

# Partnering with the Private Sector in Improving Malawi Soils and Crop Yields

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## Introduction

With about 65 percent of its population working in agriculture, access to fertilizer is a critical need for Malawian farmers.<sup>i</sup> Between 2015-2024, Malawi spent an estimated US\$2.5 billion importing 4.1m MT of fertilizer, with the bulk of those payments coming from government coffers (\$1.57 billion) and private sector (\$695 million), using foreign currency that the country desperately needs to import other critical resources, including fuel.<sup>ii</sup> According to current estimates, Malawi needs about 650k MT of fertilizer per year, and the government's longstanding farm input subsidy program can meet only half of that amount.<sup>iii</sup> At the same time, chemical fertilizer has become unaffordable over the past few years owing to a variety of factors, including the 2022 Russian invasion of Ukraine.

Additionally, Malawian soils are degraded and tend to produce low crop returns even when chemical fertilizer is accessible. Farmers need low-cost substitutes, or at least additives, to chemical fertilizer, creating a compelling market opportunity for Malawian companies willing to create quality local alternatives, at scale, to imported fertilizer. The Malawian government recently instituted a 10-year action plan on fertilizers and soil health, seeking to spur greater interest in developing soil health products. While some locally produced organic soil products are already present on the market, most of them are uncertified and all of them are scarce. The private sector has a vital role to play in bridging this gap, but Malawian companies struggle to innovate and scale their products alone.

**This case study illustrates how Palladium with support from the Embassy of Ireland in Malawi is working with the private sector to make low-cost, organic-based fertilizers widely available to small family farmers across in the country on a commercially viable basis.** Two private sector partners are rapidly scaling up, selling locally made, organic-based fertilizers for 30,000 kwacha (US\$ 18 or €15) per 50kg bag. When mixed with synthetic fertilizer to boost their nitrogen content, Malawian organic

fertilizers save the average farmer about 40% compared to the cost of using synthetic fertilizers alone.<sup>iv</sup>

These solutions not only help to bridge the critical gap in low-cost fertilizer access, but they also create sustainable solutions by working through commercial incentives – the companies succeed by scaling up, and farmers want to (and can afford to) keep buying these products to boost yields and steadily improve soil health.

The Growth Poles Project (2023–2028) is a flagship Ireland–Malawi initiative that accelerates inclusive, climate-resilient wealth generation by transforming food systems and catalyzing private sector–led growth. Using a growth pole approach, it partners with anchor firms, cooperatives, SMEs, and smallholders—especially women and youth—to drive sustainable increases in jobs, productivity, and value addition at scale, supporting Malawi 2063 and Ireland’s A Better World policy while reaching more than 700,000 people nationwide.

This case study first dives into the partnering process, illustrating how the project, referred to as GPP, identified and engaged commercial partners. Secondly, it profiles two of the four partners to illustrate how the project worked with them. Thirdly, it distills conclusions and lessons based on this experience, offering advice for other actors who may be interested in replicating this approach.

## GPP’s Approach to Partnering with Private Sector Actors

Responding to Ireland’s emphasis on improving soil health as a critical resource for improving agricultural production in Malawi, the project developed **a strategy for finding and supporting private sector actors** that were positioned to sustainably improve poor farmers’ access to high quality, locally produced, biological soil enrichment products – at a scale.

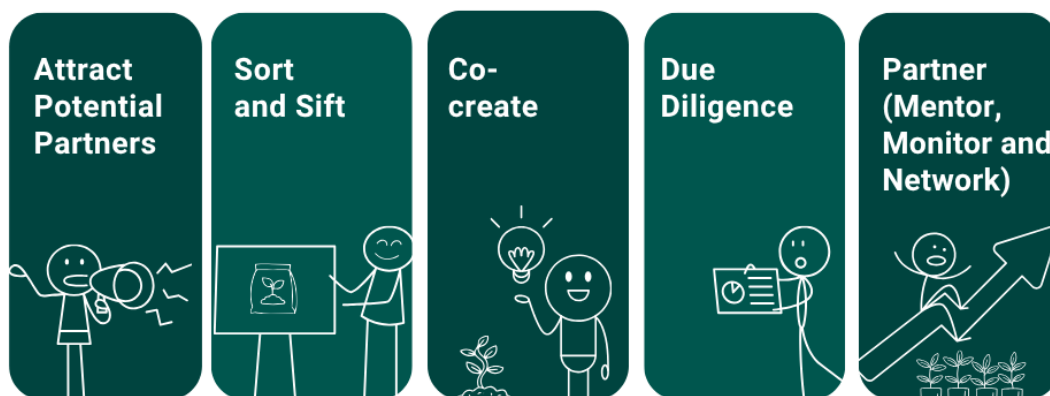


Diagram: Illustration of the project’s partnership process. Credit: The Canopy Lab

**Attracting Potential Partners:** The project first selected the scale of investment they thought was both impactful (on the partner side) and affordable (for the project), settling on a target of \$150,000 per award. GPP then determined the phase, or business maturity, of firms from whom they would accept proposals, opening the contest to both early stage and more mature businesses with innovative ideas for impacting soil health. After publishing the call for proposals, they received more than 20 applications and nine were shortlisted based on the following criteria: (1) the maturity of the applicant company, (2) maturity of the product, and (3) scalability of manufacturing the product.

**Sorting and Sifting:** The second phase consisted of a “shark tank” session, where each of the nine applicants pitched their proposals for five minutes, followed by a 15-minute question and answer session with two panels. A voting panel consisted of the Project Team Leader and representatives from the project’s funders, Ireland and USAID. Another advisory panel, including technical experts from the programme and experts contributing opinions for consideration by the voting panel. The panels ultimately selected five finalists that convincingly met the three main criteria to enter co-creation and due diligence – the other candidates had either failed to argue convincingly that their products or their business models were scalable.

**Co-Creating:** The main purpose of the co-creation phase was to interrogate each finalist’s key assumptions, targets, milestones, risk mitigation strategies, staffing and work plans. This process allowed GPP to build the partnerships by refining scopes and budgets to align with the program’s assistance modalities and timelines, while maintaining the commercial business growth incentive that was necessary for the partner to succeed. This balance – meeting development objectives (especially a verifiable impact on the poor) while staying within the partner’s commercial interest – is the central challenge of these types of partnerships. Co-creation discussions help to craft that balance, with both sides working collaboratively to create a partnership with the deepest possible development impact *and* a high likelihood of commercial viability.

One adaptation the project incorporated into these negotiations was the need to balance partners’ cash flow needs while still maintaining accountability and incentivizing results. All partners wanted support to import equipment and vehicles requiring upfront payments in forex that the Malawi banking system was unable to provide at the time.

**Due Diligence:** The project carried out due diligence with the five finalists. This process ensured that entities receiving funding or entering into partnership agreements had legal standing, integrity, financial controls, and technical capacity to manage funds responsibly and deliver agreed results. This process occurred prior to contract or grant signature, and its outputs directly influenced award conditions, monitoring intensity, and capacity-building requirements. The approach was risk-proportionate: findings were

synthesized into a low, medium, or high-risk rating, which determined the level of oversight and special conditions applied.

**Partnering:** By the end of this roughly three-month process, the project moved forward with the four companies:

- **EcoGen** – a Malawian clean energy company that sells and installs biodigesters, which convert livestock waste into cooking fuel, carbon credits, and bioslurry – a key ingredient they hand-mixed into their biofertilizer product called Magic Soil. EcoGen requested project assistance to purchase industrial-scale equipment and machinery for composting and bio-slurry transport. This would enable the company to experiment with a new payment model that would allow customers of their biogas systems to repay in bioslurry after the biodigesters were installed.
- **Speedy's Food Industries** – the largest producer of eggs in Malawi and, consequently, a massive producer of poultry manure. Speedy's requested GPP's assistance to accelerate industrialization and commercialization of their biofertilizer manufacturing process from composting their chickens' manure with organic materials recovered from municipal waste streams.
- **Bio-Innovation Lab (BIL)** – the first biotech startup birthed out of the Lilongwe University of Agriculture and Natural Resources (LUANAR), BIL requested GPP's assistance to increase its capacity to manufacture its range of inoculant biofertilizer products – a bacteria used to coat seeds prior to planting that helps crops grow better by improving nutrient availability—especially nitrogen.
- **Bio-Energy Resources Ltd (BERL)** – a bio-fuel startup that uses jatropha nuts purchased from smallholder farmers to produce biological fuel additives and seedcake, the main ingredient in their biofertilizer. BERL requested GPP's assistance to scale up their purchase of jatropha nuts and conduct experiments with different formulas for their biofertilizer products.

BIL and BERL are younger companies that had not yet shown significant momentum as of the time this case study was written. For that reason, the rest of this study explores the EcoGen's and Speedy's business models and partnership progress, before distilling partnership tips at the end.

## EcoGen's Payback-With-Slurry Model

**The Partner:** Founded in 2018 by a graduate of Lilongwe University of Agriculture and Natural Resources (LUANAR), EcoGen has sold and installed more than 2000 biodigester systems in Malawi. It imports the equipment from Sistema, a Mexican company for which it is the sole Malawian seller. EcoGen sells systems ranging from small units that produce enough fertilizer and cooking gas for a household with one cow to large industrial systems that can run a generator, plus accessories like stoves and heaters. Household benefits to owning a system include access to high-nitrogen fertilizer and a clean, free source of cooking gas along with a convenient solution for cow dung.



*Photo: A biodigester installed at an EcoGen client's home. Credit: The Canopy Lab*

While its products are in high demand, EcoGen was searching for a way to get more biodigesters into the hands of poor farmers who could not afford the 1.5-million-kwacha price for the Sistema 6, its smallest unit. At the same time, it was experimenting with small-scale production of biological fertilizer, using a combination of crop detritus and char (mainly rice husks), composted manure, and slurry it bought from farmers who had previously purchased their biodigesters. It quickly discovered that its fertilizer line was more profitable than its systems sales.

**The Model:** Putting these two factors together, EcoGen approached GPP with an idea of distributing its next 500 systems to farmers who would pay back over time with the slurry they produced. Working through their existing partnership with milk producer associations in Malawi's Shire Valley to identify reliable farmers, then sell the fertilizer back to farmers through a network of collection points operated by those associations. In addition to the systems, this plan required a significant investment in staffing, mechanized production capacity, and the vehicles and equipment needed to collect the slurry and then transport the fertilizer back to the collection centers for sale.

**GPP's Additionality:** By the end of the co-creation process in late 2024, the project and EcoGen had created a partnership by which EcoGen would pay for the cost of the 500 systems plus a new warehouse and other infrastructure, a total cost-share of about \$275,000. Installing several hundred systems without upfront payment was a huge investment and risk for EcoGen, demonstrating the company's dedication to the model.



*Photo: EcoGen's "Magic Soil" fertilizer being prepared for sale at its Blantyre composting site. Credit: The Canopy Lab*

For its part, GPP would cover about 1.5 years of salary for a handful of new staff plus six vehicles and a mechanized compost mixer, for a total grant of about \$150,000. They agreed on an upfront payment to help with the import of the vehicles and equipment and set performance-based milestones for the remaining amount.

Without GPP support, “we could still be doing this,” commented EcoGen’s CEO, Clement Kandodo, “but it would be so slow.” He added,

“[The project] enabled us to have a number of biogas systems in one place, and for us it’s easy to go and collect that fertilizer because it’s reachable. Second, we bought a machine that can process our fertilizer at 200 tons in a day. That’s something we couldn’t do for the whole year. For distribution, we have bought vehicles that help us to get the fertilizer, helping us to get to the farmer.”

**Impact:** With the programme’s assistance, EcoGen successfully developed a slurry buyback financing product and expanded fertilizer production, and its fertilizer sales have soared. From selling 900 50kg bags of fertilizer in all of 2024, the company reached 7000 bags in 2025 – a 14-fold increase – after recovering more than 350,000 liters of bioslurry from farmers. Without GPP support the company thinks it would have reached 1,500 bags in 2025. Looking ahead, EcoGen expects to sell 40,000 bags of fertilizer in 2026.



*Photo: Ms. Kamiyango mixing dung and water to feed the biodigester. Credit: The Canopy Lab*

For households who received the biodigesters, the systems give them an ample supply of free fertilizer (many are supplying their neighbors as well), a steady supply of clean cooking gas



*Photo: Evness Isaac, an EcoGen client, lights her clean cooking stove fueled by odorless biodigester gas. Credit: The Canopy Lab*

(obviating the need to buy charcoal or scavenge for firewood, which saves each household about 30,000 kwacha per month), and a solution for livestock manure. Regarding the cooking fuel, Ethel Kamiyango, a livestock owner and recipient of a biodigester, exclaimed, “There’s no smoke in the house, the pots are cleaner, and it’s modern.”

Meanwhile, EcoGen has successfully experimented with the buyback model, discovering that it can recoup the cost of installing a system after taking 8000 liters of slurry back for processing into fertilizer. The recent formalization of a carbon credit framework agreement between the Malawian and Swiss governments adds an additional incentive, positioning EcoGen to move forward quickly with importing and installing thousands more biodigesters in Malawi in the next several years, enabling them to further expand their fertilizer business.

## Speedy’s Organic Fertilizers

**The Partner:** Speedy’s Organic Fertilizers is a business line started by Speedy’s Food Industries Limited, the largest egg producer in Malawi, with 370,000 laying hens. Speedy’s also produces over 20 MT of poultry manure daily. Since 2022, it has been slowly building its capacity to produce and market biological fertilizer using poultry manure and other ingredients, including rice and maize husks, eggshells, wood ash and biochar, which it collects from local farmers to compost. When Speedy’s applied for the soil health opportunity with GPP in 2024, it was producing 2,000 bags (100 MT) per month of fertilizer (and



*Photo: Speedy’s current warehouse, storing manually mixed fertilizer. Credit: The Canopy Lab*

using a marginal amount of the manure it produced), all of which it quickly sold to local farmers.

**The Model:** With demand for its fertilizer far outpacing supply, Speedy’s wanted to rapidly industrialize its fertilizer production line. It approached the project with an ambitious plan to build a new factory at its composting operation in Blantyre, pledging to invest about \$1.4m in construction, machinery and staff costs in return for a \$150,000 grant from the programme, which it would use to pay for half of the cost of granulation machinery. This factory would enable Speedy’s to jump from producing 100 MT of fertilizer per month to producing 600 MT per month – a sixfold leap – while using more than half of its daily manure production.

**GPP’s Additionality:** Speedy’s is a large, successful company – why would a development project give it a grant to make more money? For one, the funds from the project helped accelerate a large increase in the supply of locally produced, affordable, biological fertilizer available to poor farmers who desperately needed it.

Without GPP support, “it would delay the process,” said PG Jayaraj, the General Manager. “[The project] support helped us to start it quickly.” This is the most common benefit of partnering with companies like Speedy’s – the development actor helps the partner overcome barriers to launching a new or expanded line of business –transforming a passion project into a fully commercial revenue stream – making affordable, beneficial products and services available to farmers and other customers quickly.



*Photo: Speedy’s new warehouse under construction. Credit: Growth Poles Project*

The project also supported Speedy’s to navigate Malawi’s foreign currency challenges, in accessing USD for importing machinery. Speedy’s had tried unsuccessfully for two years

to get a USD-denominated letter of credit (LC) from a regional bank that would allow it to import the machinery from India. The grant to Speedy's, also made it easier for the bank to give us the LC after they saw the grant from the project, Jayaraj commented.

“Even to get [foreign currency] in Malawi is very difficult. [The project] was able to pay the supplier of the machine directly instead of giving [the cash] to us. The remaining part of the money we sourced from a bank through a letter of credit.”

**Impact:** With project backing giving it confidence that it could scale, Speedy's dedicated more effort to fertilizer production while it imported equipment for the new factory and built the new facility. In 2024-2025, it produced a total of 17,600kg of fertilizer. In the first quarter of 2026 alone, it produced 26,000kg. Meanwhile, at the time this case study was written, Speedy's had just received the first three of ten containers with equipment for the new factory

Interviews with many of its regular customers pointed to the benefit of having Speedy's



*Photo: Henok Maseko in his farm. Credit: The Canopy Lab*

fertilizer widely available. Henok Maseko, a local farmer, has been using Speedy's fertilizer for four years. “With a little money you can buy all you need for your garden,” he said. Moreover, Speedy's fertilizer tends to stay in the soil instead of washing off in heavy rains, as chemical fertilizers do. Over time, he's seen his soil health steadily improve. “People at first thought I was just adding soil,” he said, “but then they saw the effect.”

Mr. Maseko started selling Speedy's fertilizer as an agent two years ago and now sells to more than 100 farmers in his area. “Almost all of them recommend it,” he says with a smile, standing in a field of 3-meter-tall maize plants fed by Speedy's fertilizer.

## Conclusions

The project support helped its partners dramatically scale their operations in a short period of time, with even higher growth coming soon. In these two cases, the project's additionality lies in accelerating the pace of experimentation by risk-sharing large investments in industrialization. This allows local private sector actors to take on more of the risk associated with introducing beneficial new products and services – often viewed as pro-poor and thus low profitability – far more quickly and at a much larger scale than they would otherwise be capable of doing.

In the cases of market failures such as this, local companies often have great ideas but cannot afford to scale them quickly. Development actors can use their valuable but

limited resources as catalysts and multipliers, enabling scalable innovations and growth that is critical to advancing transformation in critical industries that are essential to Malawi's food systems and broader economic transformation as prioritized in Malawi 2063 and Ireland's A Better World policy.

Based on this success, GPP is planning a new round of partnerships to expand and accelerate its support for Malawian soil health companies, as the need for their products is enormous. GPP works with several large agricultural companies in Malawi, each of which partners with a network of small outgrowers. Five of these partners (working with about 11,000 small farmers) could consume approximately 1400 MT of organic fertilizer each growing season, blending organic and synthetic fertilizer to create the optimum treatment for chilis, cotton, vegetables and groundnuts. While Speedy's and EgoGen (producing over 2000 MT a year under their highest estimates) can meet demand from these five agribusinesses and their outgrowers, this is small portion of the overall amount required to fill the 325k MT in fertilizer demand that is not currently met by the Malawian government's input subsidy program.

To help meet this demand, the project's next stage will focus more on acceleration than incubation – these will be more mature companies (no startups) with more mature product development and demonstrated early commercialization, given the time remaining.

GPP is also looking at more systemic bottlenecks and priorities affecting the entry of new players and products as well as accelerating growth – particularly in quality assurance testing and registration and certification services – that have emerged as priorities based on its experience of partnering with soil health companies.

## Seven Tips for Partnering with Private Sector Actors

The GPP case illustrates several lessons for other development projects that want to emulate this approach.

**First**, it is important to shape the tender to attract the actors you want – GPP opened the opportunity to both early stage and more mature businesses. The more mature businesses (Speedy's and EcoGen) are moving much more quickly than the early-stage actors, BIL and BERL. In the next round, its support will be open only to the more mature group (this is also important considering that GPP is set to close in 2027).

**Second**, take due diligence seriously. As stewards of public funds, development actors have a duty to ensure that they are using resources responsibly. Programs should take the time to thoroughly explore ownership and management structures of potential partners, troubleshooting for conflicts of interests and other issues. A failed partnership

that is due to market conditions is acceptable, but failure that is due to mismanaged funds is not.

**Third**, expect widely varying performance and be flexible. BIL and BERL may be slow to take off, but they are still likely to make progress. At the same time, programs should not be afraid to cut a partner off if it is not performing (and likely to not improve) or the program have serious concerns around management and other key issues.

**Fourth**, require at least a 1:1 match, meaning that the partner must put provide at least equal funding for the partnership (expect more like 2:1 to 10:1 from the most serious and capable applicants). This isn't a sign that your funds are not necessary but an indication that a well-positioned actor is looking for a particular kind of partnership that you may be best placed to offer. It also demonstrates ownership by the partner, who puts "skin in the game" and will suffer a loss if the partnership fails.

**Fifth**, look for emerging opportunities to create larger, more systemic impact, like biological fertilizer testing services mentioned above. Smart programs look continuously, and these types of partnerships are golden opportunities to deepen the program team's understanding of significant constraints that impede the growth of whole sectors.

**Sixth**, be realistic about the level of upfront investment required to get things like this moving. Many programs require partners to invest first and seek reimbursement, but that is not always possible. Sometimes a program has to help make the first investment to get the partnership moving.

**Lastly**, work with your partners and their existing systems to efficiently track and report impact all along their value chain. Companies – even impact driven ones – are good at measuring profits but usually inexperienced at capturing impact. Impact reporting not only serves the program's reporting needs, but positions partners for future investment.

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<sup>i</sup> Employment in Agriculture - Malawi, World Bank:

<https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=MW>

<sup>ii</sup> From Tate Munro, Palladium

<sup>iii</sup> Expert opinion gathered from soil health actors during research for this study.

<sup>iv</sup> Calculation based on estimated cost of standard nitrogen application across one hectare.