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**NATIONAL
IRRIGATION
AUTHORITY**



UNYUNYIZI NEWS



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Editor's Note



Head of Corporate Communication, NIA- Mr. Daniel M. Nzonzo

Welcome to the third issue of “Unyunyizi News”. Since the release of the second issue, much has happened. First, we transitioned from being National Irrigation Board to National Irrigation Authority. Secondly, we have moved from Ministry of Agriculture, Livestock, Fisheries and

Irrigation to Ministry of Water, Sanitation and Irrigation.

In this issue, we expound on the Irrigation Act 2019, take you through zero tillage farming, climate smart irrigation and agricultural breakthrough with Aflasafe. We also bring to you a one on one interview with one of our just retired engineer on his career life and introduce you to the national values that Kenya works to uphold. In our previous issue, we asked you about “what you thought of when you first heard of NIB” and the response was overwhelming. We will sample some of the responses in this issue.

We continue to engage you in order to keep records straight by looking into some misconceptions about our services.

Kindly share with us “Your opinion about the importance of embracing irrigation in Kenya”. We will sample some your feedback in the next release.

Enjoy your read.

Word from the CEO'S Office

I am delighted to share with you the various milestones that NIA has covered not saving the transitions it has gone through over the past quarter of this financial year in this issue.

Firstly, the President of Kenya, H.E Hon. Uhuru Kenyatta signed the Irrigation Bill 2019 into law on July 29, 2019 necessitating the transition of NIB to NIA. The Irrigation Act is intended to support sustainable food production by outlining the roles of National and County Governments in facilitating irrigation activities in the country.

The institution was able to launch irriga-

“**T**he institution was able to launch several irrigation projects meant to accelerate irrigation expansion and strive to achieve the targets of the Big 4 Agenda especially on the pillar of Food and Nutrition Security.



NIA CEO- Mr. Gitonga Mugambi

tion projects meant to accelerate irrigation expansion and strive to achieve the targets of the Big 4 Agenda especially on the pillar of Food and Nutrition Security. One of the projects launched was Bura Irrigation Rehabilitation Project on September 12, 2019. The project was launched by the Deputy President H.E Hon. Dr. William Ruto.

The completion of Bura Irrigation Rehabilitation Project will lead to a shift from the expensive pump-fed

irrigation system as well as avail more water allowing for the expansion of the scheme in order for it to realize its potential of 40,000 acres.

The institution also continues to implement the Household Irrigation Water Storage Programme. The Pilot Phase and Phase II are complete, while Phase III and IV are ongoing. The project aims to see to it that small holder farmers have water for irrigation throughout the year hence more production of food.

During that period, NIA continued to undertake its core mandate with a view to ensure that we avail water for irrigation to support continuous food production across the country. I urge Kenyans to embrace irrigation as well as modern farming techniques since this is the only way to conquer food shortage in this country. This way Kenya can become Food and Nutrition Secure.

NIB transitions to NIA

By Modest Chabari and
Brendah Rajwayi

On July 29, 2019 H.E The President Hon. Uhuru Kenyatta assented the Irrigation Bill 2019 into an Act. The Irrigation Act 2019 which was gazetted on August 2, 2019 and commenced on August 16, 2019 is intended to support sustainable food production by outlining the roles of national and county governments in facilitating irrigation activities in the country. As a result of the assentment of the Irrigation Bill 2019, NIB transitioned to National Irrigation Authority (NIA). The transition of NIB to NIA led to the expansion of its mandate and roles all together not to miss out on mentioning more responsibility which it is willing to undertake to ensure that it delivers water to every irrigable acre in Kenya.

NIA is mandated to develop and improve irrigation infrastructure for national and/or public schemes. Development and improvement of irrigation infrastructure will lead to the increment of the land currently under irrigation which will mean more food production. It is prudent for a country to be able to feed itself because as once stated by a famous author; Jairam Ramesh, a country that cannot feed itself cannot have self-pride.

Under the new mandate, NIA is also charged to provide irrigation support services to private, medium and smallholder schemes in consultation and cooperation with county governments and other stakeholders. Technical advisory services in design, construction, supervision, administration, operation and maintenance under appropriate modalities, including



Photo Courtesy of State House Kenya | H.E President Uhuru Kenyatta signing the Irrigation Bill 2019 into law

“The new act moreover clearly defines the roles of the National Government, county governments, private sector, civil society organizations, and the general public.

agency contracts is also part of its responsibilities.

NIA is also expected incorporate the County Government where the county

government may within its jurisdiction establish a county irrigation development unit for the better carrying out its functions. Each county government is called upon to implement and act in accordance with the national policy guidelines issued by the Cabinet Secretary and approved by both House of Parliament for the purpose of ensuring uniformity and national standards in the irrigation sub-sector, through its legislative and administrative action.

The new act moreover clearly defines the roles of the National Government, county governments, private sector, civil society organizations, and the general public. The coming into force of the Act, tasks NIA with more responsibilities which it is ready to undertake and deliver to Kenyans. This will see the realization of the Big 4 Agenda on food and nutrition security.

“The coming into force of the Act, tasks NIB with more responsibilities which it is willing and ready to undertake and deliver to Kenyans..

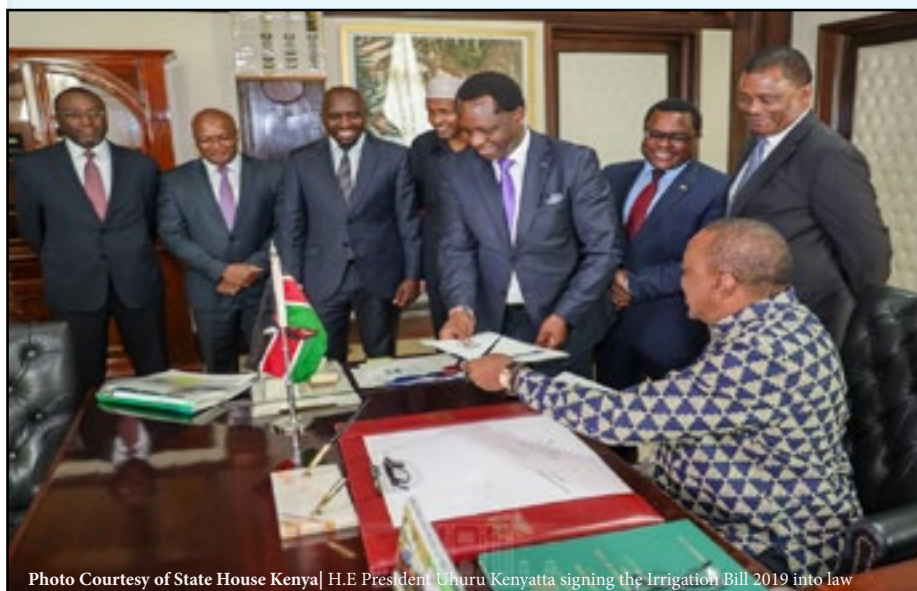


Photo Courtesy of State House Kenya | H.E President Uhuru Kenyatta signing the Irrigation Bill 2019 into law

Highlights



H.E The President, Hon. Uhuru Kenyatta assented the Irrigation Bill 2019 into law on July 29, 2019 seeing the transition of NIB to NIA. The launch is yet to take place.

H.E The Deputy President, Hon. Dr. William Ruto launched the Bura Irrigation Rehabilitation Project on September 12, 2019. The completion of the project will mean the transition from pump-fed irrigation to gravity irrigation thereby increasing the area under irrigation to 40,000 acres.



H.E The Deputy President, Hon. Dr. William Ruto visited Njoro Kubwa Irrigation project on September 23, 2019 to assess its progress. The income generated from the project annually is estimated at Ksh.600M and is directly benefiting about 20,000 people through job creation.

The institution participated in the Agricultural Society of Kenya Kisumu Regional Show held between 24th and 28th July, 2019. It managed to get a trophy for the Best Corporative Movement and Stand/Sacco among eight (8) other awards. The trophy was received by NIB chairman Hon. Eng. Joshua Toro. It was handed by the Chief Administrative Secretary Dr. Andrew Tuimur who was the guest of Honour.



Highlights



⇒ The Former Prime Minister Hon. Raila Odinga together with the Kilifi and Tana River governors alongside other leaders toured Galana-Kulalu Food Security Project where he assessed the progress of the project as well as the first crop done by NIA on August 29, 2019.

He was received by the chairman of the Board Hon. Eng. Joshua Toro together with the CEO of NIA Mr. Gitonga Mugambi.

The National Assembly Committee on Agriculture led by their chair Hon. Ali Adan Haji toured Galana Kulalu Food Security Project to assess its progress. They were received by NIA CEO, Mr. Gitonga Mugambi, the chairman of the Board and other senior officers from NIA.



⇒ The PS, Water, Sanitation and Irrigation Mr. Joseph Irungu distributed 3000 seedlings of avocados valued at Ksh. 3M to Homabay farmers on November 13, 2019. Present in the event were: Hon. Gladys Wanga, Hon. Dr. Lilian Gogo , NIA CEO Mr. Gitonga Mugambi among other leaders.

NIB participated in the Mombasa International Show and Nairobi International Trade Fair on 4th to 8th September, 2019 and September 30 to October 6, 2019 respectively where it performed exceptionally well scooping three trophies and eight certificates cumulatively.



Precision farming techniques

By Noleens Korir

Agriculture has evolved over the years, with the introduction of new technology which has made farming easier, reliable and profitable to the farmers as well as contributing to the national food basket. Research has been done on ways of making farming more efficient and maximizing on profits for the farmer. Zero tillage/ minimum tillage is one of the methods of farming that is being rediscovered and practiced currently. The first attempt of zero tillage was in the early 1940s. The practice has since been dormant until now more and more farmers are adopting the method.

Zero tillage, is a way of growing crops or pasture from year to year without disturbing the soil by tilling. It is a technique that increases organic matter retention and cycling of organic matter in the soil. The concept of Zero tillage involves also the use of drillers to sow the seeds.

In places where the soil has hardened, experts advice the use of minimum tillage. This is another form of Zero tillage where a little bit of land preparation done prior to the sowing of the seed. It may involve land ploughing of not more than 20cm. This will loosen the top layer of the soil for better absorption of water and aerate the soil in return.

Minimum tillage is practiced mainly because of high cost of oil prices for tillage. In tillage, there is weed control, but on zero tillage weed control is through using herbicides. According to research, tillage is rarely beneficial because of there is too much soil destruction. Once the rains are on, holes are dug and sowing is done. A direct seedling planter is used in large farming units and before planting is done, non-selective products are applied to eliminate all weeds.

Timely farm operation is easily achieved through no till. Farmers are able to plant well in good time since the focus on land preparation is mostly neither intensive nor subjective. Studies have shown that timely planting contributes up to 40% of the yield hence the ability of Conservation Agriculture to increase yield is largely drawn from this principle.

In Galana Kulalu, NIB has adopted the minimum tillage concept. Chief Agronomist NIB Dr. Wanjogu confirmed that Galana offered a challenge in crop production due to different factors.

The soils in Galana are very saline, hence

“Minimum tillage is practiced mainly because of high cost of oil prices for tillage.

reducing the quality of the soil. Secondly since Galana is in the vicinity of Tsavo National park the soil was hardened by the animals tramping on the soil as they roamed around the park, thirdly the existence of anthills hardened the soil top layer hence making planting an uphill task. Land preparation was done on 1,500 acres that is under maize, from the total 3,300 acres under the center pivot. Land was ploughed not more than 20cm. This loosened the hardened soil to improve soil texture. Due to the above mentioned challenges, zero tillage/ minimum tillage was the best practice to adopt in Galana Kulalu.

The concept has various advantages over the land preparation method. Since there is minimal disturbance of the soil, the soils are able to retain water hence reducing the water used for irrigation. In Galana, the fuel used to pump water from the intake was reduced by 50% hence saving on the cost of production. Zero tillage also reduces the risks of soil erosion hence protecting the environment from the adverse effects of climate change that are catching up.

Due to the less disturbance of the soil, there's improved soil fertility and hence the crop productivity and yield has been noted to be better and higher in comparison to conventional methods of tilling. In return, the labor used to operate the farm has been reduced since there's limited manual work and more or machinery work, that covers more ground and spends less in cost and time. Zero tillage is beneficial for maintenance of soil top profile that is essential in farming.

Some of the challenges with zero tillage is weed control. Since the land is not tilled or weeded, this gives way for the growth of weeds. The concept relies on heavy use of herbicides to control the weeds. The concept has not been adopted by many people since they believe that to farm one has to till the land. In addition due to the over reliance of machinery, the wear and tear of the equipment is higher compared to the conventional tilling of land. If zero tillage is not done correctly, yield can be dropped hence a combined technique is required. Such methods could be crop rotation, cover crops which are occasionally as guard crops. Though the extensively success of this practiced, it has not yet been established.

Zero tillage plays a key role in conservation agriculture through resource conservation, there is minimum harm to the environment. The process still requires high fertilizer and seed rate, it is still under improvement. In conclusion zero tillage has healthier practices of farming as compared to conventional tillage.



Photo Courtesy | Minimum tillage of land technique

Fallacies about NIA's Services

“NIA only presides over Schemes.”

NIA as a Parastatal strives to see that Kenya achieves Food and Nutrition Security. As such, it continues to maintain and rehabilitate existing irrigation infrastructure in schemes/projects. On top of that, it also develops irrigation infrastructure across the country as part of its mandate. Among the projects NIA is implementing is the Household Irrigation Water Storage Programme through constructing small water pans to individual farmers across various counties in the Country at no cost. The project's main objective focuses on harvesting surface runoff when it rains. The harvested water is expected to help the farmer conduct supplementary irrigation activities constantly with or without rainfall throughout the year.

The project is being carried out in phases. So far, 9,048 water pans have been completed with a cumulative water volume of 12,247 m³. The phases are as follows:

- The Pilot Phase and Phase 1- Complete with 2,363 water pans and 3,425,413 m³ volume of water.
- Phase Two- Complete with 2,475 water pans and 3,846, 818 m³ volume of water.
- Phase Three – Ongoing with 2,761 water pans complete and 3,550,247 m³ volume of water.
- Phase Four- Ongoing with 1,179 water pans complete and



A lined water pan with harvested surface run-off

1,425,387 m³ volume of water.

Upon completion of the project, some of the benefits expected by the farmers are:

- Increased crop production and food security and supply of agricultural products.
- Increased income, creation of employment opportunities hence economic growth.

OPINION NOOK

In the last issue, we asked you about what came to your mind when you first heard of NIB and the response was overwhelming. We are grateful.

As promised, we have sampled some of your responses raw as sent. We hope you have a great time going through them.

For our next issue, we are asking you to share with us why you think Kenyans should embrace irrigation. Again, you might be featured in our next issue hence be on the look out.

“Before I came to NIB I had never even heard about it before and even then I thought it was the Nairobi Irrigation Board up until I researched about it was when I was able to get the clear meaning and understand what it's all about.”

Chepchirchir

“I have never even heard of NIB, and I can't make out what it's about”.

Daniel

“All I know is that you're Galana, from hearing from the news almost every other time”.

Namlondwe

“I think your work is to give farmers fertilizer and seeds to plant”

Kamau

“Nadhania huwa mwafyekea watu nyasi”

Mzee Charo

“NIB imekua yenye manufaa kwangu na nguzo kwa familia yangu kwa kuwa imeniwezesha kuitunza familia yangu na kuwasomesha watoto wangu kupitia mradi wa unyunyiziaji maji mashamba kwa wakulima wadogo”.

Anne

“My lucky guess is that you irrigate judging from the name”

Natasha

Do share your opinions through communication@nib.or.ke.

As NIA grieves the loss of two members of staff Mr. Simon Kamau and Mr. Simon Njanja, it also condoles with the staff who lost their loved ones during this period. We pray for God's comfort to overwhelm you and His grace be sufficient to take you through the rest of the journey in their absence.



All the best in your new ventures Eng. Charles Koske. NIB wishes you the best in your endeavors.



Climate Smart Irrigation

By Rhoda Mbuvi

Going by the current situation in our country, you will agree with me that climate change effects are a reality. For instance, we are experiencing cold season in August unlike in July as it has been over the years. We have also seen rivers changing their course, delayed onset of the rainy season as was the case with this year's long rains, longer dry seasons, floods, and unexpected dry periods during the rainy season among other impacts.

Irrigated agriculture has so far had its share of these impacts hence the call to practice Climate Smart Irrigation (CSI).

Before we indulge further, what does it mean to say global warming and climate change? According to (Yan et al., 2016), global warming is long-term rise in the average temperature of the earth's climate system. Global warming and climate change are in most times used interchangeably but climate change includes both global warming and its effects such as changes in precipitation and impacts that differ by region. Simply put global warming leads to climate change.

Climate Smart Irrigation calls for putting in practices that will enable maximum production in midst of the impacts of climate change. It is attempting to minimize the likelihood of climate change undermining the effectiveness and sustainability of agricultural productivity or development interventions — is key in ensuring that appropriate climate change responses are included in investment plans for water management in agriculture sectors.

In Kenya, according to data from NIA, about 80% of Kenya's terrestrial land has been classified as Arid and Semi-Arid Lands (ASALs) characterized by low

“NIA under the Expanded National Irrigation Programme introduced this project targeting organized groups and learning institutions all over the country.

amounts of rainfall ranging from 150 to 750 mm annually. This means that only 11-20% is rain fed arable area hence NIB and the Nation at large has obligation to design systems which utilize renewable energy and resources available in this areas in which about 35% of the total human population lives (UNEP, 2013). The temperatures are high in many of the ASAL places above 300 C that consequently affects moisture availability hence limiting agricultural production potential.

What is NIA doing?

NIA is continually making efforts to practice CSI by introducing water efficient irrigation methods for instance drip irrigation system, which has the potential to save up to 90% of water applied. This method has been used majorly in the Greenhouse project under the Expanded National Irrigation Programme (ENIP) and a host to small holder irrigation projects. This leads me to be second initiative that NIA is using to promote CSI; greenhouse farming.

Green house farming is an agro-technology focusing on agriculture with limited water resource and controlled environment. NIA under the Expanded National Irrigation Programme introduced this project targeting organized groups and learning institutions all over the country.

So far, NIA has managed to oversee installation of more than 500 greenhouses across the country.

Further, NIA is embracing the use of renewable energy sources for example solar pumping technique. It is the best option for ASAL areas for water extraction and to power irrigation systems. Currently NIA is in its 2nd phase of a collaboration with United Nations Industrial Development Organization (UNIDO) in application of Ultra Low Head Micro Power (ULH-MHP) technology. UNIDO successfully installed this technology in one of the main canals in Mwea Irrigation Scheme in Kirinyaga County. This innovative ULH-MHP technology can be plugged into a man - made waterway to generate power (e.g. irrigation scheme canals) with minimal civil works involved, easing effectiveness to the environmental and social surroundings eliminating major costs of installation (UNIDO, 2015).

Other techniques includes practicing precision irrigation techniques, including determining reference evapotranspiration, offering expert irrigation advisory services, weather forecasting and crop specific irrigation information.

Moving forward,

“NIA is embracing the use of renewable energy sources for example solar pumping technique

As NIA strives to practice and seek further opportunities to engage in climate smart Irrigation, it is important to learn and practice the same at individual level. Charity begins at home.

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Greenhouse farming in Thua Model Farm in Kitui County

One on one with Eng. Koske

By Rhoda Mbuvi

It is a cloudy afternoon when I seat with Eng. Charles K. Koske who is almost a month old after retiring from National Irrigation Board (NIB) in July 2019. He was the Deputy General Manager, Corporate Services. In our conversation, he recounts keenly on his journey from childhood to retirement.

Who is Eng. Charles Koske?

I am the first (1st) born in a family of seven boys and six (6) girls. Our dad passed on 35 years ago leaving me to be the father figure of my siblings and my mother joined him 25 years later, making it 10 years since she departed this world.

I have been married to one (1) wife for the last 36 years and God Has blessed us with five (5) beautiful daughters who are grown up with the last born being a bachelor's degree student at The University of Nairobi undertaking an electronic engineering course.

My schooling life began at Kabianga Primary School, proceeding to Cheptenye secondary school and joined Nakuru high school for A-levels. I worked as an untrained teacher for 9 months before joining The University of Nairobi where I undertook a Bachelor's of Science in Agricultural Engineering between 1978 and 1981. Later, in 1983, I did my Master's degree in Soil and Water Engineering from The Cranfield Institute of Technology in Bedfordshire, UK.

Fast forward, July 17, 2008 I was appointed the Deputy General Manager of NIB.

My hobby is helping fellow man-kind to live well and not to be harassed.

I have known you from NIB. Is this where you started your career?

No, after university, I got two (2) jobs: with the Ministry of Agriculture as a lecturer, which I declined, and joined the second (2nd) at the Ministry of Water Development. It has been a journey; at some point I was the Director for Drainage and Irrigation, CEO of National Water and Pipeline Corporation from 1997 to 1998, CEO of Ewaso Nyiro South Development Authority from 1999 to and 2002 and have held various senior positions in the water sector before I was deployed to NIB in July 2008.

How was it balancing your family and career?

It was tough to balance all especially when our daughters were young and did not understand why I had to be away or was working late but we had to seat them down and explain. I remember one day on a Sunday in 1997, I took them for lunch but had to leave for work because I had to finalize some assignments before flying out of the country; the kids questioned if being a boss means you go back to work all the time.

How was it working with NIB? What are your most memorable moments at NIB?

"Out of the places I have worked, NIB stands out. NIB is a good employer. The staff are the best. It is a family setup and the working environment is conducive. I have several memorable moments but three (3) stand out. In one, my deployment and reception at NIB, the task given was challenging. Secondly, my deployment to be the Western Region Manager. I did not intend to accept the opportunity but after the overwhelming congratulatory messages especially from a team of the staff who organized a farewell party for me, my heart melted to a point that I embraced the deployment. Thirdly, a memory was created in my last day at NIB: a bigger team organized for an exit party for me and it was a great opportunity to reflect on all achievements attained, friendships build and my stay in general, it was a great moment.

Did you (or still) have a best friend at NIB? Someone you could talk about very personal things? If yes, who?

Smiling, yes I had. Eng. Daniel Barasa (NIB former General Manager). We have taken the journey together since our deployment. (They joined NIB at the same time in 2008)

Do you miss NIB? What do you miss most?

"Yes. I miss NIB family. The team is amazing. They stood with me all through even at a time I was ailing. Thank you to everyone, he concluded."

Your high achievements at NIB

Trying to isolate from the many achievements he has achieved, Eng. Koske finally responds by saying,

"Attaining the first agenda I was deployed to NIB to do i.e. to help in bring-



ing it to limelight was a major achievement for me and the team, secondly, overseeing the process of recently signed Irrigation Bill 2019 crowned it all."

It was a great 11 years of service at NIB and close to 38 years of working life.

Were you ready for retirement? From what period did you think of the possibility of retiring?

Yes. 10 years ago. It dawned on me that I did not have time hence had to reflect and plan on my life after retirement. "My advice to everyone is that the earlier the better. You are in charge of your life."

About retirement, what did you wish you knew earlier?

I wish I had incorporated the advancing dynamics of life in my retirement plan. The realities on the ground.

Kindly advice on investing/saving as you work Vs meeting basic needs.

Eng. Koske has a simple way of summarizing it, "do not overfeed. Do not starve"

Are you a fan of soccer? Which team do you support local and internationally?

Laughing he says he pays attention to Mashemeji Derby locally, the top 4 teams at the European League, and Barcelona and Real Madrid for La-liga.

How do you manage stress?

Stress is inevitable to humankind. Two principles: Analyse the situation (what is the cause, your role in it etc.). Accept. Move on. However, before moving on, make sure you have played your part well.

One of the decisions you regret?

Opting to do my bachelor's degree in engineering. I wish I went for a medicine degree."

Best joke

Laughing he starts, "mmmh... 5 years ago I was visiting Western Region and apparently the scheme manager was not present and I got to learn of incidence where some farmers from part of Bunyala and Ahero were suing the Board on claims of evictions and I had to take action immediately. Fast forward, when I was making my speech in one of NIB's end of the year party, I joked about the situation that I had acted as the Scheme manager and when the General Manager was making his speech, he further joked pitting me that I would have finished the joke by asking for "scheme manager acting allowance".

Best quote

"If you fail to plan, you are planning to fail". You are in charge of your destiny

Final word to NIB

"There is an urgent need to focus on formulating NIB succession plan. All the best in your endeavors."

Agricultural Breakthrough with Aflasafe

By Daisy Chanzu

The agriculture sector in Kenya has suffered setbacks from time to time whenever crops are found to contain high aflatoxin levels. This caused the crops to be declared unfit for consumption and hazardous/health risks to both livestock and human beings, hence their destruction. This in turn becomes a burden to Kenya's economy as the sector incurs losses.

Aflatoxins are poisons that are mainly produced by the fungus *Aspergillus flavus* and *Aspergillus parasiticus*. They may also be caused by closely related fungi. The contamination process takes place in the field and may continue throughout storage up to consumption. According to a research conducted by the World Health Organization, some of the key contributors to the existence of aflatoxin causing moulds are: high temperatures/high humidity levels, draught stress, insect damage and poor storage. According to findings from

“Aflatoxins are poisons that are mainly produced by the fungus *Aspergillus flavus* and *Aspergillus parasiticus*.

a study conducted by Kenya Agriculture and Livestock Research Organization (KALRO), in Kenya, the aflatoxin threshold is 10ppb (parts per billion) which escalates at times to more than 20,000 ppb. Aflasafe is an all-natural biocontrol product otherwise referred to by its market name Aflasafe KE01TM and is meant to drastically subside the aflatoxin levels in aflatoxin affected crops.

Aflasafe KE01TM contains four (4) atoxi-



Photo Courtesy: U Mutuku/IITA | Sarah broadcasting maize in Galana-Kulalu

genic of *A. flavus* (meaning it cannot produce aflatoxins) that are native to Kenya. The atoxigenic strains auto compete with toxigenic strains when applied in the field 2-3 weeks before flowering. Atoxigenic strains depend on roasted, sterile sorghum for nutritive value and as a carrier source. The application process is what follows where the spores of the strains are coated onto sorghum using a sticker. A blue food dye is then used to distinguish Aflasafe KE01TM from regular sorghum.

Aflasafe KE01TM is then broadcasted in the farmer's field 2-3 weeks before maize flowering. This is so that the atoxigenic strains will grow rapidly on the sorghum grains and will colonize the available nutrient sources in the field, including maize before toxigenic strains do so. Hence, Aflasafe KE01TM strains will become associated with the maize and will prevent growth and production of aflatoxin by the toxigenic fungi.

Benefits of Aflasafe

- Farmers earn more since aflatoxin-safe crops have higher chances to be sold in premium markets.
- One annual application of Aflasafe

KE01TM provides multiple-year and multiple crop benefits.

- Aflasafe KE01TM is cost effective in providing high returns upon investment and increases health benefits by preventing aflatoxin occurrence in crops.
- The aflatoxin levels in crops are reduced by 80% to 90% when farmers apply Aflasafe KE01TM on their crop.

NIA has adopted the use of Aflasafe in some of its irrigation schemes/projects such as Galana Kulalu Food Security Project where 3,500 acres of maize were treated with Aflasafe KE01TM to produce maize safe from aflatoxins. It was found that 99% of the maize contained less than 10ppb total aflatoxins, a safe level whereas 95% of the maize was found to have up to 4ppb aflatoxin, a level compliant with the strict European limit. In Kenya, KALRO is host to IITA's regional Mycotoxin Laboratory where research and development of Aflasafe for East Africa is conducted. It is anticipated that in the years to come Kenya will be producing Aflasafe KE01TM for other Nations.

“NIA has adopted the use of Aflasafe in some of its irrigation schemes/projects such as Galana Kulalu Food Security Project



National Cohesion and Values

Did you know that all state organs, state and public officers, the private sector, non state actors, development partners involved in national cohesion and reconciliation initiatives and all persons have the National Cohesion and Integration Policy applying to them? Well, I bet now you do.

According to Sessional Paper N0. 9 of 2013 on National Cohesion and Integration, Kenya's challenges over national cohesion and integration are associated with political, social and economic disparities and the manner in which diversities have been managed before and into independence. The basis of discrimination, impeding national cohesion and integration is often diversity.

Humans are naturally diverse and the forms of social diversity in Kenya include culture, race, ethnicity, language, religion, gender, marital status, health status, age, and disability. Besides these social aspects of diversity, an important basis for socio-economic differentiation is the diverse agro-ecological heritages across the country. For this reason, it is important that every individual takes up the challenge of promoting national values.



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