

ISAN MAGAZINE

FOR SUSTAINABLE FOOD SYSTEMS

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ABOUT ISAN MAGAZINE

ISAN Magazine was born in 2021 out of the Knowledge Hub for Organic Agriculture and Agroecology in Southern Africa, a project funded by GIZ and operationalised by African NGOs through five knowledge hubs making up the Knowledge Centre for Organic Agriculture and Agroecology in Africa. The aim is to support the emergence of a strong regional network.

Today, we are working towards a sustainable business model that can continue its work to strengthen networks, keep practitioners and consumers informed and advocate for organic agriculture and agroecology as a framework for food systems in the region.

ISAN Magazine is dedicated to building a strong network of informed civil society actors and organisations across the southern African region to advocate for organic agriculture and agroecology as a framework for regional food and farming systems.

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EDITOR'S NOTE

by Fortunate Nyakanda

Welcome to this edition of our magazine, where we delve into the heart of organic agriculture and sustainable farming practices. Our focus this month is on embracing organic agriculture as a lifestyle, ensuring that every step we take upholds the principles of organic farming that make it sustainable and enriching for both the environment and for farmers.

We are excited to introduce you to syntropic farming, which is a revolutionary system that complements organic farming by mimicking natural ecosystems. Traditional and natural preservation methods are explored as a way to help reduce waste, extend shelf life and ensure that the bounty of each season is fully used. We also cover a waste recycling project in Malawi, which is contributing to a circular economy.

And we delve into organic livestock production and its benefits in Namibia.

For organic farming to thrive, ongoing research into different aspects is crucial. We highlight the latest research and advancements in practical methods that can help farmers increase productivity while maintaining ecological balance.

We hope this edition inspires you to adopt and advocate for sustainable farming practices. Together, we can create a healthier, more sustainable future for all. Remember to share widely.

Organically yours
Fortunate Nyakanda

ORGANICS 3.0

The International Federation of Organic Agricultural Movements (IFOAM)-Organics International represents 700 affiliate members on 6 continents.

The organic movement has an important role to play in helping to transform food and farming systems in Africa. Read more about IFOAM-Organics International's position in its landmark publication: Organics 3.0: for truly sustainable farming & consumption

Download it [here](#).



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INFURIATING FACTS...

Things that happen elsewhere,
but affect us

We live in a globalised world in which we are not just affected by global trading platforms, but also by any production and consumption behaviour that causes greenhouse gas emissions, loss of biodiversity and ecosystem degradation. Often these activities take place in our backyards. What we do affects others. This section highlights some of these impacts.



LAND DISPLACEMENT IN MASAITI DISTRICT, ZAMBIA

By Fumbe Chanda, journalist

Zambia's liberalised economy has created investment opportunities for local and foreign investors in various sectors including mining that contributes 12% to Zambia's GDP. Arguably it creates jobs and generates much-needed foreign exchange, but the consequences of these extractive industries are felt beyond the ambit of the sector. As in other parts of the world, mining has displaced communities from their land, degraded their environment as well as polluted their air and water. We explore the consequences for the more than 2 000 households living in Murebwa village, Zambia.

Dangote Industries Limited, a Nigerian multinational industrial conglomerate, has invested in a cement plant in the chiefdom of Senior Chief Chiwala in the Copperbelt province. The plant's claim to fame is that it produces 42.5 grade cement at competitive pricing than lower quality ones on the market.

The company has, however, been accused of degrading the environment, displacing local communities and blocking access to the Mwatishi River. This river is the only source of water for human consumption and for gardening for the community in Murebwa and surrounding villages.

Eyewitness testimony

A local resident states that Dangote had dug a quarry inside the river, which blocks the flow of water to smaller water reservoirs, which are used for irrigation and consumption by both community members and their livestock. This resident went further to say that women and children now walk long distances to fetch water for home use, and that some local businesses have had to stop due to the lack of easily accessible water. This makes it hard to support their families. Another resident says that her house has been destroyed by huge rocks displaced from the blasting activities at the cement plant.

"We fear for our lives, when the siren rings, we all run out of our homes and stand very far until the blasting is done at the plant because we fear to be hit by the rocks from the plant." - Local resident

She has accused the traditional leadership of the community of prioritising the interests of investors at their expense.

Traditional leadership & government response

When reached for comment, Senior Chief Chiwala challenged the affected communities to rather lodge a formal complaint with the Zambia Environmental Management Agency, which he said had sanctioned Dangote's operations. He noted that "If anything, it's not the blocking of the river because it still flows, except there has been a diversion in terms of water going into the quarry ... If mining activities are there and the government has embraced them, who is that person to complain that water has been diverted."

The Minister of Water Development and Sanitation, Mike Mphosha, noted that government needs to balance economic development and social and environmental responsibility so that citizens are not pushed into shackles of poverty. He did, however, warn that blocking the flow of the river must not be allowed, as it negatively affects various stakeholders who depend on the water sources. Dangote Industrial Limited was not available for comment at press time.

FIAN International Zambia country coordinator Vladimir Chilinya says "There are weakness in regulations, laws and actions by the government in dealing with such cases. Such cases happen because perpetrators get away with them." He added that the law in Zambia provides that a natural stream should not be blocked by any business, investment or individual to curtail communities from benefiting from it, hence the need for monitoring of investments which he said should not be done at the expense of communities. He called for strengthening of governance on natural resources to ensure the protection of local communities.

FUNDING & WORK OPPORTUNITIES

Citizen's Engagement for Accountability Activity: Women Community Activism Grants (Zimbabwe)

Applicable to women-led community-based organisations in Zimbabwe. Seven grants of US\$10 000 will be awarded.

Deadline: 19 August 2024

More info [here](#).

\$50,000 Innovation Prize to Reduce Post-Harvest Loss

This grant is seeking groundbreaking solutions that empower smallholder farmers in South Asia and Sub-Saharan Africa to reduce post-harvest loss.

Deadline: 14 August 2024

More info [here](#).

Lush Spring Prize 2025

Open to organisations, community groups, businesses and other projects that are working to revive damaged social and natural environments, and who want to share what they are doing to inspire and inform others.

Deadline: 27 September 2024

More info [here](#).

External Project Evaluation of "Healthy Soil Healthy Food" Project

The Alliance for Food Sovereignty in Africa ([AFSA](#)) intends to commission an external evaluation of its Bread for the World-funded 'Healthy Soil Healthy Food' (HSHF) project. The four-and-a-half-year project runs from January 2021 to June 2025 and involves HSHF centres operated by AFSA's local project partners in six countries: Senegal, Togo, Burkina Faso, Kenya, Uganda, and Tanzania.

Deadline: 31 August 2024

More info [here](#).

THE FUTURE OF FOOD

Exploring the drivers of food system collapse and food trends

Through opinion pieces and author contributions we explore what is driving the breakdown of our food systems and identify best practice in how to combat challenges such as climate change and other challenges such as food loss and waste, and support the transition towards more sustainable, equitable and inclusive food and farming systems.



A HARVEST OF WASTE: TACKLING FOOD LOSS AND WASTE IN MALAWI

By Isaac Mafuel, ISAN Magazine staff reporter

Malawi, a landlocked nation in Southern Africa, is known for its stunning landscapes and vibrant culture. Yet, beneath this beauty lies a harsh reality; a significant portion of the country's food production is lost or wasted each year. The World Food Program estimates that a staggering 30% of Malawi's harvests succumb to rodents, insects and mould within a few months of picking. And this is in a country with high levels of hunger and malnutrition. It is critical to halt this loss of nutritious foods. This article explores some of the challenges and opportunities in this regard. We thank Chisoma Maliwa, a Malawian food scientist, for her insights.

Malawi cannot afford to waste food

A stroll through major market waste dumps paints a vivid picture — they are overflowing with rotting seasonal produce like tomatoes, oranges and mangos. The 2023 bumper potato harvest serves as a reminder, with most of it lost due to inadequate storage and handling practices. The irony is that most Malawians are significantly dependent on agriculture for both food security and livelihoods.

The [2022 State of Food Security and Nutrition in the World](#) report notes that 51% of Malawians were severely food insecure in 2021. As of 2024, the situation has deteriorated significantly due to the drought. And about 37% of children under the age of five are stunted.

Most farmers rely on rain-fed agriculture, with a limited window from November to April for cultivation. The remaining months are designated for consuming (not processing) the harvest — this is a period coinciding with peak food waste in Malawi. Any changes to rainfall patterns — rains coming too early or too late or not coming at all — have disastrous implications for rain-fed farming.

What are the causes of food loss and waste?

Chisoma Maliwa, a Malawian food scientist, sheds light on the root cause: a lack of post-harvest handling expertise. While significant strides are made in developing high-yielding crop varieties, minimal effort goes into proper storage and handling techniques. This expertise gap leads to the heartbreaking sight of fresh fruits and vegetables wilting and rotting in

abundance just as they come into season. To address this, Chisoma acknowledges government initiatives like the Small and Medium Enterprises Development Institute (SMEDI) that provide training in value addition for perishable goods like mangos and tomatoes.

These initiatives offer processing facilities and certification to small- and medium-sized enterprises (SMEs), although limitations remain. The processing capacity is insufficient to accommodate the vast number of small-scale producers, and logistical challenges like transportation costs hinder wider adoption. The implications of food waste extend far beyond economic loss.

Every discarded fruit or vegetable represents wasted resources — the water, energy, and labour invested in its production. Furthermore, rotting food in landfills generates methane, a greenhouse gas contributing to climate change.

Addressing Malawi's food waste crisis necessitates an integrated approach

Expanding training programmes in post-harvest handling and storage techniques is crucial. This empowers farmers to preserve their hard-earned harvests, leading to increased food security and income generation.

While modern technologies offer solutions for large-scale food preservation, Malawi also boasts a rich legacy of indigenous methods. Chisoma highlights the significance of these traditional practices in her research.

Benefits of indigenous preservation methods

While acknowledging the limitations of traditional techniques in terms of capacity, efficiency and shelf life, Ms. Maliwa recognizes their potential. These methods, often passed down through generations, are readily available and require minimal resources, making them particularly suitable for small-scale farmers.

The key lies in finding a balance between time-tested practices and modern advancements. For instance, incorporating solar dryers into traditional sun-drying methods can significantly reduce drying time while minimising reliance on fossil fuels. Similarly, integrating improved hygiene practices into traditional storage techniques can minimise food spoilage.

The role of consumers

Consumers also play a vital role. Embracing imperfect fruits and vegetables, planning meals effectively to minimise waste, and adopting practices like composting food scraps can all contribute to a more sustainable food system.

The fight against food waste is not just about saving resources; it is about unlocking Malawi's agricultural potential and ensuring food security for its people. By working together, researchers, policymakers, farmers, processors and consumers can build a more resilient and sustainable food system in Malawi, ensuring that the harvest truly nourishes the nation.

“When we waste food, we waste the future of the planet” - WWF



Caption: Examples of rotting vegetables and fruit thrown away at Zigzagwa Market, Mzuzu, Malawi Credit: Jennings Kantema

TRADITIONAL FOOD PRESERVATION METHODS

By Odette Mavunga, ISAN Magazine staff reporter

Traditional food preservation methods have been used for centuries to preserve food without the aid of modern technology. Traditional food preservation methods are simple, effective and sustainable ways to preserve food without modern technology. These methods not only preserve food but also enhance its nutritional value and flavour. By understanding and using these methods, we can promote sustainable agriculture, reduce food waste and maintain food security. Whether you're a homesteader, a chef or a food enthusiast, traditional food preservation methods are worth exploring.

Fermentation

Fermentation is a method used to make food last longer, ensure its safety, enhance the flavour and texture, and boost its nutritional content. It is used in beer, cheese and wine making, as well as for breads, kefir and kombucha.

Dehydration

Dehydration or drying is one of the oldest methods of food preservation. Removing all moisture from food stops bacteria, yeasts and moulds from developing. It is used for fruit, vegetables, meats and herbs.

Smoking

Smoking is a traditional method of food preservation that extends the shelf life of food and gives it a distinct flavour, combining drying, cooking and the antimicrobial properties of smoke to preserve food. This method is used to preserve meats, fish and cheeses.

Pickling

When pickling foods, you soak food in a brine solution (a mixture of water, salt, vinegar and sometimes sugar) to create an acidic environment that stops bacteria from growing and extends the life of the food. This is used with vegetables, fruits and meats.

Curing

With curing, you use salt or sugar to draw moisture out of food. This helps to prevent the growth of bacteria. It is often used to preserve meats, fish and fruits.

Preserving in fat

Preserving in fat involves covering food in animal fat or oil to stop oxygen from reaching it. This method is used to preserve meats, fish and vegetables. It adds flavour and tenderness to the food.



BAOBAB FOODS

By Hana Faulds, Technical Advisor

Baobab has been on the rise as a nutritious food ingredient and has recently taken the global wellness market by storm. The baobab fruit is a nutrient dense superfruit packed with vitamin C, minerals, antioxidants and a ton of fibre leading to its popularity as a great gut health solution. Additionally, its naturally dehydrated form means it requires minimal processing and it is sold as a superfood powder making it highly versatile for adaptation into packaged food products or for direct at-home use in either sweet or savoury recipes. As any food ingredient or superfood breaks into a global market, essential questions on sustainability, social ethics and exploitation concerns need to be addressed.



Caption: Baobab tree in Tete Mozambique Credit: Baobab Foods

As we confront ecosystem collapse, environmental degradation and the pressing challenges of climate change, the shift towards sustainable and regenerative practices in agriculture has never been more crucial. Regenerative agriculture transcends traditional farming methods, embodying a holistic philosophy that aims to restore and enhance ecosystem health by mimicking natural processes and leveraging the power of biodiversity.

The nature of baobab harvesting, when done sustainably, offers a pillar of hope for our future food systems and aligns closely with the core principles of regenerative agriculture. Baobab trees thrive in arid and semi-arid environments where other crops struggle, making them ideal

for sustainable agroforestry practices. They are not farmed and do not require intensive agriculture, row cropping, water or chemical inputs. Thus, by harnessing the natural bounty of these trees, communities can avoid the environmental degradation linked with such intensive agricultural practices and ecosystems remain intact. Unlike many superfoods that are farmed, potentially threatening natural habitats, our fruit is wild-harvested and hand-picked. We wait until the fruit is ripe and ready, naturally falling from the tree. No plucking or pulling — just letting nature take its course. During each harvesting season we ensure that not all fruit is gathered, leaving some for animals and for natural decomposition to continue. The trees remain undamaged, continuing to produce nutritious fruit for generations to come.

At Baobab Foods our entire supply chain is guided by nature and led by local wisdom. All of our harvesting partners are local women, who are the true custodians of the baobab tree. They possess deep generational wisdom, track each tree's growth and annual change, understand climate effects on harvesting times and fruit composition, and predict the perfect gathering time. All traders are formally registered, ensuring fair pay and safe labour conditions, while preventing exploitation throughout the supply chain. In many sub-Saharan regions, the baobab trade is often a primary source of income and the creation of this microeconomy has significantly empowered local communities in multiple ways. Additionally, baobab harvesting promotes sustainable land management, fostering a deeper connection between communities and their environment, which supports conservation efforts. By investing in baobab harvesting, rural communities reap the benefits of a nutritious superfood while cultivating a brighter future for themselves and their families.

Moreover, baobab trees are a beacon of hope for climate-resilient agriculture, well-adapted to harsh climatic conditions and thriving in dry environments where water is scarce. As climate change intensifies water scarcity and extreme weather events, cultivating and conserving baobab trees enhances community resilience, diversifies income sources and protects against crop failures and food insecurity.

Baobab Foods is committed to regenerative agriculture, ensuring that our practices not only support environmental sustainability but also empower local communities, fostering resilience and economic growth.

Read more about Baobab Foods [here](#).



Caption: Local harvesting partners Credit: Baobab Foods



Caption: Naturally dehydrated fruit pulp inside a baobab fruit Credit: Baobab Foods



WASTE SEPARATION: A CRUCIAL STEP TOWARDS A CIRCULAR ECONOMY

By Hana Faulds, Technical Advisor

WASTE Advisers is a Malawian NGO that develops and monitors sustainable and contextual systems for liquid and solid waste management. It has assisted 44 schools and 30 markets with improved water and sanitation services. The organization under their new brand called GEMS (Green Economies Made Simple) has a special interest in developing circular economy initiatives and targets a 30% circular economy for Malawi's urban centers by the year 2030. Since 2022 they established and strengthened over 15 businesses in compost production and recycled more than 3 000m³ of organic waste per year into thermophilic compost in addition to other non-organic recycling initiatives. Contact: info@wasteadvisersmw.org for partnerships

In the drive towards a more sustainable future, waste separation stands out as a pivotal step in establishing a circular economy. Recognising the critical role of waste management in this transition, WASTE Advisers has installed more than 200 sets of waste separation bins across four major cities in Malawi. The sets comprise two bins with the red representing inorganic matter and the green for organic matter. This initiative not only facilitates better waste management but also promotes the recycling and repurposing of materials, creating a sustainable cycle within the waste value chain.

Waste separation involves sorting waste at the source into distinct categories, such as organic waste, plastics, metals, and paper. This practice is fundamental to recycling and repurposing efforts, as it ensures that different types of waste are processed correctly.

By installing separation bins in key urban areas, WASTE Advisers is enabling communities to participate actively in waste segregation, laying the groundwork for a circular economy. **The implementation of waste separation bins has had an immediate impact on how waste is managed in these cities. Residents and businesses are now more conscious of their waste disposal habits, ensuring that recyclable materials are not mixed with organic or hazardous waste.**

This separation is crucial for the efficiency of recycling processes, as it reduces contamination and increases the quality of the recyclable materials collected. Once the waste is separated, it is collected by city waste management services. The separated waste is then sold to local recyclers who transform these materials into new products of market value. For instance, plastics can be recycled into new

plastic products, metals can be melted down and reused, and organic waste can be composted to produce nutrient-rich soil. This process not only diverts waste from landfills but also conserves natural resources and reduces the environmental impact of raw material extraction and production.

The success of WASTE Advisers' initiative demonstrates the potential of waste separation as a transformative practice in urban waste management. However, the journey towards a fully realised circular economy requires ongoing commitment and collaboration among all stakeholders, including government agencies, businesses and the community. Policymakers need to support such initiatives with regulations and incentives that encourage recycling and the use of recycled materials.



WASTE Advisers - Malawi



WASTE Advisers
Source separation enables efficient recycling, reducing contamination and enhancing the quality of recycled materials. It conserves natural resources and supports a circular economy by turning waste into valuable products.

Join us in turning waste into prosperity
Email: info@wasteadvisersmw.org

www.wasteadvisersmw.org/



FARMING SYSTEMS

The wide range of sustainable farming approaches can be confusing...

This section profiles different sustainable farming approaches, providing insights into their principles and practices. Of these, many are shared across a wide range of sustainable approaches, and can be incorporated into any farming system.



SYNTROPIC FARMING

By Fortunate Nyakanda, Editor-in-Chief

Syntropic farming is an agricultural approach that seeks to create self-sustaining ecosystems by mimicking natural processes. Developed by Ernst Götsch, a Swiss farmer and researcher, syntropic farming emphasises biodiversity, soil regeneration and the integration of different plant species to create a resilient agricultural system.



Key principles of syntropic farming

- **Diversity:** This is a key element of syntropic farming. The aim is to bring a wide range of plant and animal species together in the agricultural system. The benefits of this diversity of species include higher pollination opportunities, optimal use of resources and enhanced resilience. It provides for more organic matter, which makes the soil healthier and more resistant to pests and diseases. With more organic matter, soil has improved soil aeration and generates higher levels of nutrient recycling. The goal is to create a synergistic system in which each element supports and enhances the others. The system, as a result, is more resilient to changing conditions and will continue to thrive over time.
- **Succession and stratification:** Succession is the practice of planting species in progression over time. It mimics natural ecological succession that regenerates soils, boosts biodiversity and enables the production of an abundance of food and other resources over the long term. This starts with the planting of pioneer species that are fast growing and can 'prepare the environment' to support other species. When these are established, other species are planted, benefitting from the improved conditions and adding additional nutrients to the soil and creating more complex habitats. Finally, slow-growing and long-living species are planted. The end result is a mature and stable ecosystem capable of supporting a diversity of species and characterised by high levels of productivity.

- **Mulching and organic matter:** Mulch and organic matter are critical components of syntropic agriculture, contributing to soil health, water conservation and retention, weed suppression, erosion control, nutrient recycling and overall ecosystem resilience. They help create a fertile environment for plant growth, mimicking natural forest processes, and supporting the regeneration of the agricultural system.
- **Minimal tillage:** Minimum tillage means disturbing the soil as little as possible. This helps to preserve soil structure, minimise erosion and keep a good habitat for beneficial soil microorganisms. It improves water retention and, by not disturbing the soil, organic matter can accumulate and decompose naturally, contributing to carbon sequestration.
- **Agroforestry integration:** This refers to the combining of tree and shrub cultivation with crops and/or livestock systems to create a diversified, productive and sustainable land-use system. This approach leverages the natural symbiotic relationships between different plant species and their environment to enhance biodiversity, improve soil health, and increase resilience to climate variability.

Benefits of syntropic farming

Syntropic agriculture builds a healthy ecosystem, improves soil health and water efficiency and retention. It helps sequester carbon and build resilient systems that are better able to withstand climate extremes, with different plant and animal species increasing productivity and economic benefits.

The benefits make syntropic farming an appealing option for those looking to practice agriculture in an ecologically and economically sustainable manner.

Syntropic farming represents a holistic approach to agriculture that aligns with ecological principles. By fostering biodiversity, improving soil health, and integrating various plant species, it aims to create sustainable and productive farming systems that benefit both the environment and the farmer.



MOVEMENTS & ADVOCACY

Celebrating the many organisations,
networks and movements
transforming our food systems.

In this section, we profile the innovative work undertaken by Southern Africa organisations, national movements and networks to systematically transform our food and farming systems. They work at multiple levels to do so.



PELUM ZAMBIA: COMMITTED TO UPLIFTING LIVELIHOODS FOR SMALL-SCALE FARMERS

By Participatory Ecological Land Use Management (PELUM), Zambia

PELUM Zambia is part of a wider PELUM Association network found in East and Southern Africa. Established in 1998, PELUM Zambia works to improve the livelihoods of small-scale farmers by fostering ecological land use management. It does this through capacity building, sustainable management and utilization of natural resources, networking, research and evidence-based campaigns, advocacy and lobbying.



Caption: Dignitaries following deliberations at the Agroecology Conference, Lusaka, 2024 Credit: PELUM Zambia

Collaborations and project implementation

PELUM collaborates with various partners in the implementation of its activities in project areas.

- Rosa Luxemburg Foundation

The project undertaken with the Foundation focused on strengthening farmers voices in the Southern African Development Community region. Through the project, a Technical Working Group was created that served as a platform for collaborations with other civil society organisations and farmer representatives. This platform spearheaded the Zambian Traditional Seed and Food Festival, annual Agroecology Social Accountability and Climate Change (ASACC) Media Awards and development of the National Agroecology Strategy.

- Bread For The world

Bread for the World has supported PELUM Zambia in enhancing networking and adoption of agroecology in Zambia's rural communities.

The project aims to contribute to crop diversity in small-scale farmers in selected districts, enhance networking and collaboration among PELUM Zambia and its member organisations and lastly influence the national agriculture policy.

Activities undertaken include capacity building, policy and budget analysis, facilitating member meetings and workshops, awareness creation around agroecology, and research.

- Global Environmental Facility Small Grants
The Global Environmental Facility (GEF) project, supported by the United Nations Development Program and implemented by PELUM Zambia in partnership with GEARS and Zambia Climate Change Network, aims to integrate biodiversity conservation and livelihoods in the Luapula landscape by restoring degraded land to improve crop productivity and livelihoods. The project is implemented in Mikula and Sonkontwe wards of Milenge District, targeting 5 000 beneficiaries. To date, community mapping has been undertaken and 20 environmental defenders trained.

- Markets and Seeds Access Project (MASAP). NIRAS A/S in partnership with the Community Technology Development Organisation (CTDO) and the Research Institute of Organic Agriculture (FiBL) is implementing the first phase of MASAP in Zimbabwe and Zambia. Funded by the Swiss Agency for Development and Cooperation, the goal of the programme is to improve resilience in food security of smallholder households (especially women and youth) by increasing adoption and use of improved open and self-pollinated varieties of small grains (sorghum and millet) and legumes (cowpea and groundnut) through strengthening the seed and commodity value chains in Zambia and Zimbabwe.

MASAPs long-term vision is the creation of a vibrant and community-driven seed and commodity market system, creating income opportunities and resilience for smallholder farmers – in particular women and the youth – supported by strong institutions, national and regional policies and innovative private sector actors. PELUM Zambia supports the project by holding district and national seed and food festivals to promote adoption of local seed and consumption of traditional foods, and by linking small-scale farmers to private sector actors.

- Knowledge Hub For Organic Agriculture and Agroecology in Southern Africa (KHSa). PELUM Zambia is an in-country partner of KHSa, has facilitated the training of multiplier groups, among them are lead farmers, journalists and policymakers, in agroecological principles and practices. Training and the development of knowledge products was undertaken after comprehensive needs assessments that highlighted knowledge gaps. Several knowledge products have been developed, validated and translated in three major languages (Bemba, Tonga, Nyanja).



Caption:(Top to bottom) Newly recruited environmental defenders and project staff, Milenge District; Delegates at the 2024 Agroecology Conference; Farmers displaying their produce at the Chipata District seed and food festival; PELUM participating at the 96th Agricultural and Commercial Show. Credit: PELUM Zambia

NAMIBIAN MEDIA FOOD JAM

By the Namibian Organic Association

The Namibian Organic Association (NOA) is a membership-based association established by a group of dynamic farmers and consumers with the common interest of developing the organic sector in Namibia. NOA is an in-country partner of the Knowledge Hub for Organic Agriculture (www.khsa.online) and one of their stakeholder groups in the project is media practitioners.

On 9 July 2024, the NOA, hosted its second Organic Food Jam on Farm Krumhuk, 25 kilometres south of Windhoek, Namibia. The event aimed at exposing invited media practitioners to organic livestock production and to share knowledge about the role that organic and agroecological farming can play in improving food security and building resilience to climate change impacts.

The event attracted a diverse group of media representatives from major print and digital media houses in Namibia including public relations officers from the Ministry of Agriculture, Water and Land Reform (MAWLR).

Participants visited the farm's mobile kraal learning from the cattle farmers and rangers how organic livestock production differs from conventional practices and the benefits it attains. Farm Krumhuk, known for its commitment to sustainable organic practices, provided a tangible example of how these principles can be implemented.

The event also served as a valuable networking opportunity, strengthening the relationship between the Namibia Nature Foundation (NNF), NOA, the Ministry and the media. The interaction between journalists and agricultural experts facilitated a rich exchange of knowledge and ideas, fostering a collaborative spirit that is essential for addressing the complex challenges of sustainable agriculture.

The immediate impact of the Organic Food Jam was evident in the media coverage that followed. Within days, five articles and a short video were published in various Namibian media holdings, highlighting the event and the innovative practices of organic agriculture and agroecology. This coverage significantly boosted the visibility of these innovative approaches and underscored the importance of organic and agroecological practices in Namibia's agricultural sector.

www.noa.org.na



PGS CATALYSES GROWTH OF NATIONAL ORGANIC SECTORS

By Participatory Guarantee Systems South Africa (PGS SA)

PGS SA assists smallholder farmer groups to harness the economic, environmental and social potential of organic farming in order to develop local food systems that are climate resilient and keep soils and people healthy. In 2023, PGS South Africa and Grow West Africa, in collaboration with the Knowledge Hub for Organic Agriculture and Agroecology in Southern Africa (KHSA), co-hosted a series of webinars on key topics for PGS farmer groups. Presentations were made by PGS and organic farming experts: Patricia Flores from IFOAM-Organics International, Rowena Buena from the PGS Pilippines, and Julie Matovu from Freshveggies PGS in Uganda.



Caption: (Left to Right) Patricia Flores (IFOAM-Organics International); Julie Matovu from Freshveggies in PGS Uganda; Rowena Buena (PGS Pilippines)

Overcoming challenges to uptake of PGS

Patricia Flores, Global Academy Manager of IFOAM-Organics International, noted that “in Latin America, we have been working in PGS for so long — we are celebrating exactly 20 years next year of the first global meeting on PGS!” Patricia said that PGS started to grow in a significant way from 2018 onwards, with most producers (almost 1 million) from India.

She spoke to the five biggest challenges to the uptake of PGS. These are the need for autonomy and participation; how we work on a territorial approach and involve local governments; support and regulation to enable compliance with government bureaucracy; PGS versus the model of Internal Control Systems; and lastly, the need to build capacity and empower people.

“Power should stay in the system and not be given over to other institutions. Institutions that are not part of farmers’ grassroots organisation, even with the best intentions, weaken the system.”

- Patricia Flores

She concluded by saying that: “Finally, PGS is about capacity building and empowerment of people, and we need to be continuously improving in this capacity so that we can become better advocates for public policy for organic production.”

Importance of consumers and government

Rowena Buena from PGS Pilippines spoke to the development of PGS and organic certification in the Philippines noting that “organic certification only started in the early 2000s, but organic agriculture has been practised traditionally by many farmers for a long time.” At that time, they were operating in a non-restrictive environment with regards to organic certification.

The first Philippine standards for organic agriculture and a third-party certification system were accredited by the government in 2004. The aim was enabling the marketing of organic products abroad. In 2010, there was a push by one policymaker to recognise and support the central role of farmers, indigenous peoples and other grassroots stakeholders because 75% of farmers in the country are small-scale producers. It was at this point that campaigning started for recognition of PGS, as the law only allowed third-party certified products to be labelled as organic. An annual PGS conference to generate strategies to mainstream PGS in the country was initiated and a network built with local government units, NGOs and church-based organisations. As a result, PGS Pilippines was established in 2011.

Rowena noted that the organic market is fragmented, targeted at niche markets. Most organic products are sold in big cities and are expensive. This creates the impression that

organic products are only for the rich. Rowena noted that PGS Pilipinas' objective is to "bridge the gap between farmers and consumers and develop the domestic market by helping farmers receive inexpensive yet credible certification."

PGS Pilipinas has undertaken a lot of training, lobbying, networking, conferencing and PGS development work to support attainment of this objective. In 2016, the government created a technical working group to draft PGS guidelines and in December 2020, the President signed an amendment to the Organic Agriculture Act, which gives PGS recognition, a budget for the organic agriculture program, including small subsidies for PGS-certified farmers, representation of PGS network in the policymaking body, establishment of seed centres and a national campaign.

As of 2023, PGS Pilipinas had 20 PGS groups comprising 3 198 certified organic farmers producing on more than 500 hectares. Rowena concluded by emphasising the need to engage with and educate consumers and other stakeholders around PGS, and that once recognised, PGS should be supported in terms of processing, local distribution and marketing.

"Building critical mass is crucial in lobbying and strengthening your base, know what to compromise, continue to engage with international, national, and local stakeholders, as well as government bodies. Organise, inspire, and mobilise!"

- Rowena Buena

Invest in PGS as a business initiative

Julie Matovu from Freshveggies in PGS Uganda spoke to the growing recognition by policymakers that organic agriculture has a significant role to play in attaining Africa's food security. She noted that "In the late 1990s and early 2000s, development focused on produce for export to Europe, however more recently the African Union has committed to promoting ecological organic agriculture under her EOA-I 2015-2025 Strategic Plan. According to 2023 research from FiBL & IFOAM-OI, organic agriculture in Africa is on a strong growth path with 2.7-million hectares of organic farmland, 442,274 organic producers, and 458,702 metric tons total exports from Africa into the global market."

She emphasised that the key elements of trust, social networking and knowledge exchange should always be maintained in a PGS system.

And stated that PGS can be a proactive and practical entry point to integrate organic agriculture into the public domain to benefit from upcoming organic policies, strategic frameworks and standards. "In the absence of a Pan-African organic standard, and with each African state setting up its own national competent authority with an inspection system for organic products, PGS provides a perfect opportunity to stimulate local organic markets. PGS is a tool to facilitate trade and promote inclusion of grassroots small scale producers within their Organic Farmers' Organisations (OFOs), networks and family farms," she said.

Julie noted the need to strengthen the sometimes weak and informal organisational structure of OFOs as small-scale producers are custodians of 80% of the land in Africa and responsible for the majority of food production. Speaking to the opportunities and challenges, she noted the need for four-pronged approach that includes an orientation towards markets, is policy driven and that includes private/non-governmental stakeholders and the government.

She provided a practical tip regarding farmer pricing of organic produce, sharing that in her PGS, members undertook a bi-weekly market survey of key markets across the city to ensure that their prices were competitive and would not deter consumers. When dealing with high value products sold in basket schemes, other prices are moderated to ensure that the basket remains competitive in price.

"PGS groups need to "organise production, logistics and viable services to our communities. We need to invest in PGS as a business initiative and we need to encourage continuous learning through sharing as a key pillar of PGS."

- Julie Matovu

PGS for advancing organic agriculture

It is clear that PGS plays an important role in fostering organic sectors globally. Through continuous improvement, consumer education, and stakeholder and government support, PGS has the potential to enhance organic farming's growth and sustainability, as well as market integration. By leveraging local contexts and encouraging stakeholder collaboration, PGS can be a cornerstone in promoting organic agriculture worldwide.

Find the presentations [here](#).

For more info, visit [PGS SA's](#) website.

DELVING INTO MARKETS

Markets - small, large, formal and informal - are key to small-scale farmer success

Each edition, we will provide an in-depth look at a local market set-up in different countries. This edition, we focus on Zambia's Soweto Market, which is a primary supplier to both formal retail outlets, restaurants and informal street vendors. Our staff reporter Rabecca Mwila reports back.



EXPLORING ZAMBIA'S SOWETO MARKET

By Rabecca Mwila, ISAN Magazine staff writer

Despite substantial advocacy around the benefits of organic and agroecologically produced food in Zambia, it has not yet received recognition at the country's largest markets and trading hubs. It is key that small-scale organic and agroecological farmers are able to access consumer markets for their produce. ISAN magazine visits Lusaka's Soweto Market to investigate.



Caption: A visit to Lusaka's Soweto Market, July 2024 Credit: Rabecca Mwila

About the Soweto Market

Soweto market is Zambia's largest trading hub where a variety of Zambian traditional foods are found, sold and distributed to different destinations, both local and to other cities. There is no separation of organic and agroecologically produced foods.

Located in the country's capital city, Lusaka, the market comprises the New Soweto market and the Michael Chilufya Sata popularly known as BH open market. The duo hubs provide a very busy trading place for both small-scale and commercial farmers, wholesalers and retailers, as well as thousands of youths jostling the crowds to make ends meet through direct daily employment.

Owned by the Lusaka City Council, the local authority responsible for local governance, the market receives thousands of tons of a range of traditional and non-traditional foods mainly from small-scale farmers. It is known for cheap fresh farm produce, chiefly vegetables and fruits from farmers, while other farm products such as beans, fish, rice and other products also find their way into the market.

Oswald Wamunyima, a commissioned agent and chairperson at BH market says the market is one of the city's valuable assets in terms of food security and income generation for the ever-growing informal sector as it is a point of supply to hotels, supermarkets, chain stores, retailers and individual consumers through the market commission agents.



Caption: Scenes from Lusaka's Soweto Market, July 2024 Credit: Rabbecca Mwila

Wamunyima adds that the Soweto market is a strategic food security hub to the neighbouring Democratic Republic of Congo and Zimbabwe as a variety of the produce traded at the market crosses borders into these countries.

Where is the organic/agroecological food?

There is no organic or agroecologically produced food stock at the market — or at least none marketed as such. Speaking to some of the traders and farmers revealed that while they are relatively knowledgeable about organic farming, they believe there are more short-term income gains to be made from conventional farming. Wamunyima says, "Talking about organic products, we don't have here because most farmers use conventional fertilisers in order to have uninterrupted supply. The reason is simple, when you go organic way, it takes long for the crop to mature and also when you use conventional fertilizer, the yields are high."

Levy Siwale, a commissioned agent at the tomato section and who coordinates the supply of fruits and vegetables to hotels and supermarket suppliers says that never at any time have clients requested organic products. "To tell you the truth, don't be cheated, we don't have organic farm produce here, we sell what is produced by using synthetic fertilizers because they quickly uptake the nutrients once applied to the soil hence growing fast and giving high yields," he explained.

Dorica Mulobani with 30 years of experience in selling fresh farm produce at New Soweto, says "We don't even ask if what we are buying from commissioned agents is organic, all we do is just buy and sell to consumers."

More advocacy work to be done

Meanwhile Rolf Shenton, an ardent advocate for agroecology and organic agriculture and the founder of the Grassroots Trust, says "Once consumers realise that their increased health costs are due to poor food quality, they will be willing to pay more for organic produce and farmers will quickly shift to natural farming." He further notes that "Farmers who work with nature will always have lower costs, so they will win against high input farming in the end, because their profits are potentially much higher." He observes that many organic farmers have a long way to improving management as attaining regenerative production.

"The challenge is that many consumers don't appreciate the health benefits from having no poisons in the production chain, so they are not willing to pay a little extra for organic quality as consumers are doing in many other countries." - Rolf Shelton

There is clearly a need for much more consumer advocacy to be undertaken so that consumers can use their purchasing power to create a demand for sustainably produced food.

LOVING LIVESTOCK

Livestock production plays a critical role in livelihood and food security strategies.

The role of livestock production in African livelihood and food security strategies is undervalued. And there is a push towards industrial meat production on the continent. This section explores sustainable alternatives to the industrial model.



ADAPTED BREEDS FOR ORGANIC LIVESTOCK PRODUCTION

By the Namibian Organic Association

Organic livestock management is based on the same principles that guide organic crop production – Health, Ecology, Fairness and Care. These principles guide how farmers manage, feed and interact with their livestock. They also guide how livestock is managed within the farming ecosystem to avoid any negative impacts on the environment (e.g. overgrazing, uncontrolled build-up of livestock manure). Organic livestock farming considers animal welfare, organic animal feed and using breeds adapted to the local environment.

Why are adapted breeds important?

The use of adapted breeds is one of the cornerstones of organic livestock management to establish a functioning organic system that is supporting natural cycles. Adapted breeds typically have attributes such as birthing ease, strong mothering instincts, adaptation to feed availability without the need for extensive supplementation, a good temperament, and disease and parasite resistance for the particular environment to which they are adapted. These 'easy-care' attributes lead to fewer veterinary interventions and hence lower use of antibiotics or parasiticides.

An important aspect of breed selection in livestock farming for any farmer is the feed conversion rate of the animals. This is the amount of food that is fed to the animal that results in a certain amount of good quality meat. Animals that are well adapted to their environment tend to have a better feed conversion rate for the naturally available fodder compared to those less well adapted.

Adapted animals have been able to survive in the given environment for a period of time and their bodies have adjusted to digesting the available feed.



This is particularly important in harsh, drought-prone environments such as those in Namibia, where grazing availability (quality and quantity) can be a limiting factor for the animal's performance.

What to look for when selecting animals

The farmer's ability to select animals that do well in his or her specific farming environment is very important. When buying animals, it is important that they come from environments with similar conditions to the new environment. Key also is to select breeds or animals that are well suited to farmer's management. Animals with regular close human contact need to be more docile, while animals that are left to graze with little human control need to be more reactive towards other species (such as predators or thieves).

Organic farmers should consider the economical and ecologically sustainable profit/hectare when selecting a breed for the farm. Meaning that profit per animal can be lower than that of other breeds. For instance, large-framed cattle, e.g. Simbra cattle, reach a significantly higher price per animal when sold to an abattoir or auction than smaller-framed cattle, e.g. Nguni cattle, yet it is possible to keep a larger number of smaller-framed cattle on the same piece of land with less supplementary feed and medication. There is possibly a higher conception rate as they are well adapted to environmental stress.

Even though the price per animal is lower, the farmer is more profitable because of large numbers and lower input costs. So personal research on different breeds is very important when selecting a breed.

Other livestock — pigs and poultry

For animals that are not grazed purely, such as pigs or poultry, similar considerations are still relevant. Organic farmers rarely choose (ultra-) high productivity breeds, as their requirements in terms of feed, care and management might not be met easily on diversified organic farms that produce animal feed on farm and ensure on-farm nutrient cycling.

Local breeds are often less demanding in terms of fodder quality and quantity and have good productivity in local climatic conditions. They are also more resilient to local diseases. Local chicken breeds can cover most of their nutritional needs by scavenging while local pig breeds can be fed mainly with on-farm residues of other production lines or value-addition activities. The choice of best-suited animal species and breeds for a farm always depends heavily on local environmental conditions, management practices and market demand. It needs to be carefully considered and re-evaluated by any farmer, but specifically by organic farmers, who aim to build on natural systems and enhance natural cycles.

To learn more visit [Farm Krumhuk](#)

REGISTER ON KCOA PLATFORM TO DOWNLOAD RESOURCES

All of the KPs created by KHSA partners are freely available for download on the Knowledge Centre for Organic Agriculture Knowledge Platform.

Register as a multiplier to have access to these resources and hundreds more generated by the knowledge hubs in East, West, Central and North Africa. The platform also showcases events and workshops, and it is possible to connect with others working in the fields of sustainable food and farming systems from across the continent.

Register by visiting kcoa-africa.org or scan the QR code alongside.



SOIL LIFE

Soil is the basis of healthy farming systems. African farming soils are increasingly degraded through the use of synthetic inputs...

This section profiles different ways to improve the health and fertility of agricultural soils using affordable and accessible 'ingredients' and processes. In this issue, we focus on using green manures, which provide for multiple benefits.



USE GREEN MANURES TO IMPROVE YOUR SOILS!

By Rebecca Mwila, KCOA Digital Knowledge Officer

Green manures are crops that you grow specifically to be put back into the soil while they are still green. Examples are lablab, pigeon pea and cowpea. Before the crop flowers, you will turn it back into the soil by mowing or chopping it and mixing it in with a fork, a plough or a disk.

Why use green manures?

Green manures boost soil fertility, improve soil structure and support the biodiversity of life in the soil. They typically have high nutrient content and when put back into the soil, also contribute to soil organic matter.

Soil organic matter is critical for good plant growth. Green manure plants improve soil structure even when growing as their roots help break up compacted soil and allow for water and air to penetrate the soil. Some even help to suppress weeds and reduce pest populations.

How to use green manures

- Choose the right green manure crop: The type of crop depends on your soil type, climate and the nutrients that the crop you will plant afterwards needs. For example, legume crops fix nitrogen from the atmosphere in the soil, which can then supply nutrients to the plant.

- Prepare the soil and sow seeds: Prepare the soil by clearing the bed and either broadcasting the seed or placing into planting holes.
- Incorporate into the soil: Let the plant grow until just before flowering and then either mow or chop the crop and turn it into the soil by hand or with a plough. Disturb the soil as little as possible.
- Allow time for decomposition: Allow some time for the green manure to decompose and release its nutrients into the soil. This can take several weeks, avoid planting other crops during this time to allow for decomposition.

Read more about this topic [here](#). And find more resources related to using green manures and other practices to boost soil health and fertility on the [KCOA Multiplier Network platform](#).

ACCESSING KHASA KNOWLEDGE PRODUCTS

All of the KPs created by KHASA partners are freely available for download on the Knowledge Centre for Organic Agriculture Knowledge Platform.

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Register by visiting kcoa-africa.org or scan the QR code alongside.



YOUTH OUTLOOK

What is the pivotal role of youth in the future of farming, and how can we support them?

African youth are speaking up about the kind of food futures they want to see, and what needs to happen to make these a reality. We need to actively support youth in making their voices and ideas heard about food and farming systems.



AFRIFOODLINKS YOUTH AMBASSADOR PROGRAM

By Tashi Piprek

The AfriFOODlinks project is revolutionising urban food systems from Africa to Europe, with a special focus on empowering young leaders through its Youth Ambassadors Programme. This initiative harnesses the energy and creativity of youth to drive social innovation and foster community engagement across 20 cities. By amplifying young voices, AfriFOODlinks aims to inspire transformative actions and deepen understanding of urban food system challenges and opportunities.

Building a cohesive network

Since its inception in October 2023, the programme has appointed 15 African youth ambassadors, with European counterparts joining in September 2024. These ambassadors are pivotal in shaping a cohesive network dedicated to urban food system transformation. They contribute to an intergenerational dialogue that will take centre stage at the AfriFOODlinks Consortium meeting in Cape Town from November 25-29, 2024.

The youth ambassadors bring diverse perspectives and fresh insights to the project, exploring themes such as food culture, innovation, indigenous ingredients and local organisations. Their stories offer a new lens through which to view urban food system complexities, enriching the broader project narrative. By organising city-level activations, they unite various stakeholders — students, researchers, community organisations, and local leaders — to address food system issues collaboratively.

The role of youth ambassadors

The programme has significantly enhanced AfriFOODlinks by integrating diverse voices and strengthening community networks. Youth ambassadors facilitate face-to-face gatherings that offer unique insights into their city's food system, from food culture and entrepreneurship to market dynamics and food safety. Their content, ranging from local food initiatives to innovative solutions, provides a rich tapestry of stories that highlight both challenges and successes in urban food systems.

City-level activations, coordinated by the ambassadors, mobilise communities and draw attention to pressing food system issues. These events, including discussions, marches and workshops, are documented and shared on social media, amplifying their impact and encouraging broader support for the project.

Support the movement

To engage with these compelling stories and stay updated on AfriFOODlinks' latest activities, follow them on social media and subscribe to our quarterly newsletter. Track our progress with hashtags like #AfriFOODlinks, #ThroughFood, and #OurFoodStories. Through their innovative efforts, the AfriFOODlinks youth ambassadors demonstrate the powerful role young leaders play in transforming urban food systems for a more resilient and sustainable future.



Meet the Youth Ambassadors

Lusaka
Womba Mufundi



Chef and entrepreneur combining her background in physiotherapy with a passion for food and health to impact her community.

Windhoek
Kaylah Cordon



An architecture student, content creator, and youth advocate, promoting hygiene awareness and empowering girls through the Inner Girl Foundation.

Tunis
Adel Azouni



A geologist, environmental law student, radio host, and climate change advocate, contributing to international discussions on socio-ecological justice.

Tamale
Awudu Amina



Founder of the traditional restaurant The Dudughu Experience, she is passionate about indigenous food knowledge and nutrition,

Antananarivo
Tsiory 'Tiakaly'
Rakotondrainitomaho



Foodie and content creator, Tsiory, promotes local cuisine through his platform "Tiakaly". He is committed to learning about and influencing food systems.

Kisumu
Bonareri Morara



Founder of Mvuvi, innovating sustainable fish processing with solar drying technology around Lake Victoria, and promoting food security.

Quelimane
Fernando Sozinho



A Mozambican artist and activist using theatre, music, and poetry to raise awareness on social and environmental issues in his community.

Cape Town
Sindile Kamlana



A creative guide of African cuisine in Cape Town and founder of a media company promoting healthy diets, with a decade-long commitment to vegetarianism.

Bukavu
Clementine Maroyi



Passionate about food, winemaking, and information technology, she is an agri-entrepreneur driven to impact her community and contribute to sustainable business.

Dakar
Abass Mbatie



Advocate for sustainable development and multimedia creator promoting localisation of resources and engaging in global sustainability forums.

Mbale
Sam Wesamoyo



An agriculturalist and insurance professional enhancing smallholder farmers' resilience to climate change through innovation and consultation.

Niamey
Mariama Chitou



A political science student dedicated to humanitarian work, promoting sustainable eating, and youth mobilization through COJEFIL.

Chefchaouen
Omar Rahmouni



A primary school teacher and association activist, promoting cultural assets and engaging in youth educational programs.

Arusha
Filbert Minja



A filmmaker and storyteller highlighting conservation, community, and cultural appreciation through impactful visual narratives.

Ouagadougou
Farida Tientore



A tax lawyer and blogger promoting women's initiatives and local cuisine through her organization "Le Réseau des Héroïnes du Faso."



RESEARCH ROUNDUP

Bringing you research you
can use

We need an evidence base to advocate for organic and agroecological food and farming systems. This section provides overviews of research conducted into these systems. If your organisation is involved in research that you want to share, please [contact us](#).



FARMERS' DIGEST EXCERPTS

by the Network of Organic Agriculture Researchers in Africa (NOARA)

The Network of Organic Agriculture Researchers in Africa (NOARA) was established to unite and coordinate African organic and ecological agriculture scientific and technical researchers within and outside Africa. The network is an African initiative. It was independently established by African organic researchers and launched in 2009, during the 1st African Organic Conference in Kampala. Research is a critical component of any initiative designed to promote ecologically sustainable development of agriculture in Africa. <https://noara.bio>

Improving Soil Quality with Composted Poultry Manure: A Case Study with Tomato Cultivation

For maximum yield in crop production, a well aerated, moisturised and nutrient-enriched soil is necessary. Thus, improving soil quality continually will give a crop an environment suitable for optimal nutrient uptake. This will ensure a proper development of the crop and yield potential. Poultry manure is one of the organic fertilisers that can be used to boost soil nutrient content.

This investigation was conducted to examine the impacts of composted poultry manure on soil's physical attributes and soil organic carbon content, which are vital components of agricultural soil quality. Two varieties of tomatoes (UC82B and BESKE) were used as test crops. It was observed that application of poultry manure increased the volume of soil organic carbon and its total porosity, saturated hydraulic conductivity and aggregate stability and decreased bulk density in the experimental soil. Also, water retention did not show any significant difference between varied level of applied manure. Application of 10 tons/hectare compost was adequate to improve carbon content and soil physical properties for studied soil. Considering this research output, farmers are encouraged to use poultry manure to improve the quality of their soils.

This article is a farmers' digest from:

Author: Wahab, A.A, Agboola, K., Aina, O., Dada, O.A. and Hamza, A.

Title: Effect of Composted Poultry Manure on Selected Soil Properties and Organic Carbon Under Tomato Cultivation in Abeokuta, Nigeria.

African Journal of Organic and Ecology, Vol. 2, pp37-44

Herbal Leaf Meal as an Alternative Feed Grade Antibiotic for Pork

Pig production requires a less sophisticated mode of rearing and produces pork, which can serve as another source of protein for humans. Synthetic antibiotics are usually used in pigs as growth boosters, and the excessive use of it by piggery farmers has led to bacteria becoming resistant to antibiotics, and it has a deleterious effect on the final consumers. Hence, the need to start using organic means that provide a safe alternative to synthetic antibiotics and that build consumers' confidence in food safety.

This research was carried out to examine the effect of Moringa oleifera and Neem leaf meal and their composite on pork technological qualities and colour. It was discovered that the pigs' diet of herbal leaf positively influences the pork quality and also the intrinsic and extrinsic colour. So, for a maximum production of best pork qualities and colour that will attract consumers and bring about high demands, which will eventually increase farmer's profit, it is advisable to use organic sources of antibiotics like the herbal leaf diet, which includes use of Moringa leaf and Neem leaf meal.

This article is a farmer's digest from:

Author: Adigun, W.O., Njoku, C.P., Ekunseitan, D.A. and Agbaje, M.

Title: Evaluation of Herbal Leaf Meal as an Alternative to Feed Grade Antibiotics on Pork Technological Quality and Colour.

African Journal of Organic Agriculture and Ecology.

Vol.4, 2020. pp 13-21.

DOING IT FOR YOURSELF

We can all take some small action to make the world a better place...

This section provides stories, recipes, tips and knowledge that can apply at home, in our gardens or on our farms. Each action makes a difference. If you have tips or stories you would like to share, please [contact us](#).



MAKE YOUR OWN NATURAL CLEANING PRODUCTS

By Odette Mavunga, ISAN Magazine staff writer

Chemical cleaning agents, while effective at maintaining hygiene, can have several adverse effects on the environment and on your and your family's health. These effects include waste generation from the packaging, water and soil pollution from their production and toxic exposure for people and other living organisms. As the negative effects become more apparent, people are increasingly seeking alternative cleaning agents and methods. This article explores the benefits of natural cleaning products, provides simple recipes and discuss the advantages. These products are budget friendly, safe to use and easy to make.

Toilet cleaner

- 1 cup white vinegar
- 1/2 cup bicarbonate of soda
- 10 drops essential oil

Instructions:

- Pour in vinegar, add bicarbonate of soda and essential oil.
- Let sit for 3-5 minutes.
- Scrub and flush!

Window and mirror cleaner

- 2 cups water
- 1/2 cup vinegar
- 1/4 cup rubbing alcohol
- 1-2 drops orange essential oil (optional)

Instructions:

- Combine, pour into a spray bottle, and shine.

Homemade kitchen cleaner

- 20 drops of lemon oil
- 20 drops of lavender oil
- 250 ml water
- 250 ml white vinegar

Instructions:

- Combine, pour into a spray bottle and you're good to go.

Laundry detergent

- Grate 50 grams soap
- Dissolve in 1 litre boiling water
- Add 3 tablespoons baking soda
- Add 10 drops of essential oil (citrus or lavender)
- Let rest for 1 hour, then add 2 litres more water.
- Strain and pour into a jar and start using!

Wood furniture polish

- 250 millilitres white vinegar
- 125 millilitres olive oil (organic)
- 1 tablespoon lemon juice
- 20-30 drops lavender essential oil (organic)

Instructions:

- Mix all ingredients in a glass spray bottle. Shake well before each use.
- Spray on wood and rub with microfibre or other soft cloth.

Natural kitchen degreaser

- 30 grams baking soda
- 125 millimetres vinegar (white wine or apple cider)
- 1 teaspoon natural dishwashing liquid
- 0.5 litres hot water
- 5 drops lemon essential oil

Instructions:

- Shake, pour into a spray bottle and use to degrease kitchen surfaces.
- Let sit for 5 minutes for tough spots.





INDIGENOUS RECIPE BOOK



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RECIPES FOR SORGHUM

Sorghum: Sorghum Porridge Seasoned with Groundnut Flour

Ingredients

- ½ cup sorghum flour
- 1 cup groundnut flour
- 4 cups water
- 1 cup milk (optional)
- 1 teaspoon sugar (optional)
- 1 teaspoon salt

Preparation

1. Mix maize flour, sorghum flour, groundnut flour and water.
2. Heat water till it is boiling.
3. Pour the mixture into the boiling water while stirring to make porridge.
4. Reduce the amount of heat and continue stirring until the porridge starts to boil slowly.
5. Continue cooking on low heat for 30 minutes until the porridge is done.
6. Add salt and serve while still warm.
7. Add sugar (optional).

This is enough for 5 adult persons.
This meal comprises 3 food groups: fats and oils, food from animals and staples.

Sorghum: Pops

Ingredients

- 1 cup sorghum grain
- ½ cup soybeans
- 1 teaspoon cooking oil
- Pinch of salt

Preparation

1. Clean sorghum and soybeans.
2. Heat a pan and add the oil.
3. Add the dry sorghum and roast until grains pop.
4. Roast soybeans until brown.
5. Remove the outer part of the soybeans by rubbing or grinding moderately and then winnow to remove them from the mixture.
6. Mix soybeans and sorghum pops.

Serve with a drink. This is enough for 5 adult persons. This meal comprises 3 food groups: fats and oils legumes and staples.

Find this and other useful resources related to sustainable food and farming approaches on the KCOA Multiplier Network platform. Register [here](#) for free.

RESOURCES AND EVENTS

Watch: XERO Waste Champions

ZERO waste champions: when people are at the heart of change. This documentary tells the story of a partnership project on zero-waste and environmental justice in Durban, South Africa. This short documentary shows the power of small but impactful local solutions developed with people. Watch it [here](#).

Read: EU still exporting banned pesticides to Africa

In 2020, the European Commission pledged to address the outrageous practice of exporting banned pesticides and chemicals which pose significant risks to human health and ecosystems to non-EU markets. Despite this commitment, no concrete proposal has been put forth, leaving the EU still exporting tens of thousands of tons of these hazardous substances every year. Read the report [here](#).

Read: Landless Workers Movement interview Larissa Packer

Socio-environmental lawyer Larissa Ambrosano Packer addresses how the green economy serves financial interests, turning common goods into financial assets. Read the interview [here](#).



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