Most people dismiss black soldier fly, scientifically known as Hermetia illucens as dirty insects which transmit diseases to humans. However, researchers at the International Centre of Insect Physiology and Ecology (ICIPE), Nairobi, are using the housefly to make cheap but nutritious feeds for fish, poultry and pig. This is a huge relief to farmers who have in the past been relying on expensive feeds, which leave them with small profit margins from their ventures. According to Dr Chrysantus Mbi Tanga, a research scientist at ICIPE who is leading the project, use of insects to produce feeds is cost-effective and offers the farmer a chance to enjoy relatively bigger profit margins. The insect produced feeds are also high in nutrient value because insects have over 60 per cent of proteins and fat contents as compared to conventional feeds in the market which would only have about 10 per cent of proteins. To get the feeds from black soldier fly, a farmer should be committed to go the whole route of catching and domesticating houseflies, then later harvesting their eggs which are then grown in specially designed containers until the larvae stage (maggots). At ICIPE, Insects laboratory where this technology has been tried for the last three years, the black soldier flies are trapped and kept on enclosed glass containers for mating and egg production. “We place pieces of small cartons inside the containers for the flies to lay their eggs on. When the eggs are laid, the cartons are then transferred to buckets containing waste material to grow into larvae,” says Dr Tanga. The scientist says the maggots can grow in human faeces, cow dung, chicken droppings and other forms of waste. However for the research, the scientists are using waste from Kenya Breweries. “We have found out that this waste is one of the best for the eggs to hatch and grow. It takes about 15 – 20 days for them to be ready for harvesting,” he says. At the harvesting stage, they are big, fat maggots burrowing their way inside the waste. “You need to harvest them at this stage before they get into pupae stage and then into adulthood (grown flies). For harvesting and processing, the maggots are separated from the waste through sieving and placed on direct sunlight for at least two days to die and dry up. When they are fully dried, they are then taken to a grinding machine and ground into powder form. Dr Tanga says this powder, which is high in protein and fats is then ready to be mixed with maize grains and others to get complete balanced diet feeds for either fish, poultry or pigs. The final products are either in form of powder, cake or pellet.
Kenya is staring at food shortage in the coming months as farmers have to cope with a myriad of challenges that could adversely affect the production of the country’s staple food — maize. Experts have warned that drought, pests and diseases will affect key maize-growing regions rendering many households to rely on government interventions for food supplies. Also casting dark clouds on the gloomy outlook is the slow adoption by farmers of disease and drought-resistant crop varieties. Besides, farmers are already contending with a bumper maize harvest that is going to waste due to lack of storage facilities and the lethal maize lethal necrosis disease.

“In the last five years Kenyan farmers have seen a sharp rise in severe drought along with the emergence of an avid plant pest called African Fall Army Worm (FAW) that threatens to decimate the region’s most important food crop, maize,” said African Agricultural Technology Foundation Board chair, Ousmane Badiane. Kenyan maize farmers lost Sh3 billion to the FAW attacks in 2017 alone.

“The Fall Armyworm damaged 250 hectares of maize last year when it was first reported in the country. This reduced the maize yield by three million bags, which translates to approximately Sh3 billion,” said David Mwangi, who heads a team of experts appointed to combat the pest at the Ministry of Agriculture. Food and Agriculture Organization (FAO) has warned the country’s food import bill is set to increase tremendously in the next 20 years as land under main food crops will reduce by over 40 per cent owing to the escalation of effects of the climate change. The area under maize production is likely to reduce by 800,000 hectares from the current 2.1 million hectares to 1.2 million hectares.

Kenyans are among high consumers of maize compared to her peers in the region despite its endowed production potential. Kenya National Bureau of Statistics recently indicated that Kenyans consume 51 million bags of maize against its production of 40 million every year. Badiane says there is a need for new approaches to overcome obstacles that discourage agricultural technology developers from generating products that meet the needs of smallholder farmers in Kenya.

“We see public-private partnerships as the best way to stimulate innovations that are aligned with the way Africans produce food—which is largely on small, family farms—and target the unique mix of crop varieties and growing conditions on the continent,” he said.

Badiane said that a steady stream of farming innovations is crucial for the success of ongoing efforts to transform smallholder agriculture in Kenya from subsistence to commercial production.
Kenya plans to adopt new guidelines aimed at streamlining cage fish farming in Lake Victoria. The new fish farming regulations were recommended for the East African Community (EAC) partner States for adoption by Lake Victoria Fisheries Organisation (LVFO).

They are pegged on the legalized establishment and operation of fish cages in the lake. While coming up with the proposals, LVFO recognized the potential of cage aquaculture in the lake but emphasized the need to practice it in a manner that is sustainable and less damaging to the environment and aquatic resources.

As a result of the rapid expansion of cage fish farming by the private sector, the sixth special session of the LVFO Council of ministers of 2014 directed the institution’s secretariat to coordinate development of guidelines and standard operating procedures for the cage fish farming in East Africa. This coordination, the ministers said, would ensure optimal benefits to farmers with minimal impact on the environment and other lake users. LVFO appealed to EAC States to use the regional guidelines to develop their own regulations and support legislation which provides an enabling environment to facilitate cage fish farming expansion in the region.

“We look forward to the future successful and sustainable development of an industry capable of delivering benefits to the regional food security, livelihoods and economic growth and pray that these guidelines help this industry emerge and grow,” LVFO Executive secretary Shigalla Mahongo in a statement. If adopted, the regulations are expected to rationalize cage aquaculture in Lake Victoria. The Kenyan fisheries department and stakeholders engaged investors in the sector on the proposed new rules during a consultative meeting.
Researchers at the Kenya Institute for Public Policy Research and Analysis (KIPPRA)) have tipped national and county governments to develop policies to exploit the huge potential of purple tea. They said, while still in its infancy, Kenya’s emerging purple tea production has the potential to create a new market which can generate an estimated Sh6 billion in the next three to five years. KIPPRA researcher, John Nyangena, regretted that the country is yet to benefit from the exciting new product capable of transforming the country’s tea industry and boost the sector’s competitiveness and increase earnings to farmers and the country at large. “Purple tea has higher yields, is more adaptive to drought and can fetch up to 10 times more than processed green tea at the international market,” he said.

To harness the full benefits of purple tea, Nyangena said more effort is needed to reduce the cost of setting up specialized factories, develop the necessary technical capacity for processing and address market barriers. He said production of a unique specialty product such as purple tea offers great promise in transforming the local tea industry as well as boosting the sub-sectors competitiveness. Purple tea derives its name from its distinctive, purple-reddish leaves associated with high levels of anthocyanins, the same antioxidants that give colour to foods such as blueberries, cranberries, grapes, and even red cabbage or eggplants. The clone thrives on highlands 1500-2500 meters above sea level on rich volcanic soils. Besides the economic benefit, he added, Kenya stands to reap from the health benefits of purple tea whose introduction in 2011 by Tea Research Institute provided an opportunity for diversification and increased competitiveness of Kenyan tea. Research has shown that its rich flavour in oxidized form enables purple tea to have multiple health benefits. For example, drinking purple tea helps in anti-obesity through the inhibition of lipase, the enzyme that breaks down fats in the body, and providing anti-aging benefits to the skin. In addition, it has low caffeine content, is highly refreshing and has a unique thirst-quenching flavour, and has no additives or no known allergens. Currently, Kenya exports approximately 60 tonnes of purple tea to Japan, China, North America and Europe. While the prices of ordinary tea have been falling in the international market, prices for purple tea have been rising. At the local level, a kilo of purple tea can fetch up to Sh2,600 which is 10 times more than processed green tea which fetches Sh200 per kilo. A well-established bush can yield up to 2.5 kgs of leaves in a year as opposed to 1.5 kgs for green tea. In addition, the tea withstands adverse weather conditions like drought and frost as well as diseases and pests. A recent study by KIPPRA identified capacity gaps in the tea value chain in general and specifically for specialty teas. The gaps include insufficient numbers of tea specialists, statisticians, market researchers and policy experts. The gaps exist in institutions mandated to promote tea production, processing, marketing and research, among others. At the national level, the country does not have an operational tea policy while at the counties there is a lack of a clear legal and regulatory framework to effectively support the tea sector.
The survey also points out that the current production of purple tea in the country is still low with a small proportion of farmers engaged in its production. Majority of farmers are reluctant to adopt purple tea mainly due to expected income loss if they were to replace the existing tea bushes. Although the time it takes before the plant is fully established is much less than in the case of black tea (three compared to five years), the loss of income during the waiting period discourages farmers, since they have no other sources of income to support their livelihoods. A KIPPRA research paper dubbed “Promoting Purple Tea to Enhance Diversification in Kenya’s Tea industry”, purple tea requires specialized plant, equipment and technical know-how. Most of the factory capacities in the country, the paper by Nyangena, Hannah Wang’ombe and Augustus Muluvi, says consist of wilting, bruising, oxidation, rolling and drying processes needed to produce black CTC tea. “However, the processing of purple tea requires additional processes, specifically for fixation, yellowing and curing which requires dedicated lines for production,” they add. Currently, of all the 66 Kenya Tea Development Agency factories, only Kangaita Tea Factory in Kirinyaga County has a production line that can process purple tea.

### Murang’a governor acts to arrest coffee theft

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Murang’a Governor Mwangi Wa Iria has said he will roll out measures to curb coffee theft in the county.

Among the measures is the deployment of an officer in every factory who will oversee operations and enforce measures instituted by the county government. The governor said coffee societies are largely to blame for the menace, which has seen farmers incur huge losses and languish in poverty. He said some of the factory managers have to collude with cartels that steal beans from factories then sell to private processors.

“Factory managers collude with buyers and agree to sell coffee at the lowest price possible,” he said. The governor said he will order for a thorough audit conducted on coffee factories and managers found culpable will be arrested. “I will ask the DCI and DPP probe the coffee industry in Murang’a and I believe this will help deal with some issues affecting the sector” he added.

He also said plans are underway to buy coffee processing machines to facilitate selling of processed produce.

He pointed out that the tribulations facing the coffee sector do not emanate from lack of market but from mismanagement at factory and society levels. “Marketers make a kill from coffee bought at cheap prices while the farmer is paid peanuts” he added.

“I know there are cartels and I will also become one and neutralize the bad ones but bring positive impact in the sector,” he said.
President Uhuru Kenyatta has directed the Ministry of Agriculture to start buying maize from farmers at Sh2,500 per bag. This is Sh200 more than what the cabinet approved on November 22 last year. Speaking at State House in Mombasa on Thursday, the President directed Agriculture CS Mwangi Kiunjuri to authorize the National Cereals and Produce Board to purchase 2 million bags. The maize will be bought through the Strategic Food Reserve in coordination with the counties. “I call upon the investigative agencies to expedite the verification process to ensure maize farmers are paid as soon as possible,” Uhuru said. He was flanked by Kiunjuri and Treasury CS Henry Rotich.

The President said last year’s maize production stood at 46 million bags owing to a bumper harvest owing to good weather. He said Kenya has enough maize reserves and the price of flour should remain stable this year. Uhuru said at least 2.5 million bags from last year’s harvest are still in stores. He said 1.7 million bags will be released in the market at Sh1,600 per bag while an additional 300,000 bags of animal feed will be sold to farmers for Sh1,400 per bag.

"It is clear that currently there is sufficient maize in the market being sold at between Sh1,700 and Sh1,800 per bag. I do not expect any changes in the cost of unga," Uhuru said. Uhuru’s announcement may not appease farmers from the Rift Valley who have been pushing for Sh3,600 to cater for production costs and leave them with some profit.

At the same time, Uhuru told the ministry to start paying sugar cane farmers pending claims following the completion of an audit he directed on Madaraka Day last year. "I’m pleased to confirm that the process has been completed. I, therefore, direct the Ministry of Agriculture and the National Treasury to immediately start paying the farmers,” Uhuru said.

The President further directed the ministry to accelerate the implementation of interventions that have been agreed upon under the Big Four Food and Security Agenda. He said the government is committed to realising the agenda and supporting farmers to increase productivity.