

CONFERENCE NEWS BULLETIN

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Faith Njoroge shows products derived from the mulberry plant. They include dried and powdered leaves for tea, wine, baskets from the tree fibre and dried pupa for both human and livestock consumption

Silkworm farming: Kenyans on the verge of reaping big

By Carol Otieno Miyawa

Kenya is poised to become one of the largest producers of silk globally within the next one year, the Kenya Agricultural and Livestock Research Organisation (KALRO) Sericulture Research Centre in Thika says.

Dr Muo Kasina has revealed that over 700 farmers are growing mulberry in Kenya as they await the silk production factory which is currently under construction in Thika.

"The factory—which has been under construction since August 2018—is almost complete and by March 2019 we expect it will be operational."

Dr Muo noted: "At the moment, Kenya does not have a single factory for silk production but we expect several factories will be constructed in other counties.

"This move is expected to increase the production of high quality silk in Kenya."

The Government has partnered with Japan's National Agricultural and Food Research Organisation in establishing a National Sericulture Research Centre at the Krganisation (KALRO) station in Thika.

The station is expected to promote silkworm farming which thrives in poor weather unlike other crops such as maize, cotton and sugar cane among others.

The five-year partnership on the viability of the silkworm rearing using the biological technology to alleviated poverty.

"Silk farming can empower small-scale farmers since its products and mulberry plant fetch good prices," Dr Kasina noted.

Experts say at the moment there are many people who are interested in mulberry and silkworm farming where over 700

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Post-harvest losses stifle food security globally



A farmer sells her produce to customers after a good post-harvest

By George Juma

About 1.3 billion tonnes of food produced globally goes to waste annually, the International Development Research Centre (IDRC) Senior Programme specialist Dr Jemimah Njuki says.

Speaking during a three day African Conference of Science Journalist Dr Njuki said the wasted food is capable of feeding 1.6 billion hungry people.

“There is need for Kenya, Africa and the entire world to focus on minimising wastage of farm produce.”

Dr Njuki decried that little effort has been put to prevent post-harvest losses resulting in countries to suffer from food insecurity.

She called on countries including Kenya to invest in new agricultural technologies to help minimise the post-harvest losses.

In 2017, for example 1.9 million tonnes of food amounting to Sh.150 billion went to waste due to poor storage and handling, transport among others in Kenya.

The coordinator said there is also need to give focus on small scale farmers by improving their information access on matters of agriculture to address the information gap.

She said the contribution of the small scale farmers is key in addressing food shortage in Kenya and globally.

Dr Njuki said farmers needed to be empowered with skills, mentorship and business support services to increase their output.

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Millions to suffer from drug resistance globally by 2050

By Suzgo Chitete

About 700,000 people die annually due to drug resistance globally and the number is expected to increase to 10 million people annually by 2050, a health expert has warned.

A Kenya health ministry official in charge of Antimicrobial Resistance (AMR), Dr Evelyn Wesangula said cases of resistance have become more common not just in Kenya but in the sub-Saharan Africa region.

The World Health Organisation (WHO) warns that the prospect of the world entering a 'post-antibiotic era', where common infections can no longer be cured, is real.

Speaking during a MESH conference held on Thursday at Ngong Hills Hotel, Dr Wesangula said increased cases of drug resistance is posing a threat to the significant gains made in the fight against diseases, a health expert has warned.

While there are many causes of antimicrobial resistance, Dr Wesangula singled out both over use and underuse of the antibiotics as some issues which led to this public health concern.

She said the free-for all access of drugs in pharmacies, drugstores and market places, unregulated prescription in health facilities and from animals to humans as among causes for resistance.

Dr Wesangula said apart from long hospitalisation due to drugs resistance many lives are lost— a situation which should compel governments to act.

"It is a problem with a wide range of consequences. Those who have resistance will face long hospitalisation or will have to try different medicines which is costly.

"This also has an implication

on their personal economy and development. If you come to think of sub-saharan region, we have a higher disease burden hence resistance to antibiotics must be a serious cause for worry." she explained.

According to WHO, AMR occurs when micro-organisms (bacteria, fungi and viruses) change when they are exposed to drugs such as antibiotics leading to prolonged untreated illnesses.

Dr. Wesangula, there is need to intensify efforts such as enforcement of the law to have adhered to prescription procedures for antibiotics.

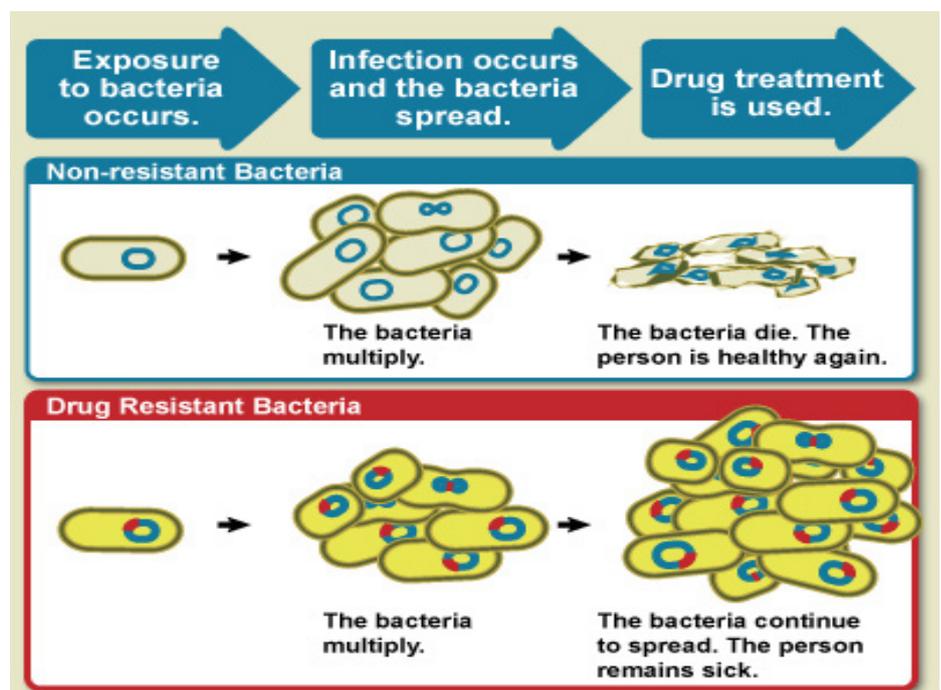
Like, Kenya, Malawi has similar challenges such as free – for – all access to antibiotics due to weak enforcement mechanisms of the law.

But National Coordinator for AMR in the Ministry of Health in Malawi, Dr Watipaso Kasambara said one strategy they have employed is raising public awareness on the gravity

of drug resistance as well as equipping medical staff with appropriate knowledge so as to manage prescription of antibiotics in hospitals among other interventions.

"Creation of a special unit to look at AMR is one effort by the Malawi government which demonstrates commitment in dealing with the problem at hand," according to Dr Kasambara.

The World Health Organisation (WHO) warns that the prospect of the world entering a 'post-antibiotic era', where common infections can no longer be cured, is real.



Study: Millions of children still miss their potential

By David Charo Ngumbao

Millions of children in low and middle income countries do not meet their potential globally, a study has shown.

The study by Children development in marginalized community program (CDMC), show that at least 270 million children in middle and low income countries in the world do not get the right potential due to various reasons.

According to Prof Amina Abubakar, lead researcher of the program, CDMC, this means the levels of stunting and malnutrition are increasing to a level of alarming.

She said that has led to Malnutrition and stunting which deters the thinking capacity of the children due to low Intelligence Quotient.

This means the children affected cannot think properly hence making them perform badly in their studies which has a long term effect where poor education increases hence increasing poverty levels in the countries.

Speaking in Kawangware, Nairobi where the CDMC program is plying its trade currently, during the third African Science Conference, Professor Amina said the situation needs urgent interventions by various stakeholders to enhance proper children growth and development for a potential future.

"We are in a bad situation because the number of children missing out on their potential in increasing rapidly due to various factors such as poverty where food is inadequate and not



A child is taken through some exercises to help assess his thinking capacity in Kawangware, Nairobi. At least 270 million children below 5 years do not meet their potential in the world

recommended for children below five years," Professor Abubakar said.

"This has led to diseases, malnutrition and stunting. But since the inception of this organization which has partnered with DARAJA organization for the program, we have managed to get in the region of seven hundred mothers from Kenya, Burundi, Dr. Congo and Southern Sudan. Globally our research shows that at least 270 million children in low and middle income countries are missing out on their potential i.e food, water, formal and informal education leading to poor mental development of the children," she added.

She said the program is also aimed at coming up with

-intervention strategies which would help father and mothers on how to bring up their children on the best way possible.

"We decided to start our program with Kawangware in 2017 because it is an urban informal settlement where children are passing through difficult situations such as inadequate food, lack of fresh water and poverty, but the number of people here is increasing and we feel we have to come up with a strategy to counter it," she said.

Kilifi though has been on the lime light with high levels of stunting and malnutrition.

According to a Standardized Monitoring and Assessment of relief and transitions (SMART) Survey of 2016 done by the Kilifi

County government nutrition department, the levels have dropped from previously 39 percent to 35.9 percent which is still on the high.

According to Kilifi County Nutrition Director Ronald Mbunya, this means that within ten children four of them are stunted.

"We did the survey in 2016 and found out that it has dropped but still on the high because its more than even the national level of 26 percent," Mbunya said.

However, the process of getting the mothers into the program has been not easy.

According to Joyce Wesonga, DARAJA Civic Initiative Form program's manager, poverty, awareness and accessibility has been a stabling block to getting the mothers enrolled on the program.

"Many mothers have been hard to open up on their family situations because they believe it's so personal to share with other people," Joyce said.

"This has made it difficult to get them because they don't believe we have a good motive with them. Accessibility has also been a problem as the areas are slams with no roads. Another thing is that they prioritize their daily activities than our initiative as they need to get something for their families and this makes it difficult to get them," she added.

Nutritionists say there is a fear that should no more effort done, the situation would be very worse in the near.

But they also say the government and the non-governmental organizations should prioritize sensitization of the community on how to cub poverty which is the main contributing factors to malnutrition and stunting where they will be able to feed their children well and adhere to the nutritional requirements on children of below five years from conception.

Post-harvest losses stifle food insecurity globally



Farmers in Angola busy preparing their land. Credit: Mario Osava/IPS

By Manuel Odeny, @ManuelOdeny

Negative stereotype on agriculture and a gap between researchers and journalists has created a narrative of dwindling agriculture in the country.

Despite the continent having an increase of agriculture productivity in the past 30 years according to Nepad in 2017, there has been a misconception on the sector with the biggest brunt felt by small scale farmers.

"For the past three decades, agriculture in the continent has increased in the continent by 160 per cent an increase that clearly exceeds the global production,"

Jemima Njuki a researcher said.

Njuki, a senior project specialist in Agriculture and Food Security for International Development Research of Canada was speaking in Nairobi on December 14 during a Science Journalists conference organised by Mesha-Kenya.

Njuki said that the main cause of a feeling of the poor growth of agriculture is high government estimates of growth in the sector across the continent which is never reached.

"Every year governments have projected 6-8 per cent growth in agriculture, but actually the growth has been at 4-5 per cent



A farmer dresses her crop using fertiliser

which doesn't meet the target estimates to make the belief that it is dwindling," Njuki noted.

According to the researcher, the best way to rectify this is through a six step process which starts with having a problem and solution model which moves to the second phase of having hints on the main problems

Thirdly, a connection to the dwindling and slow growth should establish and followed by the fourth process of getting an expert decision.

The last two steps will involve handling stereotypes and believes in the sectors, like the dwindling one, by finally having data and evidence to boost it.

"Researchers should simplify their language for journalists to make it easier to communicate with the public in a simple and clear way," Njuki said on importance of media in the whole matrix.

In 2014, African presidents adopted the Malabo Declaration, which among other raft measures who was to commit 10 per cent of Gross Domestic Product on Agriculture.

This was to end hunger by 2025 by doubling productivity through inputs to reduce stunting on children, main cause of malnutrition, by 10 per cent.

"But slow growth of agriculture in the continent is the main failure by countries to commit to the declaration," Njuki declared.

According to Njuki, the declaration showed it is important to place strong emphasis on increasing production, productivity through infrastructure like fertilizers which should be subsidized.

According to Food and Agriculture Organisation (FAO), Public Agriculture Expenditure (PAE) in 2003-18 stood at 11 per cent, but it reduced between 2008-16 by 4.8 per cent.

Equally, PAE on total public expenditure between 2003-8 it was at 3.5 per cent which was reduced to 3 per cent by 2008-16.

"This shows that farmers are beating all odds to keep up with agriculture, especially small scale farmers who don't make money or nutritional value from agriculture according to research," Njuki said.

FAO said that between 2014-16, hunger prevalence in the world population stood at 10.9 per cent but in East Africa countries it was at 31.5p.c with Central and West African countries standing at 41.3 per cent and 9.6 per cent respectively.

To beat hunger, African countries should put in place control or markets especially ease of cross-

border trader, controlling cheap imports, increase mechanisations and placing clear policies to boost the sector.

This will ease the current clamor to have youths and women in agriculture boosted as in Africa, 62 per of economically active women are n agriculture with up to 90 per cent in some countries.

Food loss

Perhaps the biggest hindrance to growth of agriculture in sub-Sahara Africa according to FAO is food loss due to poor storage.

In the region, 40 per cent of staple foods harvested is lost due to poor storage which negatively affects an over 470million small scale farmers.

"Effectively harnessing existing technology and trainings from developed countries will help to maximise yields in Africa," recent data from FAO states.

IDRC research in Uganda and Burkina Faso found over 50 per cent of harvested staple food was lost in use of traditional storage methods like granaries, which was only less than 2 per cent in improved methods like metallic, plastic and grain safe bag silos

"The loss is bigger if you put in more factors like land use, inputs and time consumed by farmers," Njuki said.



Mr. Kiri Kamau in his mulberry farm where he makes USD 2000 annually from tea leaves **Dr. Kasina (right), feeding silkworms in a rearing house**



Dr. Matoko Kiuchi, demonstrating silkworm rearing for seed production in the lab at NSRC.

farmers are already growing mulberry that has several health benefits.

This include lowering blood pressure and according to a research mulberry leaf tea contains powerful antioxidants particularly beta –carotene and ascorbic acid.

When it is taken regularly, it also reduces the risks of cancer, lowers bad cholesterol and reduces inflammation.

Mulberry leaf tea is also rich in minerals and vitamins like Vitamin A, B1, and 2, essential amino acids, bioflavonoids, magnesium, zinc, iron, phosphorus, potassium and magnesium.

Other than the mulberry leaf tea, the silk from the mulberry silkworms are used for making soap, toothpaste, sun screens, soothers and cosmetics among others.

“In the world market, one Kg of silk costs about Sh4,000 while a garment made of silk costs upto Sh15, 000 ...

“Kenya has not been able to produce even a tonne due lack of machinery/factory within the country,” says Dr Mary Mwari Musyoki , a National Sericulture Research Centre Entomologist.

Due to the high potential of mulberry farming, Mr Kiri Kamau, a Thika-based farmer abandoned maize and banana planting in the last four years for silk farming.

“The good thing about silk farming is that it does not require very large parcels of land and there is no struggle in finding the market for silk unlike maize and other cash crops,” said Mr Kamau.

He adds that the International Centre for Insect Physiology and Ecology (ICIPE) has been buying cocoons from them and exporting them.

According to Mr Kamau, he sells both wet and dry cocoons even though the dry ones fetch better prices compared to wet ones.

Dr Musyoki says that dry cocoons go for Sh1, 000 while wet ones fetch Sh500 per kilo.

The main export markets for cocoons have been identified as France, Japan and UK while silk that is produced in Kenya is taken to the domestic cottage industry.

Experts says the potential of sericulture in Kenya has not been fully tapped.

Farmers are being encouraged to venture into mulberry silkworm farming since it is environment- friendly.

Address early childhood development knowledge gap - researcher



Prof Amina Abubakar, a leading researcher on child development

By George Juma

Low investment allocated to research has been blamed on the increased cases of Early Child Development (ECD) challenges facing Kenya.

A researcher based at Nairobi's Aga Khan Hospital, Prof Amina Abubakar said addressing challenges relating to early childhood development will continue to persist until the issue is addressed.

"Feove is expected to increase the production of higing in Psychology in Kenyan and the entire Africa continent, a situation attributed to information gap in supporting child development in Kenya and the region as a whole,".

Currently, Prof Abubakar noted, the number of psychologists in Kenya remains low as the speciality has not been prioritised by the government despite its usefulness.

"When I started my PhD studies 14 years ago, early childhood development

was not a big thing but now people have realised that to reach the economic potential (that we desire) we must increase the numbers of those specializing in this particular field.

"There is need to increase investments in the discipline," Prof Abubakar observed.

At the same time, Prof Abubakar said researches done outside Africa has been used as a yard stick in attempting to address issues of early childhood development in Kenya but this have not realised the desire goals due to the difference in the settings.

In a bid to achieve the most feasible way to address issues undermining early child hood development in Kenya, Prof Abubakar noted, locally produced research in the field remains key.

"Our challenges in Kenya and Africa are unique compared to other foreign countries; we face a lot of malnutrition, poor sanitation, unfavorable environment hazards which pose a lot of threats to development of our

children at an early age".

Prof Abubakar said her research on early child development done in Nairobi's Kawangware estate is used as a sample area (and) is expected to inform policy makers on what issues needs to be taken into consideration to support the human development at an early age.

A Kawagware resident, Ms Angelina Alwal , who participated in the research conducted by Prof Abubakar of Aga Khan University said she agreed to be involved in the exercise because she was keen on seeing her daughter who is several months old developing.

"Before I decided to participate in the research, I was taken through issues of nutrition, sanitation which are key for the development of children," Ms Alwal noted.

She is among many residents of Kawangware participating in the research exercise conducted at Aga Khan University by Prof. Abubakar which is geared toward developing a reference point on matters of early childhood development in Kenya

According to the researcher; brain development of children at the age of one to five years accounts for 75 percent of their performance in terms of their future prowess.

Aga Khan University's Institute for Human Development Foundation director, Prof Kofi Marfo says socialisation between couples is also key for the development of children at their early stages.

Children who are raised in an environment where the parents socialises frequently, Prof Marfo observed, are most likely to develop better compared to children staying away from one or both parents.

Prof. Marfo said fathers have previously been ignored on researches on children development even though they are a very key icon in the development of the child.

"The distribution socialisation process where children grow around their mothers, fathers and siblings is very key for the development of children," Prof Marfo added.

According to CDMC statistics, over 270 million children from low and middle -income countries are not achieving full brain development because of unfavorable environment they grow up in, poor nutrition