

Dear reader,

THROUGHOUT THE YEAR 2025, Biovision Africa Trust has been working in various counties, providing solutions to challenges faced by farmers; building the capacity of both the young and the aged to surmount challenges on the farm and maximizing opportunities for income generation. This edition features some of these impact stories, coming from Nyandarua, Machakos, Busia, Bungoma, and Nakuru Counties. In Nyandarua County, farmers from Kinangop express gratitude for being empowered with the knowledge on how to manage snails and slugs, which have for a long time been ravaging their crops, affecting their quantity and quality of yield.

In Machakos County, learners from Kyanguli Primary School demonstrate the outcome of continued training by a BvAT's extension officer. Through practical learning, they are now skilled in using agroecological techniques to conserve moisture, rejuvenate strained soil, and maximize small spaces for production.

A farmer in Busia County has transformed from a struggling smallholder to a respected organic farming champion, thanks to the digital resources provided by Biovision Africa Trust. His once-ordinary farm is now a model of success that draws in neighbours eager to learn, turning him into a trusted community trainer.

A farmer group in Gilgil, Nakuru County, which once comprised members of meagre means, is now a thriving group of entrepreneurs, running dairy goat enterprises, thanks to training by a BvAT extension officer.

Read on for these inspiring stories and many more.



SEED SHARING

The ban on unregistered seed sharing has been lifted!

Farmers can now preserve and share seeds freely

By Erdly Agona

FARMERS HAVE BEEN waiting with bated breath for the ruling on seed sharing. Since the ban on the sales and sharing of unregistered seeds, farmers have been unsettled on the matter, hoping that the verdict will someday be challenged.

The ban stipulated penalties of up to two years in prison and a fine of up to one million shillings for anyone who distributed unlicensed seeds. However, this was overturned on 27th November 2025, by the Machakos High Court declaring that the ban on unregistered seed sales and

sharing violates constitutional law. Following this ruling, it is therefore legally acceptable for farmers and seed bankers to share seeds. The move has been celebrated primarily by the small holder community, and other practitioners in the agroecology space, as it opens opportunities for safeguarding indigenous seed heritage.

The court established that traditional seeds and farmer seeds have the same value as commercial seeds. Indigenous seeds naturally adapt to local soils, pests, and weather patterns, reducing the need for chemical use. Farmers who use these seeds can reduce their costs while adopting environmentally friendly farming practices that help combat climate change.

The court's decision protects our nation's cultural heritage. Seeds serve as more than food sources because they are reminders of a community's history and may serve as emblems of cultural identities. Indigenous varieties represent the resilience and cultural wisdom of past generations who propagate them through culturally developed selection and preservation methods; they tell a story of survival over periods of drought. Communities have maintained seed preservation and exchange as their traditional means of transmitting knowledge between successive generations.

The new law creates an enabling environment for communities to establish seed banks and farmers to exchange seeds while sustaining the posterity of the native crops. This serves as a reminder that food exists beyond market regulations; it is an integral part of human existence, sewn in the fabric of man's identity, history, and sustenance.



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icipe drives safe tomato farming in Narok county

Organic farm inputs and quality seedlings now within reach at affordable prices. PAGE 7

SEED SELECTION

Seed selection technique that turned fortunes for Kangundo farmer

By Miriam Makato

PURCHASING CROP SEEDS is one of the problems farmers encounter in the 21st century, according to FAO (this is Problem 15). The solution to that problem is practicing on-farm seed selection, saving, and sharing. Farmers have embraced seed saving through on-farm seed banks, and also community-owned/farmer-group-owned seed banks. Seed sharing can be through selling to other farmers or exchanging seeds with farmers. Farmers are trained on the seed selection process to ensure that they have quality seeds for planting.

Edward Mwikya Mating'i is a maize farmer based at Uamani Village, Kangundo North ward in Machakos County. He has a one-acre farm on which he grows maize. He uses 16 kilograms of maize seeds (Kenya Seeds DH04) per season for the farm, and a kilogram of the seeds costs Ksh 500. He is a member of Kamatu Hass Avocado Farmers-Ndunduni, who were trained by Biovision Africa Trust on seed selection, saving, and sharing. Edward decided to select maize seeds in the April 2025 rainy season.

In the maize farm, the crops that showed vigorous growth and tasseled early were selected. Colored tags were placed on the stems of the maize crops for easy identification. The selected plants were harvested earlier than the other maize crops, dried, shelled, and winnowed. Storage was done in airtight storage bags. It can also be done in storage containers and kept airtight. Edward harvested 1.5 bags of maize to use as seed.

"I did not purchase seeds to plant for the October rains; I used the ones I had saved. This cut the production cost in the farm", he says. He also sold the seeds to members of the Kamatu Hass Avocado Farmers -Ndunduni at Ksh 200 per kilogram. 10 farmers purchased the maize seeds, with quantities ranging from 1 to 5 kilograms.

"After selling the seeds to other farmers and planting, I have half a bag (45 kilograms) in storage. This will be used in the April rains next year. The seed selection process will also continue in the October rainy season. I do not plan on purchasing seeds from Agrovet. I will be using what I have selected and stored, and also purchase from other farmers who have the traditional varieties", Edward says in a very joyful voice.

Other farmers can adopt seed selection and saving methods for various crops, such as maize, beans, cowpeas, pigeonpeas, and vegetables. For crops such as cassava and sweet potatoes, vines and cuttings can be selected and grown near a water source for multiplication, and later planted after the onset of rains. Seed selection and saving help preserve our traditional varieties and cut production costs on the farm. Through this, farmers will achieve food security.

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AGROECOLOGY

Kyanguli Primary School Pupils Lead Agroecology Shift in Schools

When this year's Grade 6 national exam (KJSEA) included questions on these technologies, our students were well-prepared

By Caroline Mwendwa

FOR THE PAST six months, Anthony Musili, an officer from Biovision Africa Trust, has been more than just a visiting trainer at Kyanguli Primary School; he has become a familiar presence in the dusty pathways and makeshift gardens that now dot the school compound. Musili works shoulder-to-shoulder with the pupils in Ngalani, Machakos County, guiding their small hands through practical agroecological techniques. Under his mentorship, the children have transformed patches of bare ground into living classrooms. They can now comfortably dig Zai pits, build cone gardens, and prepare double-dug beds, techniques that enhance resilience in food production. These are key lessons for survival in a region where every drop of water counts and the effects of climate change are affecting livelihoods significantly.

The impact is already visible in the classroom. According to the school's headteacher, the training has strengthened academic performance as well. "When this year's Grade 6 national exam Kenya Primary School Education Assessment (KJSEA) included questions on these technologies, our students were well-prepared because they had learned the reasoning behind them and practically participated in making them."

The project's success is also attracting attention from other partners. "When an organization that is looking to support schools sees a school with already established projects, they are able to perceive the felt needs, and can see clearly where to put resources," says Musili.



When an organization that is looking to support schools sees one with established projects, they are able to perceive felt needs, and can see clearly where to put resources

For example, a new partner has already expressed interest to support the school with a water tank to harvest rainwater for use, during the dry season.

Additionally, with the understanding that there are different ways of planting to conserve moisture, and maximize space, learners are now keen to see how their parents are doing farming at home, with eagerness to share what they have learned.

"Parents are learning from their children and can come and witness how these technologies are working from the school demos," he says. According to Musili, involving an external extension officer in training pupils on agroecological practices creates an opportunity for learners to expand their knowledge beyond what is outlined within the syllabus.

"Learners whose classwork requires them to undertake a project in poultry, will be trained on other aspects such as vegetable gardens, rabbit keeping, water harvesting and so on," he says.

Beyond academic success, constructing these technologies gives learners the opportunity to work together to innovate new solutions hence boosting their critical thinking and problem-solving skills. In Kyanguli Primary school, the agricultural sessions offered by Musili have triggered a change of mindset. Teachers have reported a change of perception among learners, especially on farming.

"Learners are now enjoying agricultural activities, as they are eager to see the outcome of creating these techniques in the farm," says the headteacher. As agroecology takes root across Kenya, empowering young learners with these skills is fast becoming one of the strongest foundations for resilient, climate-smart communities. cmwendwa@biovisionafrica.org



AGROECOLOGY

Presenter Patrick "Jeraha" Champions Agroecology in Busia



By Erdly Agona

WHEN FARMERS IN Busia County tune in to Emuria FM, they don't just listen to music and news, they also learn how to improve their farms and health through agroecology. Behind the microphone is Patrick Okumu, widely known by his listeners as Jeraha, a presenter and reporter who has become one of the station's strongest advocates for sustainable farming. Patrick's passion for agroecology was sparked after attending a training organized by Biovision Africa Trust. "Through my field reporting and agricultural programs, I was invited to a training on agroecology by BvAT, from which I learned that farming could be done differently through organic practices, climate awareness, and ecological solutions," he says.

Before that, his reporting mostly covered conventional agriculture. Now, his stories highlight composting, mulching, crop rotation, and organic alternatives to chemical inputs. He also connects farming to public health, producing stories on how nutrition helps tackle diseases like diabetes and high blood pressure. Listeners have responded positively. Farmers no longer burn crop residues; instead,

they turn them into compost, while others have embraced fish farming for both income and nutrition. "Many farmers tell me they learned about these practices from Emuria FM programs and our WhatsApp platforms," Patrick says.

Still, challenges remain. He points out that government distribution of synthetic fertilizers, while limited access to soil testing services slows progress. High poverty levels in Busia also make it difficult for farmers to access agricultural support, and for journalists like Patrick, transport and equipment costs remain hurdles. Yet, his work continues to open doors. Today, he is frequently invited by farmers' groups, the County Agriculture Department, and NGOs to cover agricultural events. "It shows the trust we've built around agroecology reporting," he says.



If these trainings continue, more communities will adopt agroecology, and we, as journalists, are ready to spread the message

Looking forward, Patrick calls for more mentorship, advanced training, and support with tools such as cameras and transport to strengthen his reporting. His message to fellow journalists is simple: "With climate change and environmental challenges, agroecology is the way forward. Reporting on it doesn't just inform, it changes lives."

He also extends appreciation to Biovision Africa Trust and the Swedish Society for Nature Conservation (SSNC) for their support. "They have opened our eyes. Even at home, I now practice organic farming, mulching, crop rotation, and soil-friendly methods. If these trainings continue, more communities will adopt agroecology, and we, as journalists, are ready to spread the message."

INNOVATION

New Mobile App Simplifies Tracking of Black Soldier Fly Production

Black soldier fly (BSF) farmers now have a new digital partner in their farming journey. The International Centre of Insect Physiology and Ecology (icipe) has launched DuduFarm Hub, an AI-powered mobile application designed to help farmers efficiently manage and monitor BSF larvae production.

Available on the Google Play Store, the app enables farmers to track the full development cycle of their larvae and clearly know when each batch is ready for harvest. By combining artificial intelligence with local farming knowledge, DuduFarm Hub provides practical, farmer-friendly support to help make BSF enterprises more productive and profitable.

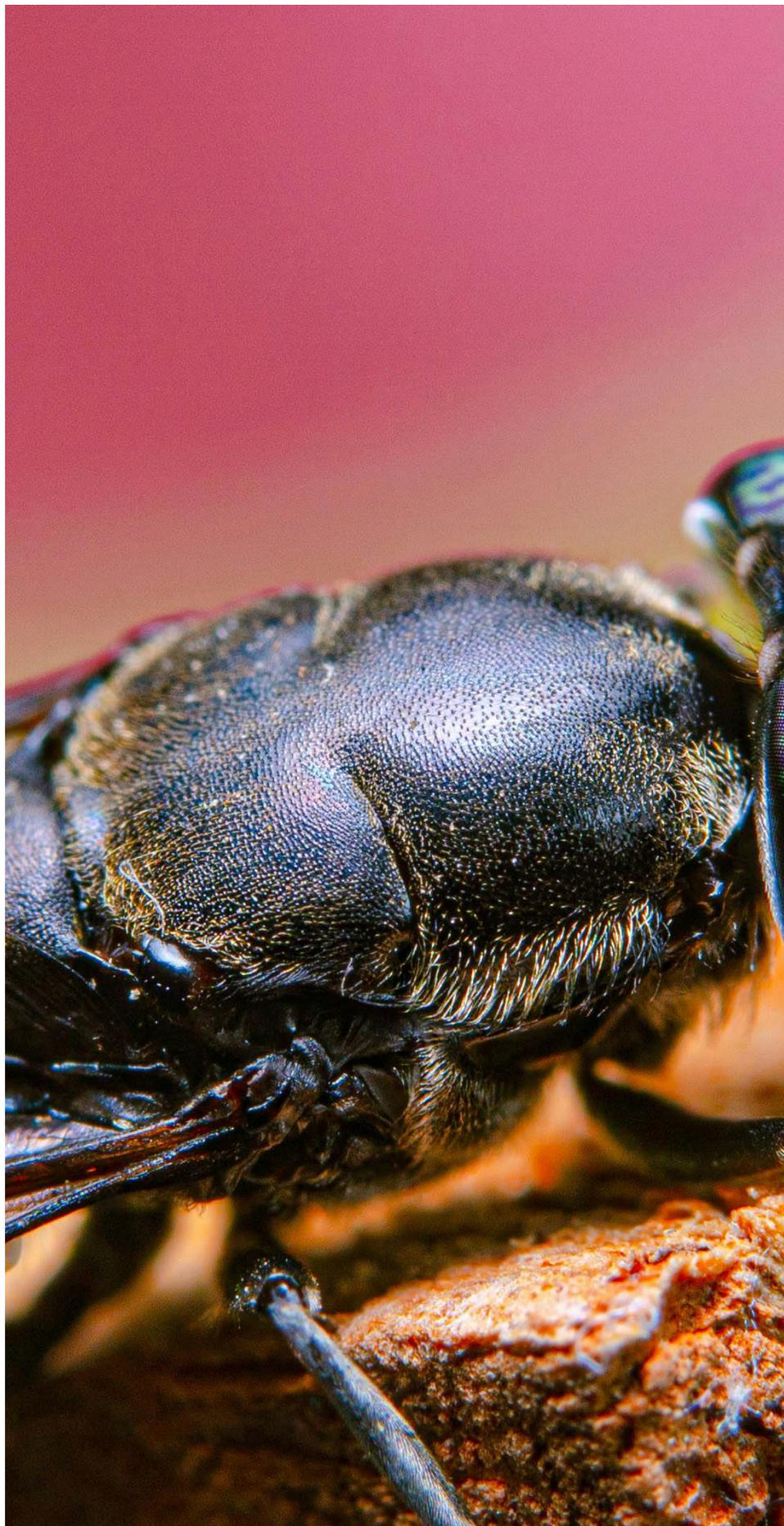


Key features include an interactive chatbot that offers instant advice on BSF management, step-by-step learning modules tailored to Kenyan farmers, and a batching tool that helps plan and schedule harvests accurately

Key features include an interactive chatbot that offers instant advice on BSF management, step-by-step learning modules tailored to Kenyan farmers, and a batching tool that helps plan and schedule harvests accurately. Farmers can also share updates, exchange experiences, and learn from one another through the platform.

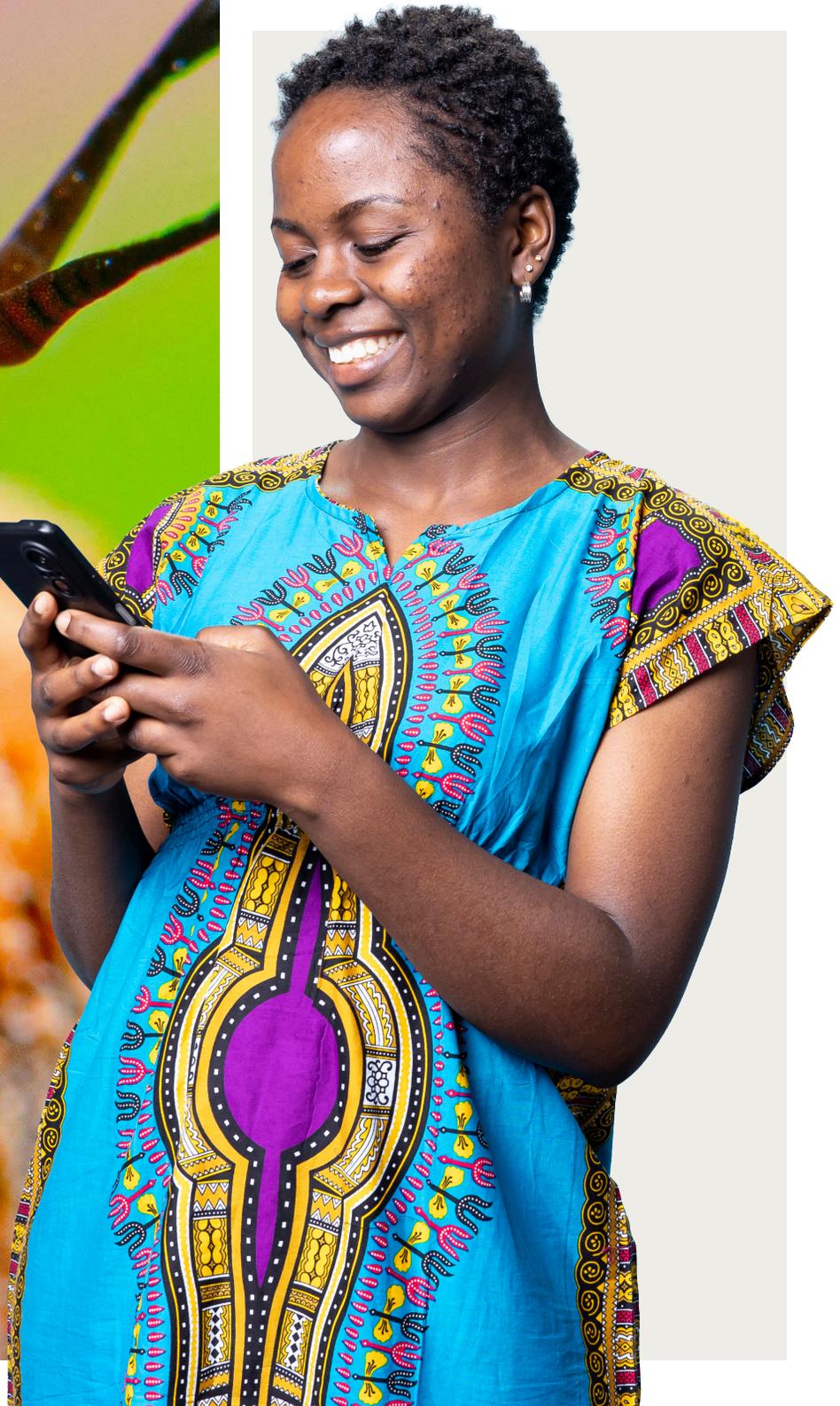
Importantly, the app works both online and offline, making it useful even in areas with limited internet connectivity.

To download DuduFarm Hub, visit the Google Play Store: <https://play.google.com/store/apps/details?id=com.icipe.dudufarmhub>





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FARMING SYSTEMS

Why Farmers Should Incorporate Sweet Lupins into Their Farming Systems

By Juma Godfrey

Forages form the backbone of livestock production, accounting for nearly 60–70% of total production costs. Yet, despite their importance, productivity remains low across much of Kenya. Forages fall into two main groups; energy sources such as Napier grass, brachiaria, and oats; protein sources such as lupins, sweet potato vines, tree lucerne, calliandra, and vetch. Most protein sources are leguminous forages, meaning they can fix atmospheric nitrogen in the soil, enriching it naturally. This makes them instrumental in sustainable and organic farming. Among these, sweet lupins stand out as a highly promising but underutilised option.

What are Sweet Lupins?

Sweet lupins (*Lupinus* spp.) are leguminous plants that offer immense potential to boost livestock productivity. In Kenya, the two most common species are blue lupin (*Lupinus angustifolius*) and white lupin (*Lupinus albus*). Despite their benefits, sweet lupin remains underused mainly due to limited access to seed and a lack of farmer awareness. Strengthening seed distribution systems and sharing knowledge about lupin cultivation could significantly increase adoption rates nationwide.

Ideal Growing Conditions for Sweet Lupins

Sweet lupins thrive under the following conditions:

- **Altitude:** 1,200–2,400 metres above sea level

- **Rainfall:** At least 700 mm annually, well distributed
- **Temperature:** Around 18°C; tolerant to low temperatures
- **Soil:** Well-drained, deep, and fertile, with light acidic to neutral pH

How to Grow Lupins

1. **Land Preparation:** Plough and harrow the land once or twice to achieve a fine tilth.
2. **Inoculation:** If planting on new land, mix seeds with a commercial inoculant or soil from a field previously planted with lupins to introduce rhizobium bacteria.
3. **Spacing:** 45 × 30 cm
4. **Fertiliser/Manure:** Apply 80 kg per acre of organic fertiliser and 2–4 tonnes of manure, well mixed into the soil.
5. **Planting:** Sow two seeds per hole, 2–3 cm deep.
6. **Seed Rate:** 12 kg per acre
7. **Weeding:** Conduct manual weeding and earth up crops regularly.



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Pest and disease management:

Common pests:

Aphids, spider mites, cutworms, budworms, and thrips are the common pests.

Apply good agricultural practices, use water mixed with soap to wash the pests, attract predators such as ladybirds to the field using coriander, sunflower, and marigold, or directly pick and destroy the pests.

Common diseases:

Fusarium wilt - Use clean seed, crop rotations, destroy infected plants, and optimum nutrient management, or use bio-agent such trichoderma-based products, e.g., trianum-P.

TECHNOLOGY

Farmer masters organic farming practices using smartphone

By Erdly Agona

Alex Mahanji, a resident of Shinyalu Village in Kakamega County, first met Field Officers Elias Biwott and Pamela Atieno during a visit to his community. “We were visited by our teachers, Madam Pamela and Mr. Biwott. They told us that if you want to learn more about farming, you must go digital. That’s where the knowledge is,” he recalls.

Their mission was to train farmers in organic farming practices to increase productivity and improve soil health. During the session, they introduced Alex to Biovision Africa Trust’s digital learning platforms, which provide farmers with agricultural

information via text messages sent to shortcode **40799**.

At first, Alex was skeptical of him; farming had always been about soil, seeds, and sweat, not screens and phone numbers. But that experience opened a new world for him. He began accessing lessons on organic agriculture, livestock management, and soil health through Biovision Africa Trust’s digital platforms.

The information was practical and easy to apply to his own farm. Today, his compound showcases different kitchen garden technologies, including conical gardens, sack mounds, and a Mandala garden filled with a variety of green, leafy indigenous

vegetables. He has also integrated repellent crops such as Mexican marigold and onions into the garden to help keep pests away naturally. At first, it wasn’t easy. Many people in Alex’s community didn’t know how to use mobile phones or access digital content, and others struggled with the English used in most training materials. “In the villages, most farmers haven’t gone far in school,” Alex explains.

“So we faced challenges because they preferred learning in local languages like Luhya, Luo, or Kikuyu.” Determined to make a difference, Alex began translating what he learned into his local language. Gradually, farmers started listening and applying the knowledge — and soon, they



Anthracnose - Dress seeds properly, use disease-free seeds, minimize wet environment, crop rotation, mulching to reduce water splashing, and remove infected plants.

Brown spot - Dress seeds properly, apply crop rotation, use tolerant varieties, and destroy infected plants to minimize disease spreading.

Harvesting

Lupins mature in about 4–5 months. Harvest once the pods turn brown and dry. Threshing can be done manually or with a combined harvester. Timely harvesting is crucial to prevent shattering losses.

Nutritional Quality of Lupins

Grain:

- **Crude Protein (CP):** 30–38%
- **Dry Matter:** 93%
- **Crude Fibre:** 4%
- **Yield:** 0.8–1.0 tonnes per acre

Green Forage:

- **Crude Protein:** 15–20%
- **Yield:** About 2.4 tonnes per acre (at four months)

Lupins as Livestock Feed

Lupins are a rich source of protein, ideal for both ruminants and non-ruminants. Green forage can be fed directly or mixed with

grasses such as Napier or maize to make silage. The grain is particularly valued in feed compounding. For homemade rations, farmers can mix 20–27% of lupin meal with energy-rich ingredients such as maize meal and wheat bran. In many systems, lupins can replace soybean meal—offering a cost-effective, sustainable protein source for livestock.

Why Lupins Beat Soya in Feed Formulation

No competition with human consumption:

Unlike soya, lupins are not widely used as food in Kenya.

No oil extraction required: Lupins can be used directly after threshing.

Climate adaptability: They grow well across diverse Kenyan regions. Readily available seeds: Farmers can access quality seeds through KALRO.

Lupins and Organic Farming

Agriculture contributes about 41% of Kenya's greenhouse gas emissions, largely from fertilisers and livestock manure. Sweet lupins can help change this situation. As a natural nitrogen fixer, lupins significantly enrich soil fertility. Recent studies by KALRO show that lupins can add 1.1–1.3 g/kg of nitrogen to the soil per season. In contrast, conventional fertiliser use adds only 0.15–0.20 g/kg—a remarkable difference that underscores lupins' potential in sustainable agriculture.

Conclusion

Sweet lupins offer farmers a triple benefit: they improve livestock productivity, reduce feed costs, and naturally enrich the soil.

With greater access to seed and improved farmer awareness, lupins could become a cornerstone of sustainable, climate-smart agriculture in Kenya.

began seeing positive results in their farms. Encouraged by the impact, Alex continued learning and even attended physical training sessions organized by Biovision Africa Trust. His commitment earned him recognition as The Organic Farmer Ambassador (TOFA), a role that allows him to help other farmers transition to agroecological farming practices.

"I went to the ward agriculture office and collected the list of all registered farmer groups," he says proudly. "Every week, I visit them to train them on organic methods and spread the word that they can now learn through their phones — from soil health to pest control and livestock management."

Alex's lessons go beyond theory. He demonstrates how to make organic manure using cow, rabbit, and chicken waste,



Alex Lichina at his vegetable Farm

how to reduce soil acidity, and how to grow safe and healthy vegetables using natural pest control methods. The digital platforms and organic farming trainings have opened doors for Alex beyond his local community. "It has helped me a lot," he says with a

smile. "Here in Kenya, I connect with people from the Central Region, especially in Kirinyaga County."

Through these connections, Alex became an agent for Safi Organic Fertilizer, helping farmers in Kakamega County access organic manure that enriches their soil naturally and boosts productivity.

Alex praises the holistic approach of the Farmer Communication Programme, which combines radio programs, The Organic Farmer magazine, digital learning, and physical trainings.

He believes these channels have encouraged farmers to embrace change and turn learning into tangible impact proving that with the right knowledge and support, organic farming can transform lives and strengthen communities across Africa.

Why Heavy Tillage Is Stealing Your Harvest

By Vincent Kipyegon

IMAGINE AS YOU walk through your cabbage field after 3 months of careful tending, expecting a uniform harvest of large, healthy heads, you find patches of stunted plants amidst a few healthy ones. You suspect soil infertility in that section but then you dig up soil and see earthworms rolling underneath, an indication of fertile land. What could have gone wrong?

The cause of such a scenario is soil compaction caused by heavy machinery during excessive tillage. When tractors repeatedly turn at field edges, their massive weight compresses the soil into rock-hard layers called hardpans. These hard pans block water infiltration, prevent air circulation, and create an impenetrable fortress that seedling roots cannot break through. The fertile soil becomes an impediment for crops, transforming productive land into barren ground that refuses to yield maximum produce.

Understanding Minimum Tillage

Minimum tillage is a farming approach that disturbs the soil as little as possible while still preparing it for planting. Instead of deep, aggressive plowing that turns the entire soil profile upside down, minimum tillage uses shallow cultivation, strip tillage, or direct seeding methods. The goal is to maintain soil structure while creating just enough disturbance to establish crops successfully.

Effects of Heavy Machinery and Maximum Tillage

Excessive tillage with heavy equipment affects the soil in several ways:

- **Soil Compaction:** Heavy tractors compress soil particles, reducing pore space by up to 50%. This creates dense layers that roots cannot penetrate, limiting plant growth and reducing yields significantly.
- **Loss of Soil Structure:** Aggressive tillage destroys the natural elements that give soil its crumbly texture. Without these structures, soil becomes prone to erosion and loses its ability to hold nutrients and water.
- **Reduced Water Infiltration:** Compacted soil sheds water like a roof, leading to runoff, pools of water on the farm and erosion instead of absorption. The crops suffer from both drought stress and nutrient loss.
- **Destruction of Beneficial Organisms:** Excessive tillage kills earthworms and disrupts other soil living organism that naturally improve soil health and fertility. Additionally, it makes it difficult for earthworms to move and thrive in the soil.

Best Practices for Minimum Tillage

Use manual labour: Use a hand-held hoe to till your small piece of land where necessary. This ensures that there is minimum disturbance to the soil. This is effective for small scale farms. Manual labour is also recommended for correcting tracks left behind by tractors.



Minimum tillage is a farming approach that disturbs the soil as little as possible while still preparing it for planting. Instead of deep, aggressive plowing that turns the entire soil profile upside down, it uses shallow cultivation, strip tillage, or direct seeding methods. The goal is to maintain soil structure while creating just enough disturbance to establish crops successfully

Use Lighter Equipment: Choose light-weight tractors appropriate for your field size. Avoid unnecessarily heavy machinery that compresses soil beyond recovery.

Supervise farm activities: As a farmer, it is advisable to be present during tilling to assist the tractor driver with specific paths for machinery to prevent compaction across the entire field. It is also a good initiative to request the driver to correct the edges of the farm by repeating the same process on designated track lanes just as they are about to conclude the tilling process

Time Your Operations: Till your land only when moisture conditions are right. Avoid tilling when the weather is too wet or too dry. Soil should crumble in your hand, not form mud balls or dust.

Employ Strip Tillage: Till only narrow strips where you'll plant seeds, leaving the majority of soil undisturbed.

Use Cover Crops: Plant cover crops during off-seasons to naturally break up compacted layers with their roots while adding organic matter. Crops such as pumpkins with fibrous roots do not require deeper entry to the soil, they improve the soil structure as they hold moisture on the ground ensuring the hard pans loosen over time.

Benefits of Minimum Tillage

Adopting minimum tillage practices delivers remarkable advantages. It leads to improved water retention, reduced erosion, and enhanced soil fertility as organic matter accumulates. Minimum tillage reduces the cost of farming as adoption of manual tools are cost effective. Most importantly, the yields increase as roots explore deeper, accessing more nutrients and water throughout the growing season.

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DAIRY FARMING

Dairy goat keeping improves farmers' income and household nutrition

By Caroline Mwendwa

For many smallholder farmers, the journey toward sustainable agriculture begins with uncertainty about what to plant, how to manage pests and diseases, where to source healthy livestock, or even how to make farming profitable. But with the right support, these challenges become stepping-stones to resilience and growth.

Within the Goodluck Farmer Group based in Gilgil, Nakuru County, this transformation is vividly reflected in the voices of women who started with limited knowledge and few resources but discovered new confidence through training, collaboration, and innovation. Guided by Biovision Africa Trust (BvAT) and the practical mentorship of BvAT's extension officer Mr. Peter Murage, the group learned to embrace organic farming, adopt dairy goat production, and build reliable livelihoods from skills they once thought were out of reach.

The following testimonials from two members of the Goodluck Farmer Group, Ms Susan Kamau and Ms Esther Musibia, capture this shift from struggling with basic farm management to establishing productive enterprises, improving family nutrition, and gaining financial independence.

Farmer Testimonials

"My name is Susan Kamau, a member of the Goodluck Farmer Group, where eighteen of us practice organic farming. When we began, most of us were struggling. We faced many challenges on our farms: crop diseases, a lack of proper fertilizers, and uncertainty about which pesticides were safe to use. Even livestock felt difficult because we didn't know where we would keep goats or how we would feed them.



Mrs Susan Kamau tends to her dairy goat

Everything changed when we started training with Peter Murage, an officer of Biovision Africa Trust (BvAT). We went to him with all our problems, and he walked with us step by step to find solutions. For four months, we learned how to make our own organic fertilizers, traditional plant medicines, how to treat diseases, harvest properly, and even how to store food without it going bad. But we still felt we needed more, something sustainable that could support our families. That is when Murage introduced us to dairy goat farming.

Through the training and guidance we received, we gained confidence that we could eke a living out of dairy goat rearing. As a group, each member was saving 200 hundred shillings every month with Seed Savers Sacco. We didn't even know what that money would do for us back then. But when we decided to start keeping dairy goats, we took out a loan, and were able to buy goats. Not everyone chose goats; some members bought water tanks: others joined the chicken project, while others invested in seeds and fertilizers for organic farming. But for those of us who went into dairy goat keeping, life began to change. Today, we see real progress. Milk production has improved, and our households are enjoying better nutrition.

We are now able to earn an income from selling milk. This allows us to save more and plan ahead, giving us a sense of stability. As village women, having money in our pockets regularly gives us dignity. In addition, our families are benefiting from the high nutritional value of goat milk.

I am truly grateful to Biovision Africa Trust. They have taken us far. We are not where we used to be. We are learning value addition now because we know these goats will multiply, and soon we will have more milk. We want to be ready to make dairy products and sell them profitably.

My name is Esther Musibia, a member of Goodluck Farmer Group. Our group is privileged to have met Peter Murage of Biovision Africa Trust, who has played a key role in our growth. Most especially, in dairy goat production. Before the training, we didn't know the types of goats, how to breed them, where to buy them, what to feed them, or how to protect them from diseases. We even lacked the knowledge of how proper housing for goats should be constructed. Milk was expensive, often adulterated, and not always safe for our families.

We have goats now. We know how to feed them well because of the training we received. With the money I used to spend on milk, I now use it to buy other essential things for my children. And on the days when the goats produce more milk than the family needs, I sell the surplus.

The training also inspired us to diversify. After my eyes were opened to the benefits of having various sources of income, I decided to keep chickens for eggs and, in addition, I started growing vegetables. The Goodluck Group has become a blessing. We started with very little, but now we can plant more, keep livestock, save money, and dream bigger. And we are still moving forward.

We hope that BvAT will continue walking with us, teaching us even more, whether it's about rabbits, new crops, or other sustainable farming practices. With their support, and with Seed Savers helping us access loans, we believe our success will only keep growing.

PEST CONTROL

Kinangop's Smart Battle Against Snails and Slugs

A Success Story from Nyandarua County

By **Veronica Wamiti**

Nestled in the heart of Nyandarua County, Kinangop is famed for its lush farmlands and thriving crops from peas and carrots to potatoes, cabbage, and maize. But behind this productivity lies a quiet battle that farmers have fought for years: a battle against snails and slugs. These tiny, slow-moving pests thrive in Kinangop's cool climate and have long been responsible for significant crop losses, silently eating into farmers' yields and incomes.

For years, limited information and the pests' sporadic nature made effective control difficult. Close crop spacing and frequent rains provided perfect breeding conditions. Now, through partnerships between Biovision Africa Trust's Outreach staff, TOF Magazine, and radio programmes, farmers are gaining knowledge and practical tools to manage snails and slugs.

Biological Control

Instead of turning to chemicals immediately, many farmers have discovered the power of natural predators. Safari ants, ducks, and chickens help to keep snail and slug numbers down. "We lure safari ants by placing bones or food scraps in the fields," says one farmer. It's a clever, low-cost, and environment friendly way of controlling the pests.



In the early mornings and late afternoons when snails and slugs are most active, farmers can be seen handpicking and destroying the pests or their eggs



Cultural Practices

Prevention begins with good farming habits. Farmers have embraced practices such as:

- Preparing fine tilth before planting
- Thinning crops properly
- Using light mulch
- Keeping fields clean
- Opting for drip irrigation instead of sprinklers.

Tilling the land exposes snail eggs to sunlight, drying them out before they hatch. Manure, when applied well, strengthens plants, helping them recover faster from any pest damage. Together, these cultural methods reduce breeding grounds for pests and boost crop resilience.

Physical Control

In the early mornings and late afternoons when snails and slugs are most active, farmers can be seen handpicking and destroying the pests or their eggs. Some set beer traps, taking advantage of the pests' attraction to yeast, while others plant herbs and spices such as rosemary, mint, thyme, and onions between their crops. The intense aromas repel snails and slugs naturally, making intercropping both a pest management and value-adding practice.

Chemical Control

Where needed, farmers use copper-based molluscicides, which are approved for organic farming. These are applied carefully and sparingly, ensuring minimal chemical use while keeping the environment and consumers safe.

Integrated Pest Management (IPM)

At the core of Kinangop's success is Integrated Pest Management (IPM), a strategy that blends cultural, physical, biological, and chemical methods in a coordinated way.

IPM focuses on prevention, monitoring, and intervention only when necessary. By understanding the farm ecosystem and acting early, farmers reduce the need for drastic control measures later.

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TOMATO PRODUCTION

icipe drives safe tomato farming in Narok

Organic farm inputs and quality seedlings now within reach at affordable prices

By **Caroline Mwendwa**

Despite Narok County being one of the major sources of tomatoes in the country, farmers had begun withdrawing from tomato production due to challenges with seedling access. The nearest source of seedlings was Njoro, Nakuru County, over 180 km away, and the state of the road into the villages made the cost even higher. Secondly, the cost of pest management can be daunting, as some pests are resistant to the chemicals farmers are accustomed to using.

This has led to intensive application of synthetic pesticides, some of which pose a risk to human health. It was therefore a great relief when icipe reached out to one of the communities in Narosura location through the Integrated Sustainable Production of Tomatoes (ISPOT) project, offering farmers training on safe methods of tomato production.

In addition to training, the project established a seedling multiplication facility within the Narok Tomato Growers Cooperative, where farmers can acquire quality seedlings and other inputs at affordable prices. "We chose Narok because there was an organized tomato cooperative, where farmers were used to working in a group, each farmer producing their own

tomatoes. It is structured and has an office within its own parcel of land," says Dr Shepard Ndlela, the Project Manager. Another advantage of this project, is its proximity to a water source, which has enabled the installation of a 10,000-litre underground tank with pumps for the successful running of the seedling facility.

Farmer testimonials

Brighton Salaton, a 28-year-old farmer from Kimelok Salama in Narosura location, practices mixed farming. He grows maize, beans, tomatoes, and onions. Of the many crops Salaton grows, tomatoes have been the most challenging, especially due to their susceptibility to pests

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Through weekly Kiswahili and local language radio programmes, TOF Radio helps to improve awareness and knowledge of sound agroecological practices, strengthen the link between researchers and farmers to enhance food security, reduce poverty and increase household incomes among farmers in Kenya.

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such as Tuta Absoluta, dubbed 'Raila' for its highly destructive nature. "Under favourable circumstances, tomato production is a very lucrative venture; however, it has, over time, become costly as I required substantive capital to acquire quality seedlings and successfully manage pests," he says. The ISPOT project has been a door to many opportunities. First, it has provided a nearby source of quality seedlings right here at the community cooperative and exposed us to effective and safe methods of pest management," he says.

Salaton learnt of the ISPOT project through an agricultural officer who was raising awareness about organic tomato production. He immediately took an interest, as this sounded like a solution to the challenges he faced in tomato production, and this led him and other farmers within his community into the ISPOT project. After attending a series of training sessions offered by icipe on a demo farm in Narok, Salaton discovered that farmers in his community were using so many pesticides, some unsafe, to grow tomatoes. Yet, there are easier and safer ways to do it.

"We learnt of the dangers of overreliance on synthetic chemicals, and in addition to the training, we were linked to organic input suppliers," he says. For the group, this exposure to alternative methods of tomato production unlocked new possibilities, not just for individual farmers, but for the entire community. Farmers were trained in various pest management techniques, including the use of quality seedlings, crop rotation, use of lures and traps, and biopesticides.

"We also learnt how to safely dispose of infested tomatoes to prevent multiplication of the pests from already affected tomatoes," he says. Now, those trained know how to use the traps to monitor the extent of infestation and determine the product and amount of application needed. "Another point of relief



Peris Soipei at the seedling facility

is the awareness that the produce is not contaminated with harsh chemicals; it is safe for consumption."

Salaton grows tomatoes on a half-acre piece of land and finds the use of integrated pest management affordable compared to reliance on conventional chemicals. He sells his produce to markets in Kisumu, Nyamira, and Nairobi markets. Peris Soipei, a tomato farmer in Narosura, Enkonguenkare village, is a member of the Narok Tomato Growers Cooperative, and a beneficiary of the ISPOT project. After training on IPM, Soipei was given a starter kit of tomato seedlings, biopesticides, traps, and organic fertilizer. "Before I was trained on IPM, production of tomatoes was expensive, especially because the cost of managing pests was high. I used to apply an array of pesticides, yet the pests were still a menace.

For some reason, we did not get the right pesticide that could effectively manage them," she says. Use of IPM to manage pests has proved to be effective and cost-efficient, and the produce is safe for consumption. In addition to tomatoes, Soipei grows onions, vegetables, mangoes, maize, and beans on 4 acres of land. "Since the training, I have

observed an increase in yields, especially the effect of the biofertilizers on the soil," she says.

Cooperative takes over operations to serve the locals

The story of these two farmers represents the transformation of so many tomato growers in this community. At the end of the project, icipe handed over the seedling multiplication farm, complete with a drip irrigation system set up to keep it running to the Narok Tomato Growers Cooperative in Narosura location. The cooperative is now running the management and sales of seedlings. Other inputs stocked by the cooperative include biopesticides, traps, and biofertilizers. When a farmer needs a particular input, they make a call, and it is delivered to their farm.

Members of the cooperative can get the inputs on credit. "With the accessibility of farm inputs, many small-scale farmers will take up tomato production and make produce aggregation and market accessibility easier. We will continue to support the cooperative in training and new member recruitment to ensure more farmers benefit from the facility," says Dr Shepard, the ISPOT project manager.

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