstrations, and the establishment of farmer-to-farmer learning networks, in collaboration with local organizations, they can help build trust in biofertilizers and improve farmers' technical know-how.

## REFERENCES

[2] Feed the future. Matrice des Programmes de Subvention en Afrique de l'Ouest. Edition 2022.

<https://api.hub.ifdc.org/server/api/core/bitstreams/e27a01a1-a57a-41df-8048-183db867e52a/content>

[3] AfricaFertilizer.org. (n.d.). Burkina Faso – Fertilizer dashboard. Retrieved February 15, 2025, from:

<https://africafertilizer.org/#/en/burkinafaso?countryIso=BF>

[4] Global Mechanism of the UNCCD, 2018. Country Profile of Burkina Faso. Investing in Land Degradation Neutrality: Making the Case. An Overview of Indicators and Assessments. Bonn, Germany.

[5] GP-SAEP Burkina Faso. (2024, November). Baseline study of the GP-SAEP Burkina Faso project [Unpublished raw data].

[6] GP-SAEP Burkina Faso. (2024, November). Baseline study of the GP-SAEP Burkina Faso project [Unpublished raw data].

## Background Studies:

MARAH (2023). *Étude sur le marché des intrants organiques au Burkina Faso*. Project PACTE.

POUYA, Mathias Bouinzemwendé. (2024). *Etude FIDA / agroécologie et dispositifs d'incitation agricole pour les petits producteurs*.

BIOPROTECT. (2024). *Étude de marché sur les biointrants dans la région du Centre-Ouest*. Project GP-SAEP Burkina Faso, IFAD.

## AUTHORS

**Eliane Steiner\***

**Mathias Bouinzemwendé Pouya**

Specialist in agro-pedology and natural resource management

**Francesco Maria Ajena\***

**Ivan Cucco\***

**Jean Christophe Duchier\***

**Rikke Grand Olivera\***

**Maria Andrea Baragan Porras\***

**Mathilde Iweins\***

\*Staff and consultants of PMI, Natural Resource Management and Land Tenure Desk, IFAD



International Fund for Agricultural Development

Via Paolo di Dono, 44 - 00142 Rome, Italy

Tel: +39 06 54591 - Fax: +39 06 5043463

Email: [ifad@ifad.org](mailto:ifad@ifad.org)

[www.ifad.org](http://www.ifad.org)

[facebook.com/ifad](https://facebook.com/ifad)

[instagram.com/ifad\\_org](https://instagram.com/ifad_org)

[linkedin.com/company/ifad](https://linkedin.com/company/ifad)

[x.com/ifad](https://x.com/ifad)

[youtube.com/user/ifadTV](https://youtube.com/user/ifadTV)

November 2025