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Dear ProAgri Africa readers,

As Zambia and several other countries enter their peak harvesting season, the focus naturally shifts to one of the most critical, and often underestimated, parts of the farming cycle: what happens after the crop leaves the field. On our cover this month, we feature SARO Agro Industrial Ltd, a company that understands this challenge and continues to offer on-the-ground solutions for farmers across the region.

Post-harvest losses remain a serious concern in many parts of Africa. Too often, the difference between a profitable season and a disappointing one lies not in the yield itself, but in how efficiently that yield is handled, processed and stored. Delays in threshing, poor shelling methods and unnecessary spillage can quickly erode the value of a farmer's hard work.

This is where SARO's range of multi-crop threshers and maize shellers makes a real difference. Designed to meet the needs of small-scale, emerging and commercial farmers alike, these machines offer a level of efficiency and reliability that is essential during the busy harvest window. In conditions where labour can be limited and time is critical, the ability to process crops quickly and effectively is vital.

In this issue, we also turn our attention to the poultry sector, where Tiger Animal Feeds introduces a

valuable new series on early chick mortality, its causes and remedies. For many farmers, especially those starting or expanding their operations, early chick losses can be both frustrating and costly.

Beyond individual enterprises, we are reminded that agriculture in Africa is deeply rooted in community. Our story on page 9, focusing on community gardens, highlight how shared efforts and local initiatives are helping to improve food security, create small-scale income opportunities and uplift households.

At the same time, the ongoing challenges of crop diseases and pests continue to test farmers across the continent. Whether it is emerging threats or familiar enemies, staying informed and proactive is essential. Knowledge, once again, proves to be one of the most valuable inputs on any farm.

As you page through this new issue of ProAgri Africa, we hope you find not only useful information, but also encouragement. Every season brings its own set of challenges, but it also brings opportunity: to learn, to improve and to grow.

Wishing you a safe and successful harvest season.

ProAgri greetings!
Bianca Pretorius
bianca@proagri.co.za

On the cover

SARO Agro Industrial Ltd brings practical post-harvest solutions to farmers across Africa, helping reduce losses and improve efficiency when it matters most. Their range of multi-crop threshers and maize shellers is built for real farm conditions, from small-scale growers to commercial operations.



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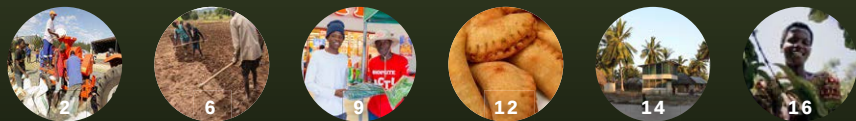
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Reducing losses, raising yields:

SARO's role in Zambia's harvest season

by Misheck Mukupa, Digital Marketing Officer at SARO

As Zambia enters the peak harvesting season, efficient post-harvest handling has become increasingly important for farmers seeking to reduce losses, improve productivity, and maximise profits. Responding to this growing need, SARO Agro Industrial Ltd continues to provide practical and reliable mechanisation solutions through its range of multi-crop threshers and maize shelter designed for small-scale, emergent, and commercial farmers.

With over 14 branches across Zambia and a strong reputation in agricultural mechanisation, SARO remains committed to helping farmers transition from labour-intensive harvesting methods to faster, more efficient processing systems.

Maize shellers for faster harvest processing

Traditionally, shelling maize manually can be time-consuming, physically demanding, and often results in grain losses and reduced product quality. SARO's range of maize shellers offers farmers a solution that significantly improves harvesting efficiency while saving both time and labour costs.

Among the solutions available is the Mini Maize Sheller Model YF-60E, designed specifically for small-scale farmers. Compact and easy to operate, the machine efficiently removes maize kernels from cobs while improving processing speed and reducing grain damage. Powered either by a 154F petrol engine or a 1.3HP electric motor, the sheller delivers a processing

capacity of up to 600 kilograms per hour, making it ideal for farmers seeking affordable mechanisation during harvest season.

For larger farming operations, SARO supplies the Maize Sheller Model 5TY-900, engineered to streamline maize processing with precision and speed. Powered by a 13.2HP diesel engine, the machine has a processing capacity of 2 000 kilograms per hour, providing farmers with a faster and more efficient shelling solution for high-volume production.

Multi-crop threshers for diverse farming operations

Recognising the increasing need for versatile equipment, SARO also supplies the highly efficient Amar Multi-Crop Thresher Tractor-Powered Model, designed to handle multiple crops including maize, soybean, wheat, rice, sorghum, pulses, chickpeas, kidney beans, oats, lentils, and barley.

Powered by a minimum 35HP tractor, the machine delivers maize output capacities ranging between 3 000 to 4 000 kilograms per hour, while soybean processing ranges from 300 to 500 kilograms per hour. Its multicrop capability makes in a valuable investment for diversified farming operations looking to improve efficiency across several crop types.

For farmers without tractor access, SARO offers the Amar Multi-Crop Thresher Engine Model, coupled with a 10HP diesel engine. The machine processes maize at a capacity of



approximately 1 500 kilograms per hour, while soybean output ranges between 150 to 300 kilograms per hour. The machine provides an efficient and flexible threshing solution suitable for medium-scale farming operations.

Maize Dehusker Cum Sheller for high-capacity operations

Another standout solution in SARO's harvesting equipment range is the Amar Maize Dehusker Cum Sheller (Tsunami Tractor Model), specifically designed to simplify the shelling process by eliminating the need to manually remove maize husks before threshing.

Equipped with a cleaning fan for cleaner grain output, the machine delivers an impressive output capacity of 4 500 to 5 000 kilograms per hour and operates using a 540 PTO RPM tractor system. The machine significantly reduces labour requirements while increasing harvesting efficiency during peak season.



Specialised seed processing solutions

SARO also supplies the Amar Maize Sheller Tractor Model, specifically designed for maize seed processing. Unlike conventional shellers, the machine is engineered to ensure gentle shelling that preserves seed quality and germination potential.

The machine delivers an output capacity of 1 200 to 1 500 kilograms per hour and operates using a 20-40 HP tractor with 540 RPM PTO power. Featuring a 36-inch drum size, the sheller is ideal for seed producers and certified seed multiplication programmes.

Supporting Zambia's agricultural growth

Mechanisation is not only about increasing speed but also about reducing post-harvest losses, improving grain quality, and strengthening food security. As climate pressures and rising production costs continue to affect the agricultural sector, efficient harvesting and post-harvest equipment are becoming essential tools for modern farming operations. SARO's continued investment in agricultural machinery and farmer support services reflects its broader mission of empowering Zambia's agricultural sector through practical, durable, and accessible mechanisation solutions.

Beyond machinery supply, SARO continues to distinguish itself through strong after-sales service, technical support, and the availability of genuine spare parts across its nationwide branch network.

This harvest season, SARO's

threshers and shellers are helping farmers across Zambia process crops faster, reduce losses, and move efficiently from field to market, reinforcing the company's long-standing commitment to quality and service.

Visit the SARO website at
www.sarozambia.com

to learn more about
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Amar Maize Sheller Tractor Model being used at a farm in Mkushi.



Mini Maize Sheller.



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Early chick mortality part 1: Causes and remedies

by Barbara M. Simbaya, Technical
Advisor at Tiger Animal Feeds



Chicks are very frail and vulnerable, especially during the first few weeks of life. Hence, it is imperative to have sound management to keep your flock alive and healthy. However, early chick mortality cannot be completely avoided even if our management is robust and the quality of the chicks supplied is good. Mortality of 1-5% is normal in a poultry farm; however, anything higher than this is a red flag and should be taken seriously.

A high mortality rate in a flock is a sure sign that something is wrong, and it demands the poultry owner's immediate intervention and appropriate action to stop further losses. Many factors cause early chick mortality, these may include issues of genetics, management, disease and nutritional causes. In this article, we will look extensively at the causes of early chick mortality and ways by which we can reduce it.



What causes early chick mortality?

There are many reasons why chicks could die, and the most common factors include:

- Genetics
- Management
- Nutrition
- Disease

Genetic causes

Genetic factors are primary contributors to early chick mortality. Inherited lethal gene mutations, congenital defects, and metabolic predispositions heavily impact hatchability and first-week survival rates.

Lethal gene mutations

Bird genomes contain several known lethal gene mutations. These genes typically cause developmental failures during the incubation period, leading to unhatched embryos or dead-in-shell chicks. In rare cases where a chick does hatch with these mutations, it often dies within the first 24 to 48 hours.

Congenital neurological defects

Certain genetic combinations cause neurological malfunctions shortly after hatching. Affected chicks may suffer from a failure to thrive due to an inability to reach food or water. Congenital neurological defects manifest in the following ways:

1. Congenital Tremors: A genetic or sometimes viral condition causing severe, rhythmic tremors that prevent the chick from standing or eating properly.
2. Congenital Loco: Causes chicks to lose balance, walk in circles, or flip onto their backs, ultimately leading to starvation or trampling by other flock members.



Metabolic and cardiac predispositions

In meat-producing birds like broilers, rapid growth genetics can trigger lethal metabolic syndromes:

1. Sudden Death Syndrome (SDS): Often referred to as "flip-over disease", it is linked to cardiac arrhythmias and is considered a metabolic disease where genetics, environment and rapid growth all play a role.
2. Ascites: Inherited fast growth creates a high demand for oxygen, causing heart and lung strain, which leads to fluid accumulation in the abdominal cavity and early death.

Skeletal and muscular deformities

Genetics, in combination with incubation conditions, can lead to structural defects. Chicks born with severe skeletal deformities (such as perosis, crooked toes, or twisted legs) often struggle to compete for feed and are highly susceptible to early culling or mortality.

Next month, we will look at management causes in early chick mortality.



For more information about best management practices for your chicks, reach out to Barbara M. Simbaya, Technical Advisor at Tiger Animal Feeds, by calling her on (+260)969-202-2070r, alternatively, you are welcome to send an email to barbara.mulonda@tigerfeeds.com.zm



Millions of farmers in Africa's Great Lakes region face rising temperatures: study predicts how crop disease and pests could spread

Study predicts by Romaric Armel Mouafo-Tchinda, Aaron I. Plex Sulá, Jacobo Robledo Buritica and Karen Garrett

Farming in the Great Lakes region of Africa (which includes Uganda, Rwanda, Burundi, the Democratic Republic of Congo, Tanzania and Kenya) is challenging because of changing environments and ongoing social and political tensions. These tensions include conflict over resources. As a result, agricultural productivity is low and there's a high rate of food insecurity in those regions.

It's difficult for farmers to manage their farms well when they don't have enough high-quality seed and also experience extreme weather conditions like floods, drought and heat waves. Armed conflict and crop diseases and pests make the situation worse by damaging crops. Losses to disease and pests are often higher in low-input agricultural systems, where there is limited access to agricultural infrastructure and inputs like fertiliser and pesticides, as is common in sub-Saharan Africa.

We are part of a team of plant pathologists who study crop diseases and pests and then come up with strategies to manage and prevent losses. In our latest research, our team sampled 27 crop pathogens and pests on banana, cassava potato, and sweet potato crops across altitudes in Burundi and Rwanda.

We then used machine learning, a type of artificial intelligence, to see how these pests and diseases may spread when the climate warms more. We wanted to identify high-risk locations and potential shifts in particular pathogens and pests under climate change scenarios.

In "climate matching" studies like this one, researchers evaluate a set of species – in our case, pathogens (disease-causing organisms like viruses or bacteria) and crop-damaging organisms like aphids and weevils – and consider how these species may change across a region as climates change. Information about pathogens and pests at a lower altitude gives a preview of the future at higher altitudes, as the higher altitudes become warmer.

Our research found that hotter temperatures are likely to change the distribution and dynamics of crop pathogens and pests in the Great Lakes region. Climate change may allow them to spread to new altitudes and regions where they were less common in the past. This would affect food security crops that are key to the livelihoods of millions of smallholder farmers.

We used a modelling toolbox to identify which cropland areas can make it easier for pathogens and pests that target specific crops to spread.

Our research shows how parts of Rwanda, Burundi and the surrounding area can serve as pathways for pests and disease to spread through crop fields.

Higher temperatures can make this worse. Pathogens and pests like particular

conditions. Higher temperatures may allow crop pathogens and pests to spread to new regions where they were less likely to thrive in the past.

We saw that, as the hills and mountains in the Great Lakes region heat up, 44% of the 27 pathogens and pests could become more common at higher altitudes. This means smallholder farmers will need to adapt.

Another important finding is that not all pathogens and pests will become bigger problems. We found evidence that 17% may become less common at higher altitudes.

This is because conditions may become a bit too hot for them. It's important for national agricultural programmes to know which pathogens and pests they need to plan for now and in the future.

How farmers can adapt and protect their crops

Our results provide a foundation for future work to improve decision-making tools that predict where and when crop diseases and pests are likely to occur. Our findings can be used to develop tools that help growers and policymakers to make decisions based on the realities of climate change.

Farmers and agricultural stakeholders – extension specialists, government agencies and humanitarian groups – need to adapt so that they can protect crop health and productivity. They can do this through climate-smart agriculture (which involves adopting farming practices that increase food production, help crops

adapt to climate change and protect the environment). At the same time, farmers can implement better crop management practices to reduce food insecurity while building resilience to climate change.

As the world heats up, it's going to become increasingly important for governments to carry out regular pest and disease surveillance and forecast where plant diseases need management. Knowing which diseases and pests are likely to spread more will be key to planning how to adapt.

There are many opportunities for improving disease surveillance, predictive modelling, and sustainable pest management. When long-term, high-resolution disease and pest data are available for more regions, predictions and strategies can be improved. Farmers will know in advance if they need to grow disease-resistant varieties or change which crops they grow. However, many national plant protection organisations face resource limitations, personnel shortages, and insufficient infrastructure. This limits their ability to implement comprehensive monitoring and response programmes.

Another problem is that when crops are poorly managed or abandoned during disasters, pathogens and pests can spread more easily throughout the region.

With better information, government agencies and humanitarian organisations can plan in advance to target the most important pathogens and pests, and work to protect the locations that will be hardest hit.



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NAMIBIAN COMMUNITY GARDENERS TAKE CENTRE STAGE AT SHOPRITE'S MARKET DAY ON WORLD HUNGER DAY

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Beetroot, carrots, chillies, herbs and other vegetables grown in a Namibian community garden were showcased and sold at Shoprite Lafrenz in Windhoek on Market Day on Thursday 28 May.



This year, the project, which annually provides local community gardeners with a valuable retail platform, coincided with World Hunger Day – a global awareness day focused on food insecurity and sustainable solutions.

Groot Aub Fresh Producers is among over 300 community gardens supported by the Shoprite Group across southern Africa, helping to strengthen food security in the region.

"This year, Market Day provided almost 60 local gardeners and co-operatives across the region with the opportunity to sell their fresh produce directly to the public, gain retail experience and strengthen the roots of small businesses that feed their communities," says Sanjeev Raghubir, Chief Sustainability Officer at the Group. "Customers stocked up on local peppers, spinach, parsley and many other vegetables and fruits, met the small-scale farmers and learned about their sustainable growing methods and, in some instances, even purchased seedlings for their own home gardens."

Namibian gardeners gain skills and market access

On the outskirts of Windhoek, Groot Aub Fresh Producers food garden grows a wide variety of crops, enabling project members to sell produce to community members and create employment opportunities. Surplus produce from the six-year old community garden, is often donated to a neighbouring old age home and community centre.

"Through this Shoprite Group project, we get connected to other communities, which helps us to sell our products quicker and generate income more easily," explains Julia Haipinge. "At



Market Day, we gain a lot of trust and customers for our products, along with skills and knowledge. This all keeps us going, and we will never give up when it comes to food production."

The skills include product presentation and record-keeping, amongst other things.

"For each community gardener taking part in Market Day, there is a story both of individual circumstance and a pathway towards a more grounded and

food secure life rooted in the soil," adds Raghubir. "The power of this day is in taking this a step further by facilitating market entry with skills training."

Beyond Market Day, the Shoprite Group continues to support community food gardens through its Act For Change programme, which to date has assisted hundreds of gardens with training, seedlings and infrastructure. This year, the retailer marks the milestone of its 300th community garden, a project outside Bredasdorp, in South Africa.

"It's exciting to see the seeds we help sow within our communities grow and flourish," says Raghubir. "We are proud to champion the heroes of southern African gardens and small farms, who nourish their communities and their future through their own dedication and hard work."





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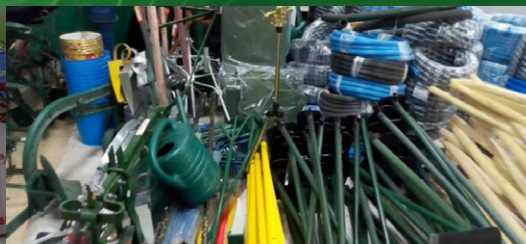
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BOTSWANA COMMUNITY GARDENERS TAKE CENTRE STAGE AT SHOPRITE AND CHECKERS' MARKET DAY ON WORLD HUNGER DAY

Article supplied

Beetroot, carrots, chillies, herbs and other vegetables grown in Botswana community gardens were showcased and sold at Shoprite Gaborone and Checkers Airport Junction Centre in the country's capital city on Market Day on Thursday 28 May.



This year, the project, which annually provides local community gardeners with a valuable retail platform, coincided with World Hunger Day – a global awareness day focused on food insecurity and sustainable solutions.

The two growers from Botswana who took part this year – Adams Eden and Sharodan Farms – are among over 300 community gardens supported by the Shoprite Group across Southern Africa to strengthen food security in the region.

"This year Market Day provided almost 60 gardeners and co-operatives across South Africa, Namibia and Botswana with the opportunity to sell their fresh produce directly to the public, gain retail experience and strengthen the roots of small businesses that feed their communities," says Sanjeev Raghubir, Chief Sustainability Officer at the Group. "Customers stocked up on local peppers, spinach, parsley and many other vegetables and fruits, met the small-scale farmers and learned about their sustainable growing methods and in some instances, even purchased seedlings for their own home gardens."

Botswana gardeners gain skills and market access

Adams Eden began in 2021 with the goal of making Botswana green. In response to local demand for fresh vegetables, the project expanded from tree cultivation to crop production. Trees and seedlings are sold at discounted prices to support food security and foster an environmentally conscious, sustainable community.

"Through our participation in Market Day, we gained confidence in sharing our story and explaining our growing techniques, while understanding what



customers value most," says Lerato Bwire.

There is also significance in the skills that the retailer endeavours to pass on to participants in Market Day, which include customer relations, communication, pricing, product presentation and record-keeping, among other things.

"For each community gardener taking part in Market Day, there is a story both of individual circumstance and a pathway towards a more grounded and



food secure life rooted in the soil," adds Raghubir. "The power of this day is in taking this a step further by facilitating market entry with skills training."

Beyond Market Day, the Shoprite Group continues to support community food gardens through its Act For Change programme, which to date has assisted hundreds of gardens with training, seedlings and infrastructure. This year, the retailer marks the milestone of its 300th community garden, a project outside Bredasdorp, in South Africa.

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African Cuisine

Part 20:

West Africa – Senegal

by Tisha Steyn

Senegal, the westernmost country in West Africa, is situated along the Atlantic Ocean. It borders Mauritania to the north, Mali to the East, Guinea to the southeast and Guinea-Bissau to the southwest. The Senegal River forms the northern border. The country nearly surrounds the Gambia, situated along the banks of the Gambia River, and which separates Senegal's southern region of Casamance from the rest of the country. The capital is Dakar.

The country consists mainly of the sandy plains of the Sahel. The northernmost part of the country is the Lompoul desert, which has quite a hot desert climate, the central part, which has a hot semi-arid climate and the southernmost part, which has a tropical wet and dry climate.

The tropical climate makes it sunny and dry, with a defined wet and dry season. The dry season is characterised by hot, dry harmattan winds prevalent from the end of November to March. In Dakar, the annual rainfall is about 600 mm and occurs between June and October when temperatures range from 24,2 °C to 30 °C and in December to February between 18 °C and 25,7 °C.

Interior temperatures are higher than along the coast, averaging between 30 °C and 32,7 °C. Rainfall increases substantially further south, exceeding 1 500 mm annually in some areas. Near the Mali border, where the desert begins, temperatures can soar to 54 °C.

Agriculture

Extreme drought has an influence on agriculture, which employs about 75% of the population. Very little of the country is under irrigation and subsistence farmers are reliant on rainfed agriculture for their needs.

Millet, rice, maize and sorghum are primary food crops, but these are

Sombiis rice pudding made with coconut milk a firm favourite of children. It is also made for special occasions like baptisms.

subject to droughts and pests including locusts, fruit flies, white flies and birds.

The country is a net importer of rice. Peanuts, sugarcane and cotton are cash crops, and a wide variety of fruits, including melon and mango, and vegetables, including green beans and tomatoes, are grown for local and export markets.

The fishing sector is the country's main economic resource and major foreign exchange earner, while the livestock and poultry sectors are relatively underdeveloped. Most of the country's milk and dairy products are imported.

The Senegalese cuisine consists of many dishes containing rice as base, with fish, meat and vegetables rounding off dishes. There is a French influence from the time of French colonialism, as well as from other West African countries.

Fish, beef, lamb, chicken and eggs are used in the country's cuisine, along with peanuts, couscous, white rice, sweet potatoes, lentils, peas and blackeyed peas. Meats and vegetables are typically stewed or marinated in herbs and spices and served over rice and couscous or with bread.



Mafe, also spelled maafe, is a dish combining white rice and a savoury sauce made with peanut butter, meat, potatoes and tomato paste.

Lunch and dinner

Thieboudienne, Senegal's national dish, consists of rice cooked with tomato sauce and nokos, which is a mixture of fiery spices, onions and garlic and fresh herbs. The rice is served with fish and vegetables, including carrot, cabbage, cassava, eggplant, okra, and turnip, simmered in the tomato sauce. The dish is sometimes accompanied by an onion sauce, called diaga, which consists of diced carrots, fish balls, and a spoon of tomato paste. Thieboudienne is served on a large plate from which the whole family eat it with spoons.

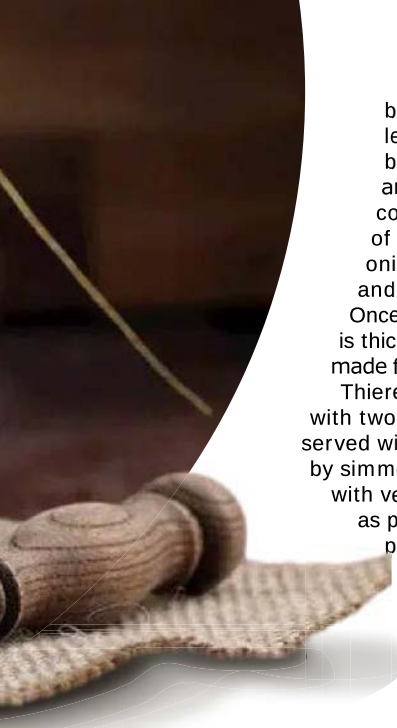
Thiébou Diola or C'est Bon, which is French for 'that's good', consists of grilled fish and dried shrimp, clams and mussels, cooked with rice. The dish is served with moyo sauce, which is made with diced raw onion, sweet peppers and chili, and seasoned with mustard, salt, pepper and vinegar, as well as boiled and mashed okra seasoned with salt and pepper.

Thiébou Yapp is the meat version of Thieboudienne, but without vegetables. The meat is braised, then boiled in water with meat broth and nokos, with rice added when the meat starts to boil.

Kandia is soup made with okra, palm oil, white rice and fish. The dish is served with souloukhou, a peanut butter sauce, to which some people also add a few okras.

Yassa Guinar or Dieun is a chicken or fish dish. Once again, the dish is based on rice served with an onion sauce with nokos, mustard and lemons. It can be served with braised or grilled fish or chicken, stuffed with nokos.

Mafe is a combination of white rice and a sauce made with peanut butter, meat, tomato paste, potato and sweet potato that is simmered for a few hours.



Domoda is a stew based on a fragrant lemon sauce with beef, veal, lamb and balls of fish cooked in a sauce of tomato paste, onions, vegetables and a lot of lemons. Once cooked, the dish is thickened with a past made from flour and water. There is often prepared with two types of meat and served with a sauce made by simmering the meat with vegetables, such as potatoes, sweet potatoes, white beans and dates, and served with millet couscous. Vermicelle poulet is steamed broken vermicelli, chopped onions and braised chicken or lamb.

Dakhine is made with meat, peanut paste, oil, rice and vegetables.

Bassi-salté is a traditional stew consisting of seasoned meat, cooked with tomato paste and vegetables and served over saadi or chere, which is traditional millet couscous.

Capitaine à la Saint-Louisienne is perch stuffed with spices. Caldou is a sauce with fish and vegetables.

Senegalese street food

Dibi is a piece of grilled lamb that is cooked en papillote, which means it is steamed in a parchment packet in the oven, before it is grilled and served with onion rings. These are often sold at a gargote or informal restaurant, also called a dibeterie, on the streets of Dakar. Pastels and fataya are salted fish fritters dipped



Dibi are lamb chops steamed in parchment paper and sold as streetfood at a dibeterie, or informal restaurants in Dakar.

in tomato sauce made with tomato, onions and garlic, while fataya is made with ground beef instead. This is another popular cheap and tasty street food.

Acara or acaraje, refers to deep-fried fritters made with black-eyed peas, ppeppers, onions, salt and a cube for seasoning.

Maad is regarded as one of the best street foods of Senegal. Maad is the fruit of a creeping plant or vine *Saba senegalensis* that grows along streams or which is cultivated as a shrub. The fruit contains seeds coated with a very mellow, yellow juicy pulp that taste both tart and sweet. It can be eaten in its natural state or with sugar, salt and pepper. When mixed with water and sugar, the fruit makes a delicious juice.

Senegalese sweets

- Lakh is a popular breakfast porridge of millet served with sugar, buttermilk and ground nutmeg.
- Sombi is rice pudding made with coconut milk, which is a favourite among children.
- Ngalakh consists of peanut butter and baobab juice eaten with couscous.
- Thiakry consists of couscous eaten with yogurt.
- Cinq centimes or five-cent cookie is a peanut cookie popular in marketplaces.



Lakh is a popular breakfast porridge made with millet and served with sugar, buttermilk and ground nutmeg.

Senegalese juices

Bouye juice is a popular drink made with the fruit of the baobab, the most recognisable tree on the African savannah – hence the slightly acidic taste of the beverage.

Bissap refers to a species of hibiscus called *Hibiscus sabdariffa*, also called Guinean sorrel or reed. The shrub is usually between one and two metres tall and once the flowers have fallen, purple chalice appear. The drink is prepared with the hibiscus flowers and mint leaves – and sometimes orange blossoms, and can be enjoyed warm or cold.



Bissap is a popular juice made with hibiscus flowers, sugar and water.

Ditakh juice is prepared from the fruits of *Detarium Senegalense*. The apple-green juice is rich in vitamin C and is believed to have medicinal value, particularly against coughs, angina and general aches and pains. Other juices include dakhar or tamarind juice, and gingembre or ginger brew.



Ditakh juice is made from the fruits of *Detarium Senegalense*, which is a lovely apple green and very high in vitamin C.



Pastels are salted fish fritters dipped in a tomato sauce.



Acara, which refers to deep-fried fritters made with black-eyed peas, is a cheap streetfood snack.

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Better

Homes,

Healthier Kids

by Tisha Steyn

The sound of a mosquito wakes you up. Again. Your damp sleepshirt clings to your sweat-soaked body as you lie in bed listening to your baby coughing.

You are tired, as if you haven't slept at all. Your three-year-old son's delirious malaria dreams kept you up while you were also worried about your five-year-old daughter's diarrhoea.

Soon you will have to get up and try to restart the fire, and boil the last of the water in the bucket for porridge.

You will have to fetch more water from the borehole three kilometres away. On the way you will have to gather firewood. Then you will work in the vegetable garden, take care of the goats and cook an evening meal for your children.

You are not alone. Like millions of people in Africa, you live in a one-bedroomed house built with concrete blocks with one door, no windows.

Link between a healthy home and healthy children

In 2023, researchers from the African Population and Health Research Centre with an interest in urbanisation and population dynamics, set out to study the link between housing as well as children's health.

They did research in six African coun-

tries, namely Burkina Faso, Cameroon, Ghana, Kenya, Nigeria and South Africa and found that diarrhoea, acute respiratory illness and fever had serious consequences for child health and wellbeing.

Diarrhoea and acute respiratory infections are the leading causes of disease and deaths in children younger than five, especially in developing countries like these. The study found that healthy housing usually decreased the chances of these children falling ill with diarrhoea, acute respiratory illness and fever.

Their definition of healthy housing took into consideration different aspects, including sanitation, drinking water sources and housing characteristics.

If homes provide protection against heat, cold, rain and wind, provide enough space for everybody, and used clean cooking fuels, children are much healthier.

This group of researchers found that parents can improve the wellbeing of their children by doing things a bit differently. These include:

- Using clean energy for cooking to reduce indoor air pollution and consequently reduce the incidence of acute respiratory illnesses.
- Using clean drinking water, hand

washing and improving sanitation can help significantly reduce cases of diarrhoea.

Better homes for healthier children

More recent research done in Tanzania showed that a better designed home could further ensure healthier children.

Research has shown that malaria, diarrhoea and pneumonia in young children can be prevented. These diseases are transmitted in and around the home where young children spend most of their time with their mother or another adult taking care of them.

Diseases that kill young children

Three diseases are primarily killing young children in Africa. They are:

- Malaria – most cases of malaria (80%) occurs when people inside their homes are bitten by mosquitoes carrying malaria.
- Diarrhoea – a runny tummy is caused by food and water that has been contaminated by faeces (poo).
- Pneumonia – inflamed lungs are caused by too many people living in a room with little fresh air and where an open wood fire is used for cooking.

Where do these diseases come from?

The team first had to establish where the diseases originated or what caused them in traditional homes.

Malaria: Mosquitoes find people mainly by smell. From a distance, they smell the carbon dioxide people breathe out. When they come closer, they follow the smell of the bacteria on human skin.

Diarrhoea: In houses where there is clean water for cleaning, washing the body and hands and a clean place to prepare food, as well as fly-proof kitchens and latrines, cases of diarrhoea greatly reduced.

Pneumonia: Where clean air flow through a house and the kitchen is not filled with smoke, the lungs are not damaged and diseases of the airways, including colds, flu, bronchitis and pneumonia occur. This is spread through air-borne pathogens and made worse by smoke-filled kitchens which damage the lungs. All these diseases cause fever which, if not treated, can kill children younger than five.

Star homes

The researchers then designed houses that can help prevent these diseases from occurring in children.

They designed dwellings that they referred to as “Star Homes” with the following features:

- A double-storey house with bedrooms on the upper floor, away from mosquitoes, which are most abundant at ground level.
- Cross-ventilation, where air passes through the room. To increase air movement, the inner walls were made of shade netting instead of solid walls.
- These net walls made the sleeping areas cooler and kept mosquitoes away from people sleeping in these spaces.
- Mosquito screens on doors and windows kept mosquitoes and flies out.
- Self-closing doors helped to keep mosquitoes and flies out.
- Clean water harvesting by catching rainwater in tanks and better pit latrines helped to keep hands and food clean to prevent diarrhoea.

- Improved stoves kept the air clean and helped prevent pneumonia.

What happened?

After three years, it was found that children living in Star Homes instead of traditional homes had:

- approximately (44%) less malaria
- approximately three times (30%) less diarrhoea
- approximately five times (18%) less pneumonia than those living in traditional homes.

Because the children didn't contract these three diseases:

- they were significantly healthier;
- they grew taller than children living in traditional houses.

Additionally, Star Homes have the following advantages:

- Due to better ventilation these houses are cooler and more comfortable
- Building these houses are more affordable
- These homes are significantly healthier for the environment

Time to build new homes

Africa's population of 1,5 billion people is expected to increase to 2,7 to 3,7 billion by 2070. According to the researchers, millions of new homes need to be constructed urgently, and this is a good time to build healthier homes for healthier people.

They believe governments can help citizens to build better homes by:

- Ensuring they get ownership of their homes so that they can borrow money for building;
- Reducing import taxes on mesh, netting and framed screens; and
- Providing advice and ample support regarding constructing these homes.

In this way, governments can help communities to build healthier homes for people who do not earn a lot of money. If better homes can improve the health of people, they will need less medical care, which will save the government more money.

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Photo: Lorenz von Seidlein



A Star Home consists of two storeys with better ventilation for fresh air, while shade netting or fly screens keep mosquitoes and flies out. (Source: Courtesy Julien Lanoo, <https://theconversation.com/better-designed-homes-could-cut-three-major-child-diseases-by-up-to-44-tanzania-trial-281890>)

Jacobs brings **SUSTAINABILITY**

to life through its Wunderbar project in Tanzania

Article supplied



In the far west of Tanzania, in the lush and fertile region of Kagera, coffee is more than a crop, it is a livelihood, a legacy, and the foundation of thriving communities.

Driven by the ambition to solidify the Jacobs ESG strategy through the lens of its purpose and ambition that led to the launch of the Wunderbar Project in 2023, it is here that Jacobs Coffee is deepening its commitment to sustainable sourcing and community development through the Wunderbar Project, a long-term initiative designed to empower coffee farmers with the tools, knowledge and support needed to build resilient, self-sustaining futures.

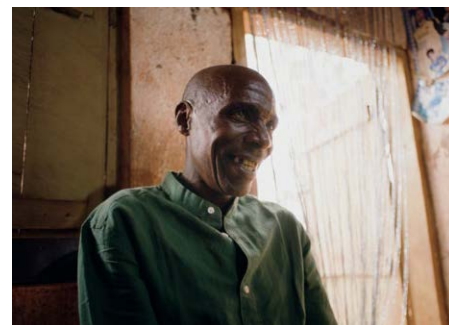
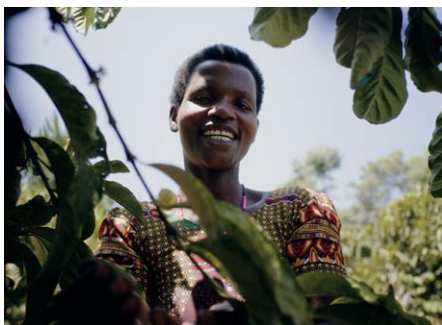
At its core, the project reflects a simple but powerful belief: when coffee thrives, communities thrive.

The Wunderbar Project is built on collaboration rather than intervention. Working closely with local farmers, Jacobs focuses on knowledge-sharing and practical support, equipping communities with skills to improve coffee production, strengthen financial resilience, and diversify income streams.

This includes training in:

- Sustainable farming practices
- Financial management and planning
- Long-term business development

By strengthening the foundation of each farm, the project enables farmers to build not only more productive operations, but more secure futures.



While the project begins with coffee, its impact extends far beyond agriculture. Across Kagera, farmers are transforming their livelihoods into broader ecosystems of opportunity, creating spaces, businesses and support systems that uplift communities. For Jafari, coffee farming has enabled him to create a gathering space where neighbours come together from a football viewing hub to small community-driven enterprises.

For Helena, it has sparked a network of women supporting one another through shared economic activity.

For Aderina, it has meant improved food security through dairy farming that nourishes both her family and her land.

For Johanes, it has unlocked entrepreneurial ambition, turning harvests into new ventures, and for Balagomwa, it has become a platform for preserving knowledge, passing down farming practices through storytelling and song.

Together, these stories reflect a broader truth: sustainable coffee farming can act as a catalyst for inclusive, community-led growth.

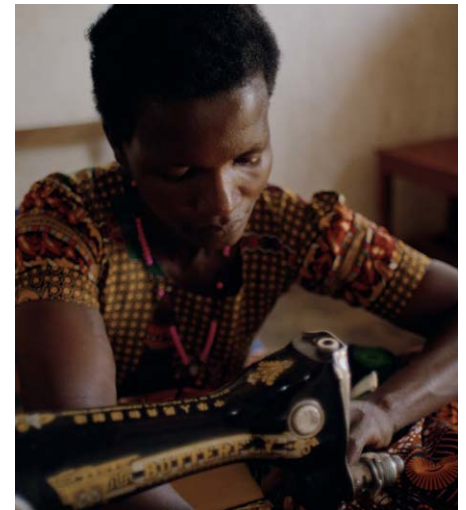
For Jacobs, sustainability is not a standalone initiative, it is embedded in how the brand sources, partners, and grows.

The Wunderbar Project demonstrates a shift from traditional supply chain models towards shared value creation, where investment in farmers directly contributes to stronger communities and more sustainable production systems.

Domaine Rautenbach, Senior Brand Manager at Jacobs, says the initiative reflects the brand's long-term vision: "The Wunderbar Project is about recognising that sustainability starts with people. By working alongside farmers and investing in their knowledge, skills, and communities, we are helping to build something that lasts far beyond a single harvest. What makes this initiative truly powerful is that the transformation doesn't come from us, it comes from the farmers themselves. Our role is to support that growth and help unlock its full potential."

As global demand for responsibly sourced coffee continues to grow, initiatives like the Wunderbar Project highlight the importance of building resilient agricultural communities that can sustain both people and production over time.

For Jacobs, the project is not just about improving coffee supply, it is about contributing to a future where farming communities are empowered, connected and economically secure, because ultimately, the true value of coffee lies not only in the cup, but in the communities behind it.



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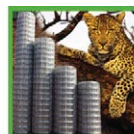
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