GROW BIOINTENSIVE AGRICULTURE CENTER OF KENYA (G-BiACK)

EMPOWERING COMMUNITIES, TRANSFORMING LIVES

EVALUATION REPORT

SUSTAINABLE LIVELIHOOD EXPANSION THROUGH AGRO ECOLOGICAL PRACTICES, SEED SOVEREIGNTY AND SELF-SUSTAINABILITY.

2020 - 2025

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Master Gardener:

Sam Nderitu

Word From

The Director

The journey from 2020 to 2025 has been nothing short of extraordinary for us at the GROW BIOINTENSIVE Agriculture Centre of Kenya (G-BiACK). Through our Sustainable Livelihood Expansion project, which focuses on Agroecological Practices, Seed Sovereignty, and Self-Sustainability, we aimed to uplift rural livelihoods by implementing simple, regenerative, and accessible methods that rejuvenate both the land and the lives of the people. This is what we call The GROW BIOINTENSIVE Agriculture.

What started as a dream to support smallholder farmers 16 years ago has blossomed into a vibrant movement, now involving over 30,000 rural families who are actively practicing agroecology, saving and sharing indigenous seeds, and generally improving their livelihoods. These efforts are not just about food and income; they're about restoring dignity and fostering ecological balance.

This evaluation report highlights the real impact of our work: healthier soils, revived biodiversity, increased crop yields, and enhanced food sovereignty. Farmers, particularly women and youth, have stepped up as change-makers in their communities, leading the transition from synthetic inputs to sustainable, self-sufficient farming practices.

I take immense pride in how this project has prioritized local knowledge, community involvement, and ecological stewardship principles that are desperately needed in our climate challenged world. We've witnessed that even in resource-limited settings, transformation is achievable when individuals are equipped with the knowledge and tools that honor both culture and nature.

I want to express my heartfelt gratitude to our committed G-BiACK team, our partners, our donors, and most importantly, the farmers who have embraced this change and made this journey so impactful. This report stands as a testament to your resilience, creativity, and hope for a brighter future. Let's keep moving forward together towards a just, sustainable, and food-sovereign Kenya.

Always remember my Slogan: "If many little people, in many little places, do many little things, they will change the face of the world."

Enjoy the reading

Samuel Nderitu
Founder & Director, GROW BIOINTENSIVE Agriculture Centre of Kenya (G-BiACK)
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About The GROW BIOINTENSIVE Agriculture Centre Of Kenya G-BiACK

The GROW BIOINTENSIVE Agriculture Centre of Kenya (G-BiACK) is a community non governmental organization established in 2008 to champion Agroecological agriculture that restores the environment, builds resilient livelihoods, and advances social justice. Based in Thika, Kenya, G-BiACK serves smallholder farmers across Kiambu, Machakos, Murang'a, and other counties, while also providing training and technical support to organizations throughout East Africa.

What we do

G-BiACK promotes the GROW BIOINTENSIVE® method, a highly sustainable, low cost, soil building approach to farming that emphasizes composting, deep soil preparation, intensive planting, carbon and nutrient crops, crop rotation, intercropping, and seed saving. These practices enable farmers to grow more food on small plots while conserving water, regenerating soil fertility, and reducing dependence on synthetic inputs.

Over the years, G-BiACK has trained over **30,000** farmers, equipping them with practical skills to increase yields, improve nutrition, and generate income. The center operates demonstration gardens, a seed bank preserving traditional and heirloom seeds, and a network of Satellite Farmer Training Centers, where lead farmers share knowledge with their communities.

G-BiACK's Core Areas of Focus

1. Agroecology, Soil Health, and Seed Sovereignty

Promote Agroecological Farming Systems: Enhance soil fertility and food production through the GROW BIOINTENSIVE farming practices such as composting, crop rotation, and organic pest control.

2. Community Empowerment and Inclusive Livelihoods

Equip Youth and Women with Skills: Provide practical training in agroecology and alternative livelihoods (e.g., tailoring, ICT, nutrition) to strengthen self-reliance and leadership.
Support Economic Resilience: Facilitate access to markets, cooperative development, and diversified income opportunities for smallholder farmers.

3. Research, Climate Resilience, Conservation, and Innovation

Advance practical environmental Solutions: Promote reforestation, water conservation, and adaptive practices that build resilience to environmental shocks.
Foster Farmer Led Innovation: Conduct participatory research and verification trials and document best practices to drive evidence-based, community driven agricultural transformation.

GROW BIOINTENSIVE AGRICULTURE CENTER OF KENYA (G-BiACK)

EMPOWERING COMMUNITIES, TRANSFORMING LIVES

ABSTRACT

From 2020 to 2025, the project “Sustainable livelihood expansion through Agro ecological practices, seed sovereignty andSelf-sustainability”, aimed to transform rural ecosystems by promoting environmentally sustainable farming methods, conserving indigenous seed varieties, and diversifying income through livestock and apiculture. targeting over 3,000 farmers per year, the initiative successfully enhanced ecological resilience, improved livelihoods, and fostered community self-reliance.

Key achievements include widespread adoption of Agro-ecological techniques, preservation of local seed genetic diversity, and the establishment of viable livestock and animal product enterprises, resulting in increased income, improved food sovereignty, security and ecological sustainability. As of July 2025, the project has laid a robust foundation for ongoing community-led agricultural development and climate adaptation, demonstrating the potential for integrated, eco-friendly approaches to sustainably elevate rural livelihoods.

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Executive summary

The *"Sustainable livelihood expansion through Agro ecological practices, seed sovereignty and Self-sustainability." project, implemented from 2020 to 2025*, aimed to empower rural communities with sustainable, eco-friendly, and diversified livelihood options. Targeting over 3,000 farmers per year, the project focused on promoting environmentally sound agricultural practices, conserving indigenous seed varieties, and establishing sustainable livestock and its products enterprises to enhance income and resilience against climate change and market fluctuations. Throughout the project period, significant progress was made in shifting farmers towards Agroecology, leading to increased crop yields, improved soil health, establishment of community learning seed banks, increased demonstration farms, increase in adoption of agroecological practices, Nutrition and a reduction in synthetic chemical dependency. Conservation initiatives successfully safeguarded over 500 native seed varieties, ensuring genetic diversity and climate resilience. The development of poultry, goat, and apiculture projects provided new income streams, boosting household livelihoods, food sovereignty and security. Extensive capacity building efforts strengthened local skills and awareness, fostering community-led sustainable practices. Despite challenges such as limited access to resources, climate change and market linkages, the project demonstrated the feasibility and benefits of integrated, eco-centric approaches to rural development. As of July 2025, the project has laid a strong foundation for ongoing community empowerment, ecological sustainability, and economic resilience, serving as a model for sustainable agricultural advancement and livelihood diversification in similar contexts.

Introduction

In the face of mounting environmental challenges, climate change, and the increasing demand for sustainable food systems, the need to foster resilient and eco-friendly livelihoods has never been more critical. The project Sustainable Livelihood Expansion through Agro-Ecological Practices, Seed Sovereignty, Self-Sustainability, and Livestock (2020-2025) aims to empower rural communities by promoting sustainable agricultural methods that enhance productivity while preserving biodiversity and natural resources. This initiative focuses on integrating agroecological practices, ensuring seed sovereignty, and encouraging self-sustaining approaches in livestock management including poultry, goats, and apiculture projects to build resilient livelihoods. Through participatory approaches, capacity building, and the promotion of traditional knowledge and innovations, the project seeks to contribute toward a more sustainable, equitable, and self-reliant agricultural landscape. Its overarching goal is to create a model of livelihood resilience that can serve as a blueprint for sustainable rural development and poverty reduction in the region over the coming years.

Objectives

☞ ***Food sovereignty:*** ***to have increased production, using ecological agriculture practices, spreading within the communities that G-BiACK is working in or has worked in.***

☞ ***Seed sovereignty***: to have active exchange of a diversity of indigenous seeds as part of the movement towards seeds sovereignty in all the communities G-BiACK works with.

☞ ***Environmental conservation:*** to strengthen respect for the environment in the target communities so that they are increasingly adapting and spreading environmental conservation methods

☞ ***Women and youth programme:*** to have strengthen the programmes in the target communities giving women and youth groups practical skills and hope and to design a program to take this experience to different communities.

☞ ***Centre Development: :*** *to have a viable educational centre that inspires, equips and transforms farmers and other visitors to implement and scale up ecological agriculture in Kenya and to contribute to the well being of Gatuanyaga community.*

☞ ***Collaboration and networking:*** : to increase G-BiAK's impact through collaboration and networking.

☞ ***Organizational development:*** To have an empowered organization that is able to drive itself in a more sustainable way and to have a diversityof crops.

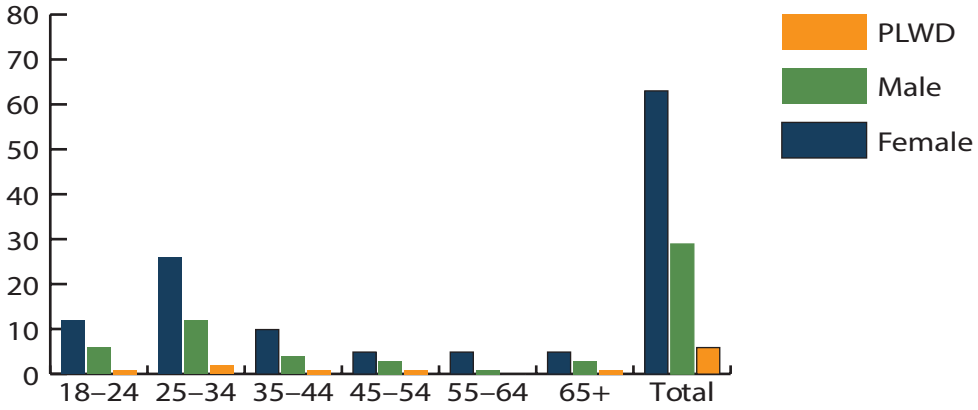
Methodology

The project employed a participatory, action-oriented approach to ensure meaningful engagement of local communities and stakeholders at each stage. To begin, baseline assessment was conducted using methods such as household surveys, focused group discussions (FGDs), key informant interviews, and participatory rural appraisals (PRAs). These methods helped to gather comprehensive data on existing agricultural practices, seed varieties, livestock project, resource availability, and community priorities.

Training and capacity-building utilized hands-on demonstrations, participatory learning sessions, and field days, enabling farmers to adopt agroecological techniques, seed-saving methods, and sustainable livestock management practices. Demonstration plots and model farms were established for practical learning and replication. To promote seed sovereignty, some community seed banks were set up and managed through participatory seed multiplication activities. Livestock activities were involved through distribution of the small livestock i.e. poultry, goats, bee hives, animal health management workshops, and farmer-led experimentation, supported by veterinary services. Monitoring and evaluation have been involved through participatory tools such as community scorecards, regular field visits, progress tracking sheets, and impact assessments. These methods facilitated adaptive management, allowing the project to refine strategies continuously and ensure sustainable impact.

Findings

Gender, Age, and Inclusion in Agroecological Practices



☞ **68%** of the female are actively involved in agroecological practices, seed saving, family provision and livestock management.

☞ **32%** of the men are actively participating agroecology practices, seed saving and livestock management.

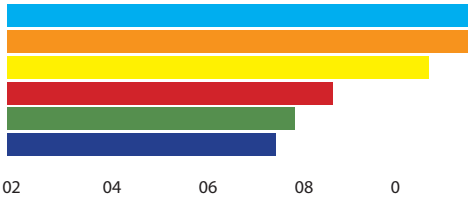
☞ Most of the farmers involved fall within the 25–34 and 65+ age groups

☞ Persons Living With Disabilities (PLWD) are also represented though in smaller numbers, showing that inclusion efforts are underway within agroecological and seed-related activities.

☞ Finding 1: 78% of participating farmers successfully adopted agroecological methods such as composting, crop diversification, farm yard manure and organic pest control.

☞ Finding 2: Yield data indicates a 25% average increase in crop productivity among participants who adopted agroecological practices.

Agroecological practices



Crop rotation
Use of Compost
Cover cropping
Use of local seed varieties
Conservation Tillage
Integrated Pest Management

☞ 30% of agroecological demonstration sites have been established, incorporating key GROW BIOINTENSIVE practices such as diversified cropping in close spacing, compost-making using on-farm materials, application of well-prepared farmyard manure, biological pest management, integration of beneficial herbs, on-site seed saving, and agroforestry for long-term soil fertility and climate resilience.

Seed Sovereignty

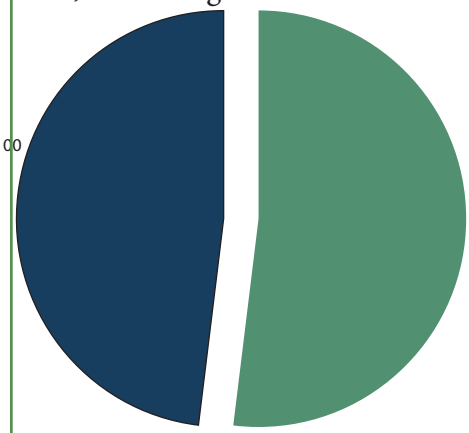
☞ Finding 4: 68% of households now produce and save their own seeds, reducing dependency on external seed suppliers.

☞ Finding 5: The project established 3 community seed banks, ensuring preservation and access to indigenous and resilient local seed varieties.

Self-Sustainability

☞ Finding 6: 70% of participating households report increased income stability due to diversified farming and alternative income sources, such as increased crop yields and poultry farming.

☞ Finding 7: Household assets, including tools and livestock, have increased by an average of 30%, enhancing resilience.

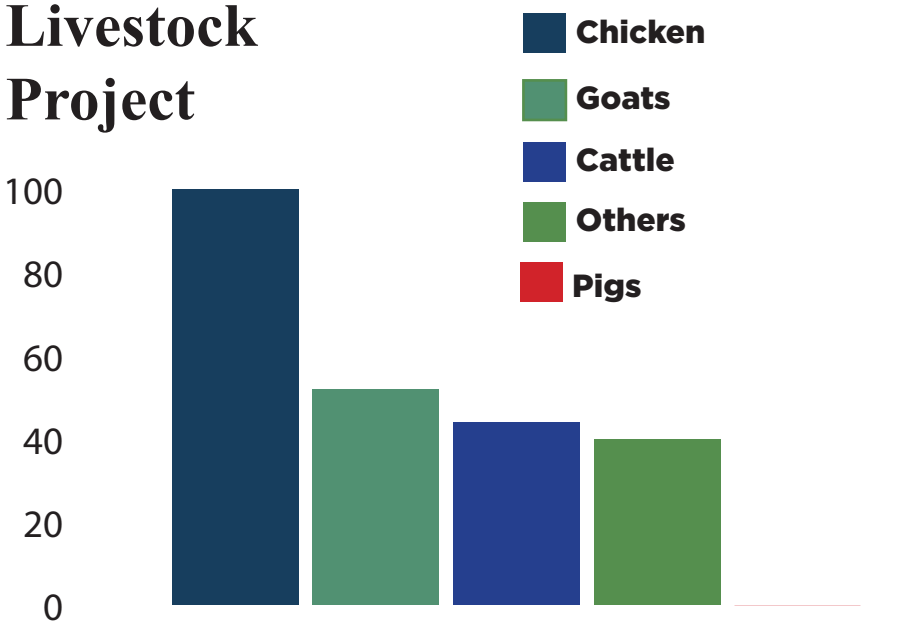


☞ **52%** slightly improved from convectional farming system to agroecology and sustainable farming practices, seed saving and small livestock production.

☞ **48%** significantly improved their farming practices adoption to agroecology and sustainable practices, seed saving and small livestock production.

Slightly Improved
Improved Significantly

Livestock Project



☞ Poultry: **100%** of households now rear indigenous chickens, yielding report increased protein intake, manure and additional income.

☞ Goats: **45%** of households rear small herds, with benefits including manure for compost and income from sales.

☞ Apiculture: One beekeeping group have been formed, with 18 beehives distributed, **30%** of hives has been accommodated with bees.

☞ Others: **5%** and **1%** of household's rears rabbits and pigs consecutively for the purpose of manure, income and food.

Results

☞ The project contributed to a 35% reduction in food insecurity among participating households.

☞ Key livelihood activities now include diverse crop production, indigenous seed saving, poultry rearing and management, goat rearing, and bee keeping

☞ The local community seed banks and agroecological practices have improved biodiversity, human health, income, and environmental health.

☞ The project has influenced and perceived nutrition status through diverse and health foods, increased meal intake per day and reduction of the malnutrition amongst the households.

☞ The project has increased self-sustainability amongst the communities through diverse farming methods, increased crop yield, increased soil fertility, reduction of external inputs and maximum land use.

☞ Farmer managed seed systems have increased understanding of seed laws and policies, self reliant timely planting, climate resilience, adaptation and pest control amongst the food systems.

☞ Agroecological products has created demand amongst the consumers preference and choices, created markets opportunities due to their nutrition status and value.

Outcomes

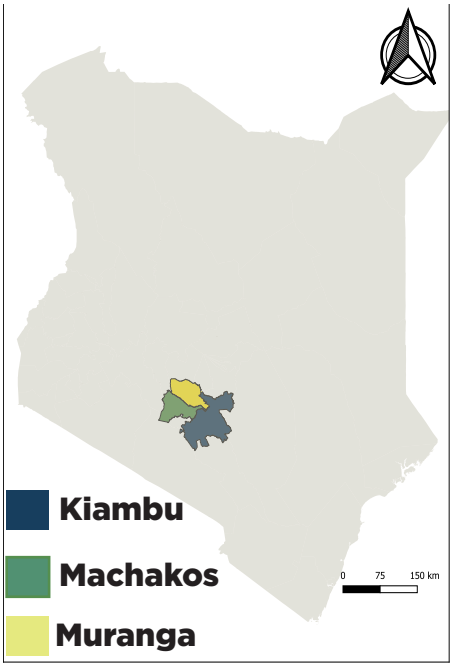
Short-term outcomes:

Increased adoption of agroecological practices, seed sovereignty, and livestock rearing among **80%** of targeted households within five years.

Long-term outcomes:

Enhanced household resilience, food sovereignty and security, and income levels, with some communities reporting a **50%** increase in overall household income by 2025.

Counties



Discussion

One of the key successes of the project has been the widespread adoption of agroecological practices among smallholder farmers. The promotion of Biointensive farming, integrated pest management, and diversified cropping systems has resulted in improved soil health, increased crop yields, and enhanced resilience to climate variability. Participants reported increased income levels and food sovereignty and security, indicating the positive socio-economic impact of these practices.

Seed sovereignty initiatives have successfully empowered local communities to conserve and multiply indigenous seed varieties, reducing dependence on external inputs and fostering biodiversity. This has contributed to the preservation of traditional agroecological knowledge and increased farmers' resilience to pests, diseases, and climate shocks.

The livestock component, including poultry, and goats, has diversified household income sources and improved nutritional intake. The training and support provided for sustainable livestock management have reduced environmental footprints and enhanced animal health, leading to better productivity.

Challenges Faced

Despite these successes, several challenges have emerged. Limited access to financial services, water shortage, pest and diseases, labor intensive, inadequate manpower and markets for farmers has restricted scale-up and sustainability of productive practices. In some regions, infrastructural deficits, such as inadequate transportation and storage facilities, hindered the efficient marketing of produce and livestock products.

Moreover, knowledge gaps persist, especially regarding advanced agroecological techniques, value additions, ecological pest management, liquid manures and integrated livestock management. The need for continuous capacity building and extension support remains critical to ensure long-term adoption and sustainability.

Climate change and unpredictable weather patterns continue to threaten the stability of agricultural and livestock systems, underscoring the importance of adaptive strategies integrated into project activities.

Conclusion

The project has made significant progress toward expanding sustainable livelihoods through agroecology, seed sovereignty, and livestock project. Adoption rates are high, and the tangible economic and environmental benefits demonstrate the potential for long-term community resilience.

Recommendations

- ☞ Strengthen capacity-building on advanced agroecological techniques.
- ☞ Expand seed bank networks to cover more regions.
- ☞ Develop markets for local agroecological products, honey, and livestock.
- ☞ Facilitate more Trainings on livestock managements and veterinary services
- ☞ Monitor and evaluate long-term ecological impacts and household income trends.
- ☞ The incubator in Githima project should be relocated to the other poultry project.
- ☞ Facilitate storage tanks for rain water harvesting.
- ☞ Facilitate soil testing and analysis amongst various farmers farms.
- ☞ More farmer led research farms to be established.
- ☞ Documentation of farmers success stories.
- ☞ Facilitate water conservation training in semi-arid areas.

Appendices

Crop diversification in agroecology is crucial for promoting biodiversity, improving soil health, and enhancing ecosystem resilience. It reduces the risks associated with crop failure by spreading economic and production risks, while naturally managing pests and diseases by disrupting their life cycles Additionally, it optimizes resource use, supports sustainable farming practices, and increases resilience to climate change, ultimately fostering more sustainable, stable, and productive farming systems.

Seed sovereignty is critically important for climate resilience and adaptation, as it empowers farmers and communities to retain, control, and select their own seeds that are well-suited to local environmental conditions and changing climate patterns. By preserving locally adapted seed varieties, seed sovereignty enhances genetic diversity, which is vital for building resilience against pests, diseases, and extreme weather events. It ensures access to diverse, climate-resilient seeds that can withstand droughts, floods, and other climate stresses, thereby reducing dependency on external seed sources and hybrid or patented seeds vulnerable to climate variability. Ultimately, seed sovereignty strengthens community resilience, promotes sustainable agricultural practices, and supports the long-term security of food systems in the face of climate change.

Composting is a vital environmental practice that helps reduce waste, conserve natural resources, and promote sustainability. By recycling organic waste such as food scraps and yard debris into nutrient-rich compost, it minimizes the amount of refuse sent to landfills, thereby reducing methane emissions and lowering greenhouse gases. Composting also enhances soil health by improving its structure, water retention, and fertility, which benefits plant growth and agricultural productivity. Moreover, it promotes a circular economy by transforming waste into a valuable resource, fostering eco-friendly habits, and supporting biodiversity. Composting is an essential activity that contributes to a healthier planet, sustainable agriculture, and a cleaner environment.

Pumpkin bumper harvests can be effectively achieved using agroecology practices that emphasize soil health, biodiversity, and natural pest management. Techniques such as crop rotation, composting, and intercropping help improve soil fertility and structure, providing optimal conditions for pumpkin growth. Integrating cover crops and maintaining natural habitats attract beneficial insects, which naturally control pests and reduce the need for chemical pesticides.

In arid and semi-arid (ASAL) areas, agroecology practices are particularly crucial for building climate resilience due to the region's extreme weather conditions and resource constraints. These practices include water harvesting and conservation techniques, the use of drought-tolerant crop varieties, agroforestry, and soil moisture retention methods, which help optimize limited water resources and improve land productivity. Additionally, promoting mixed cropping can enhance resilience by diversifying income sources and reducing vulnerability to climate shocks, improving food security, and increasing the overall resilience of communities to climate variability.

Biointensive Agriculture For Schools (Bas)

The following nine schools have been supported in establishing GROW BIOINTENSIVE gardens, with the aim of enhancing food security for their school kitchens and introducing students to sustainable agricultural practices: Munyu Mixed Secondary School, Munyu Primary School, Maria Magdalene Special Needs School, Chania Primary School, Ngoima Academy, Ngoliba Primary School, Kilimambogo Primary School, Gatuanyaga Primary School, and St. Paul Secondary School, Ndonyo Coffee Primary School, Kwamutu Primary School and Kitambasie Primary School.
These school gardens supplement meals for students and also serve as practical learning spaces where children gain hands-on experience .

Planet Savers Programme with schools and farmers.

Our Planet Savers Programme continues to grow seedlings and help G-BIACK distribute them to farmers and schools. In 2022, 820 Moringa tree seedlings were distributed to more than 500 farmers. Moringa is a special tree species which contains high amounts of vitamins A, B, and C, as well as proteins and minerals. All parts of the tree are edible and cake made from Moringa seeds is used to purify drinking water. Carefully managed Moringa trees can add a lot of nutrition to the family diet.

be.cause New Partnership

For many of the kids we work with and their families, these shoes make a big difference. Some walk long distances to school, often barefoot or in worn-out shoes. Having a comfortable, durable pair not only protects their feet but also gives them confidence and dignity, and as a result,

the financial burden that comes with purchasing this necessity is lifted from our communities.
The partnership has been a big support, especially through our Biointensive Agriculture for Schools program.

Thanks to The Shoe That Grows, kids can come to school with shoes that fit and last, which helps them focus on learning and fully take part in hands-on farming lessons.

Our work

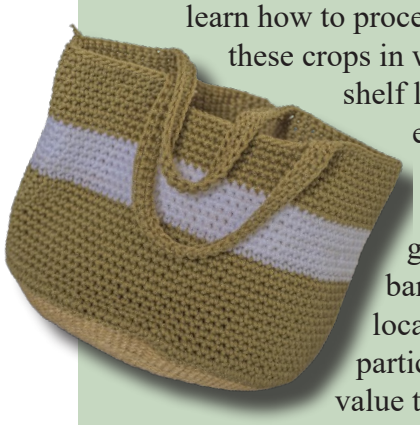
Pairs distributed	Schools impacted	Partnering since
589	4	2023

Youth Empowerment Program

Since 2020, the Youth Empowerment Program at G-BiACK has been aiming to equip youth in practical skills, knowledge, and values in the agroecological model and GROW BIOINTENSIVE farming. The report looks back at five years of activities carried out, growth, challenges, and lessons learned, and highlights a few achievements which includes training **300** Youths. The youths live at G-BiACK for 18 months to learn life skills that can ensure they can live self-reliantly. They learn the same organic soil regenerative agriculture methods that we teach to farmers. The YEP course includes a 3-month internship to prepare the students to initiate community projects introducing the GROW BIOINTENSIVE methods they have learned.

The young men and women also learn skills for income generation, including sewing, bead work, baking, cookery, food preservation, and value addition. They are also trained in computer skills and general computer literacy, enabling them to navigate the digital world for both personal development and entrepreneurship. In addition, the program includes life skills education that covers health and hygiene, basic sick patient care, nutrition, and awareness and prevention of HIV/AIDS and other STDs.

The students are also encouraged to develop soft skills such as communication, problem-solving, teamwork, and leadership, which are essential for both employment and community engagement. The training is designed to be holistic, equipping students with practical know-how, confidence and mindset needed to thrive in real-life situations.



The program is also teaching on how to add value to the food crops they produce, such as sweet potatoes, cassava, bananas, sorghum, and maize. Participants learn how to process, package, and prepare these crops in ways that increase their shelf life and market appeal. For example, they are taught how to make cassava and sweet potato flour, sorghum porridge mix, and banana crisps using low-cost local equipment. In addition, participants learn how to add value to items like clothing and baskets using locally available materials, such as beads and natural dyes. The products are then sold more profitably at the marketplace, local fairs, and even through online platforms..

Featured: Students doing a group project that involves creating an Information Management System in the computer lab.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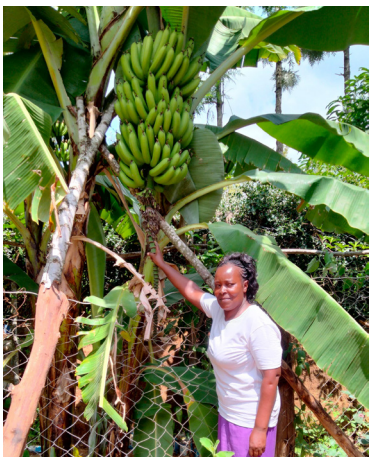
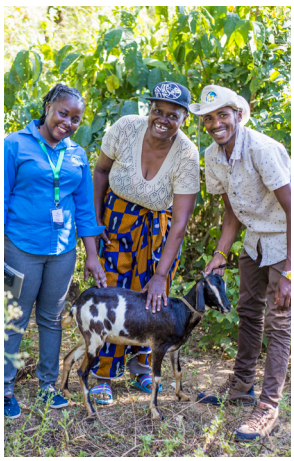
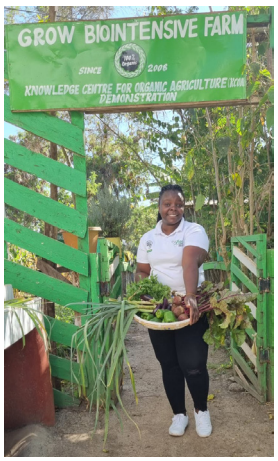
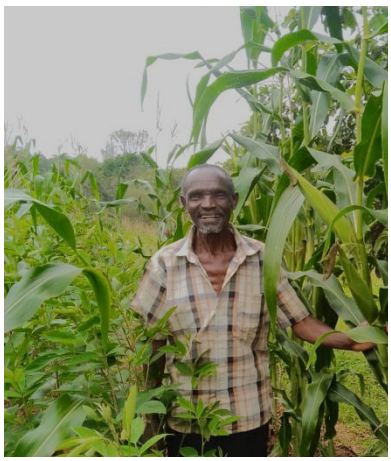





GROW BIOINTENSIVE FARM
SINCE 2006
KNOWLEDGE CENTRE FOR ORGANIC AGRICULTURE
DEMONSTRATION



GROW BIOINTENSIVE AGRICULTURE CENTER OF KENYA (G-BiACK)

EMPOWERING COMMUNITIES,TRANSFORMING LIVES

Vision

Thriving communities with a healthy environment, healthy people, meaningful employment, and fulfilled lives.

Mission

To cultivate empowerment and self-reliance within communities, leading to enhanced food sovereignty,

Our Strategic Objective

- ☞ Promote Food, Seed & Environmental Sovereignty.
- ☞ Empower Women, Youth & Communities through Agroecology.
- ☞ Expand Sustainable Practices & Learning Hubs.
- ☞ Strengthen Market Access & Local Economies.
- ☞ Build Institutional Capacity

Our Core Values

- ☞ Dignity and Autonomy.
- ☞ Community Led Growth and Empowerment.
- ☞ Celebration of Diversity and Indigenous Wisdom.

Report Prepared by G-BiACK Program Officers.

Lucy Mweche
Advocacy & MEAL.

Kennedy Namdogo
Climate resilience & research.

Mary Gitau
Staff Welfare and Matronship.

Collins Chibole
Outreach.

Kennedy Mburu
Communication & IT.

Email: info@g-biack.org
Tel: +254 720 323134
Thika, Kenya