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Newsletter

FROM THE AFRICAP PROGRAMME TEAM

he Global Challenges Research Fund - Agricultural and Foodsystem Resilience Increasing Capacity & Advising Policy (GCRF-AFRICAP) team welcomes you to the first newsletter of the programme in the year 2020.

Our hearts and thoughts go out to the people who have been affected by this unprecedented global pandemic – COVID-19. We believe that countries are working tirelessly to ensure that citizens are protected. This global pandemic is a clear indication that the virus knows no borders and, as such, policies formulated around health should not only be limited to certain parts of the globe, but the entire world.



Through this newsletter, we aim to keep everyone informed of general news and developments relating to the Programme.

In this edition we highlight how Climate Smart Agriculture approaches are helping smallholder farmers become resilient to natural shocks. We also look at how COVID-19 has forced AFRICAP implementers to mainly work online and how the pandemic has impacted the agriculture sector and food systems. In this newsletter we also chat with Ndashe Kapulu, a post-graduate researcher at the University of Leeds, who works for the Ministry of Agriculture in Zambia, about his research study on the impact of diversifying into soybean production on livelihoods and food security of smallholder households. The FANRPAN team also saw some changes with Dr. Tshilidzi Madzivhandila being appointed as Chief Executive Officer after serving the organisation in an ad interim capacity for the past year and few months. We are dedicated to ensure that we carry out all the activities intended for 2020 as we approach the last year of the AFRICAP Programme in 2021.

We hope you will find this newsletter interesting. Please send us your feedback to contact@africap.info.

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Tanzania smallholder farmers outsmarting climate change

By Daniel Semberya

ANGA REGION, Tanzania – Mwanaisha Issa Kuziwa, a smallholder farmer from Lushoto District in Northern Tanzania, used to get poor yields from her maize field every year.

Kuziwa blamed low-quality seeds and inadequate preparation of her field for the 200 kg of maize she harvested each farming season.

She is a happy farmer. Kuziwa is now harvesting 700 kg of maize.

"Most of the farmers used to save seeds from the previous season to use in the next one," said Kuziwa, one of over 800 farmers participating in the Integrated Approaches for Climate Change Adaptation Project (IACCAP). The programme has trained farmers on Climate Smart Agriculture (CSA) techniques. Farmers are now using improved seeds which give high yields, meaning they have more food and surplus to sell after harvest.

Everything changed after Kuziwa learnt about improved seed varieties. She improved the way she prepared her field, applying fertilisers and pesticides. As a result, Kuziwa harvested more maize compared to previous years and increased her income. Kuziwa revealed this during a study tour of the project at Mbuzii Village by smallholder farmers, extension workers, government officials, researchers from the Social Research Foundation (ESRF), Sokoine University of Agriculture (SUA) and Tanzania Agricultural Research Institute (TARI)-Selian.

The study tour was one of the GCRF-AFRICAP programme capacity building, policy design and engagement activities.

GCRF-AFRICAP is a four-year, £9.2million research programme focused on improving evidence-based policy making to develop sustainable, productive, agricultural systems, resilient to climate change. It is implemented in four countries – Malawi, South Africa, Tanzania and Zambia. ESRF is an implementing partner in Tanzania.

"The aim of the study tour was to provide participants with an opportunity to learn from what is on the ground on Climate Smart Agriculture best practices," said Abel Songole, a researcher with the Social Research Foundation.

The study tour involved field visits to the Consultative Group for International Agricultural Research (CGIAR) programme on Climate Change, Agriculture and Food Security (CCAFS)'s Climate Smart Villages in Lushoto District.

The CSA focal point in East Usambara Mountains (EUM), Sylvester Mziray, said farmers used to get low yields because of poor local farming practices. Soil erosion was also a major challenge.Farmers are digging trenches to prevent the washing away of soil during floods after being trained on soil and water conservation techniques.

The project has also supported farmers with a warehouse for storing spices before they are sold at the market.

"They collect their spices and bargain the prices with traders in a win-win situation," said Mziray, adding, "The training helped them to understand the market demand and supply dynamics."

George Sayula, a researcher from TARI-Selian, Department of Resources specialising on climate change, said small-scale farmers were lacking proper education platforms to understand good farming practices and how to manage climate change risks. Through the project, the farmers were supported to diversify their incomes by venturing into dairy. They now sell 5,000 litres of milk a day. They also have a butterfly farming project whose aim is to help conserve forests and fight poverty. This means that if floods wash away their crops, they can still generate income from the other projects.





Will the Free State Province Still be South Africa's Bread Basket in 2050?

Dr Ndumiso Mazibuko, a senior agricultural economist at the National Agricultural Marketing Council (NAMC), says there is need to help farmers in South Africa's food basket, the Free State Province, build crop resilience. This follows a household survey under the AFRICAP which indicated that farmers are experiencing climate change impacts such as changes in rainfall patterns which have affected their production. Dr Mazibuko says AFRICAP is using crop modelling to understand if the Free State will still be the food basket of South Africa by 2050, on the back of a changing climate. Dr Mazibuko reveals more in this podcast with journalist, Crystal Orderson.

https://africap.info/will-the-free-state-province-still-besouth-africas-bread-basket-in-2050/?preview=true

Q&A: Soybean, could be the new oil for smallholder farmers in Zambia



Ndashe Kapulu, is a doctoral researcher at the University of Leeds, in the UK. He also works for the Ministry of Agriculture in Zambia. Through his research study supported by AFRICAP, he is investigating how diversifying into soybean production will impact livelihoods and food security of smallholder households in Zambia, where maize production is a staple. The GCRF-AFRICAP programme is supporting researchers to generate evidence in Malawi, South Africa, Tanzania and Zambia, to inform policy development in agriculture and food security.

How did the research on the diversification to soybean come about in Zambia?

Soybean was prioritised as an alternative crop in Zambia following a multi-stakeholder consultative meeting. Stakeholders felt that, within the government's crop diversification agenda, soybean had a potential of improving the income of commercial and small-scale farmers.

To underpin that, the government set up a technical working group to understand the potential of edible oils to which soybean ranked highly. The GCRF-AFRICAP programme, through the Agriculture Consultative Forum (ACF), has made a lot of progress in planning for a Soybean Strategy. ACF is facilitating a platform to generate evidence within Zambia to inform the government on how best they can support the commercialisation of soybean, among other crops.

2 What is your research about?

I am trying to understand how emerging soybean markets in Zambia have implications on food security and incomes of rural smallholder households. What are the implications of diversifying to soybean production from maize on the livelihoods and food security of the rural smallholder households? Soybean was initially mainly grown by commercial farmers from around the mid-1980s until 2005, when much of the market was opened up. Several multinational companies set up processing plants within the country. As a result, there was an upsurge of soybean production in Zambia. From 2005 to date, we have seen an exponential increase in the participation of smallholder farmers in the soybean value chain. However, there is very little evidence to understand how their participation in this value chain has impacted on their livelihoods, income and food security, hence the focus of this research.

3 What is the progress of your research so far?

We are still in the early stages of our research. We conducted a rural household survey in May 2019 on smallholder farmers living in predominantly soybean production areas, mainly Central Province and now Eastern Province. We concentrated on the Central Province, Mkushi and Chibombo districts which are unique. On the one hand, Mkushi is predominantly a farming block with a lot of commercial farms that grow, among other things, soybean, alongside wheat and beans. The district also has a lot of small-scale settlements around those commercial farming blocks.

On the other hand, Chibombo is predominantly a small-scale farming setting but it is located close to Lusaka, the capital city, which is where most of the soybean output markets are found. Within the district, there is a big multinational company with a huge crushing plant and it offers out-grower schemes to small-scale farmers. So, using those two market access dynamics, we decided to conduct this research to understand how proximity to markets for soybean would impact on farmer participation. We are also trying to

understand how the proximity to large commercial operations will impact on smallholder farmers in terms of their participation in soybean processing as well as their access to inputs, incomes and livelihoods in general.

Is the soybean part of the Climate-Smart Agriculture (CSA) technology?

Yes. One of the key messages that led to the promotion of soybean by the government and NGOs, is that, as a legume, it is a low-input crop compared to maize. Most legumes can have their seeds recycled without losing their germination vigour. Farmers can save seed from the previous harvest and replant it, whereas in maize one needs to buy a fresh supply of seed every season. One of the things that the government and NGOs have promoted is the use of inoculums, which are Rhizobium bacteria that help soybean generate nitrogen through biological means. That means there is no need for external nitrogen. Farmers have been encouraged to grow soybean in rotation with cereals such as maize to enhance soil fertility.

Another aspect, to some extent, is that soybean is more drought resilient compared to maize. Within the GCRF-AFRICAP programme we have done a model which projects that in the next 20 to 30 years, Africa will be dominated by soybean production because of the way the climate will evolve. The climate will suit the growing of soybean. Most of the workers within the CSA space are promoting it on that perspective.

5 How has the growth of smallholder farmers evolved since the government prioritised soybean?

From 2005, 85 percent of the land area and production was under commercial farming, but recent statistics show that now 60 percent of soybean production is coming from commercial farmers. The land area production under soybean has changed to nearly 70 percent under small scale and 30 percent under commercial. However, commercial farmers are able to get more yields compared to their small-scale counterparts because of better access to quality seeds and other inputs.

Research moves online as coronavirus lockdowns take effect

By Mantoe Phakathi

he COVID-19 pandemic has forced organisations in South Africa and Zambia implementing the AFRICAP programme to change their strategies. Following the outbreak of the virus which has since been declared a pandemic by the World Health Organization (WHO), citizens were compelled to stay at home or avoid gathering in large groups in what is widely known as lockdown.

Implemented in Malawi, South Africa, Tanzania and Zambia, AFRICAP has established academic partnerships between UK and African research and policy institutions. It aims to develop capacity across these partnerships in the field of climate smart agriculture and food systems through the participation of farmers, government officials and civil society organizations.

One of the partner organisations in the GCRF-AFRICAP programme is the Agriculture Consultative Forum (ACF) in Zambia, which has been forced to reduce research field visits and has switched to collecting data online.



"Field work has more or less come to a standstill due to travel restrictions to some areas," said Masiye Nawiko, the Executive Director of ACF. The NGO provides a stakeholder platform for agricultural policy dialogues in Zambia.

"Online tools of collecting data are also used such as Monkey Surveys

and questionnaires. Overall, due to the above challenges, the institutional capacity to spend programme funds has slowed down", Nawiko said. "Considering that the programme is underpinned by research as a basis for influencing policy to boost food security, field work is critical."

However, to ensure compliance with the WHO COVID-19 safety recommendations, Nawiko said researchers in Zambia were undertaking field visits in phases, involving small groups. He said timelines have been affected because some partners in the programme suspended operations or they were working on a rotational basis for a certain number of days in a week.

According to Ndashe Kapulu, a Zambian doctoral researcher from the University of Leeds, the pandemic has brought many uncertainties and opportunities in his work. Kapulu is researching on the implications of emerging soybean markets in Zambia on livelihoods and food and nutrition security of rural smallholder farmers. His research is supported by the GCRF- AFRICAP programme. "COVID-19 has impacted progress because we had planned to do an in-depth study through interviews and focus groups but that would depend on how the pandemic evolves in Zambia," said Kapulu, speaking from a quarantine facility following his return from the United Kingdom, which further impacted his ability to work on the study. "The pandemic also brings a lot of opportunities in helping us understand how the soybean value chain will evolve, considering the global economic impact of COVID19," Kapulu said. Farmers have harvested soybean and the Zambia government forecasts a six-percent increase in production for the 2019/2020 season.

COVID-19 has changed the way organisations disseminate research findings. For instance, in South Africa, the GCRF-AFRICAP team postponed



household survey feedback workshops after the government imposed а lockdown. According to Bonani Nyhodo, a senior manager at the National Agricultural Marketing Council (NAMC), a household survey on how farmers respond to unexpected weather changes, was conducted and the team had to come up with creative means to disseminate findings. "The team is currently compiling feedback pamphlets, videos and articles, which will be shared with the farmers and the relevant stakeholders electronically," who oversees said Nvhodo. the programme within the NAMC, which is the coordinating organisation.

In order effectively identify adaptation practices or introduce new farming practices to mitigate the adverse effects of climate change, researchers from the University of Leeds in the UK were supposed to conduct research in two districts in the Free State Province. That was put on hold due to COVID-19 travel restrictions. "It was then resolved that they work from home by doing some laboratory preparation related ecology work, which involves sorting and identifying specimen," said Nyhodo.

Engagements with partners within South Africa and other GCRF-AFRICAP countries are now done online.



What are the Expected Outcomes?

- To create evidence through research on soils, plant and livestock science, meteorology, ecology, political and social sciences.
- The research evidence will be used to develop and implement new country-specific policies in agriculture and food production.



GCRF-AFRICAP Funding

- Funding for the programme is from the Global Challenges Research Fund (GCRF), UK Government programme to support research that addresses critcal problems in developing countries across the world.
- GCRF-AFRICAP is funded to the tune of £9.2million



- Farmers
- Governments
- Civil Society Organizations
- Research Institutions
- Development Partners



OUTCOMES



Food insecurity intensifies amid Covid-19

By Lindi Botha



regetable farmer, Solly Letsoalo, cannot wait for the national lockdown necessitated by the coronavirus (Covid-19) pandemic to be lifted. It has brought down his business.

Letsoalo (47) grows tomatoes, butternuts, green beans and baby marrows which he sells to informal market traders who collect from his farm and sell on road sides. "With lockdown keeping people at home, there is no one buying the produce and even at the fresh produce market prices have fallen so low it is not worth sending the produce there," bemoaned Letsoalo, who has 4ha of baby marrow, most of which he will lose to pests. He cannot apply pesticides after his tractor broke down and parts became unavailable during the lockdown.

Letsoalo is lucky for now. Unlike his neighbours, he has not had to throw away any vegetables as he is still to harvest part of his crop on the field. But he faces ruin. He is expecting to earn R100 000 from his vegetable business this year, a 70% percent decrease from what he makes in a normal farming year. This is barely enough to pay his bills. As agricultural activities continue during the pandemic, those not in touch with the sector would be forgiven for thinking that farmers have not been affected by the lockdown which was implemented across South Africa on 27 March. At level 5 at the beginning, the lockdown meant that all non-essential businesses had to cease operations, while the population was forced to stay at home. COVID-19 came to South Africa at a time when the agricultural sector was recovering from a persistent drought and disease outbreaks such as Foot and Mouth Disease (FMD) which have had a huge negative impact.

In addressing this pandemic, the Department of Agriculture, Land Reform and Rural Development (DALRRD) established a Task Team, comprising industry role-players and State-Owned Entities. The Task Team meets regularly to discuss ways of forging ahead and addressing challenges encountered by role-players in the food value chain. Among other things, the Task Team monitors food supply via an End-to-End Agricultural value chain Tracker, which has a 24 to 48-hour reporting cycle.



As the hospitality industry and informal trading has come to a halt, much of South Africa's fresh produce has lost its market, affecting the income of farmers and, subsequently, their workers and rural communities. In an attempt to minimise the negative impact, the Department of Agriculture, Land Reform and Rural Development announced a R1.2 billion COVID-19 Support Fund for distressed farmers. The fund is providing financial aid to farmers with a turnover between R20 000 and R1 million per annum. Of the 55,155 farmers that applied for financial assistance, only 15,086 qualified. But even with the maximum pay out of R50,000 per applicant, many small scale farmers still cannot afford to stay in business. Letsoalo, who employs 20 people, has applied for financial assistance under the fund. He does not know if his application will be approved and how much he will get. "But even if I receive the full R50,000, it will not even cover my wage bill of R56,000 per month, let alone all the other on-going farm costs," says Letsoalo.

Another farmer, C P Kriek, owner of Taaibosch Piggery in the North West province, is also facing a crisis. His business is too small to sustain itself on the decreased prices as a result of the market crash and the increased cost of complying with health and safety regulations to keep his farm COVID-19 free. Simultaneously, the farm's 2,200 sow unit falls within the country's 40,122 commercial farmers who are considered too large to be eligible for the COVID-19 agriculture disaster support fund. Faced with market prices below the cost of production, Kriek is concerned. He will not remain in business for long. He is currently funding the operation from his savings and may have to let most of his employees go in a few months.

Taaibosch Piggery is an intensive livestock operation dependent on close working relations. "Two thirds of my workforce had to be placed on paid leave," says Kriel. "While I could afford to pay the salaries initially, I cannot keep doing so as my income has drastically reduced. Now they have to depend on the Unemployment Insurance Fund (UIF) payments.

But it is not all gloomy. "The country is expecting a bumper maize crop, so prices and availability will be favourable," says Christo Joubert, manager of agrifood chains at the National Agricultural Marketing Council (NAMC), a member of the national COVID-19 Task Team, established by DALRRD. NAMC is coordinator of GCRF-AFRICAP in South Africa.

The GCRF-AFRICAP is a major Programme to make agriculture and food production in Sub-Saharan Africa (SSA) more productive, sustainable and resilient to climate change. The programme is working with civil society organisations, research institutions and policy makers in Malawi, South Africa, Tanzania and Zambia. The four-year programme is focused on generating evidence-based policy to transform agriculture and food systems in Africa.

During the lockdown, the South African government and the private sector have handed out food parcels to impoverished communities, while commercial farmers and agribusinesses have donated produce and funds to help distribute the food. The government has also committed to pay social relief distress grants of R350 per person to those without any form of income. Kriek adds that instead of solving the problem short-term with a cash injection, government should give tax incentives for business to keep people in jobs. "In the current environment, exports would have made a huge difference to the pork industry. South African consumption rates are low compared to those globally and since we have a good animal health status, it would be ideal to export."

Climate smart agriculture boosting farmer yields and income in Malawi

By Martha Chikoti



Peter Chilunje, a smallholder farmer in central Malawi, grows maize, the national staple. Each time there is a drought, his family only has enough food to last them until the next harvest. "In drought years, the maize we produce sometimes lasts us less than five months and that is scary for my family," said Chilunje, from Nkhoma village, 60 kilometres south of the capital city, Lilongwe.

Across Malawi farmers like Chilunje are getting poor harvests because of El Nino-induced droughts and floods. In 2019, the country suffered a major drought and was hit by Cyclone Idai, which left 150 people dead and 6.5 million displaced in Malawi, Mozambique and Zimbabwe.

The Malawian economy is based on agriculture, with 80 percent of the population earning income from farming. When disaster strikes during the growing season, many families lose their crops and face starvation.

After Chilunje learnt about conservation agriculture, he has tripled his crop yields. He switched to early maturing and drought-tolerant maize seed. In the 2018/9 season Chilunje harvested six (50kg) bags of maize and in the current season he got 1.8 tonnes. Conservation agriculture is a set of practises which include intercropping maize with other crops and keeping crop residues on the soil after harvest to enhance soil fertility, save moisture and prevent erosion.

To mitigate the impact of climate change, the government – through the Ministry of Natural Resources, Energy and Mining – is promoting conservation agriculture approaches, including growing drought-tolerant crops such as cassava, groundnuts and soybean under the National Resilience Strategy (NRS) launched in 2018.

The Ministry of Agriculture Irrigation and Water Development is teaching farmers better farming methods. Non-governmental organisations are providing farmers with drought-tolerant seeds, small loans and farm equipment. Building the resilience of farmers against climate shocks is one of the objectives of the National Resilience Strategy which has prioritised agriculture investment to increase productivity and food diversity.

The strategy is being localised in Balaka district, in partnership with the Department of Disaster Management, supported by the AFRICAP Programme funded by the Global Challenges Research Fund. The Programme is being implemented by the Civil Society Agriculture Network (CISANET) in Malawi.

Oil seeds strategy to grow farming jobs and income

By Happy Mulolani

he Government of Zambia is facilitating the development of an Edible Oils Strategy to boost national oilseeds production and value addition. Zambia is currently relying on imported edible oils, which are killing the local industry, taking jobs and income from farmers.

The Agricultural Consultative Forum (ACF), with support from the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), is championing the development of an edible oils strategy for Zambia. ACF and FANRPAN are partners under the GCRF-AFRICAP promoting programme climate-smart agriculture sustainable food and © Polina Tankilevitch from Pexels systems.

ACF Executive Director, Masiye Nawiko, said his organisation is presently undertaking a soybean study whose findings will inform a soybean development strategy. Nawiko said that ACF is working with stakeholders such as the Zambia Statistical Agency, Indaba Agricultural Policy Research Institute (IAPRI), the Zambia National Farmers Union (ZNFU) and the Ministry of Agriculture in conducting the nation-wide study expected to be completed in October 2020.

"There is tension between farmers and oil processors," Nawiko said, noting that processors were importing edible oil from East Africa, thereby depriving the local market of the opportunity to create jobs and generate revenue for Zambia. ZNFU Executive Director, Ellah Chembe, said farmers growing oil seed crops will have good benefits once the industry is fully developed.

A 2013 National Consumption Requirement Study for Edible Oils in Zambia, commissioned by ZNFU, found that, despite the industry's immense potential to produce edible oils, it was failing to compete with imported oils which were landed cheaply and often of questionable quality.

Total imports of edible oils dramatically increased from 21,309 tonnes in 2002 to 104,383 tonnes in 2012, four times the amount Zambia exports. The industry directly employs

more than 2,000 people in the manufacturing sector and indirectly provides employment for farmers who supply oilseeds as raw material in the processing of edible oils. Multinational corporations produce the majority of edible oils in Zambia and small-scale businesses have a smaller stake in the industry.

Farmers, both small-scale and commercial, have been affected by the market volatility resulting from a glut in imported edible oils. This is a cause for concern for small-

scale farmers who have limited technical expertise and rely on the informal market to sell their oilseeds.

> According to the 2019 Zambia Agriculture Status Report by Indaba for Agricultural Policy Research Institute, Zambia has adequate capacity to cater for all its edible oils demand, but imports 70 percent of the local consumption.

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The importation of edible oils is both legal and illegal due to inconsistencies in enforcing mechanisms stable and related procedures. The lack of protection of the local industry prompted the government, through the Ministry of Agriculture, to impose restrictions on the importation of refined,

packed and bottled edible oils in the country in 2015. In line with the government strategy aimed at diversification and industrialization, the Zambia Bureau of Standards was mandated to subject all samples of edible oils in bulk for testing, with all operators giving false declarations being either fined or banned. Meantime, the Zambia Revenue Authority is tasked with ensuring that the importation of oil packaging which is less than 1,000 litres is not accepted and is classified as import refined edible oil.

Nawiko said that with support from the GCRF-AFRICAP Programme, ACF is undertaking an independent detailed analysis of the edible oils sector with regard to the national requirements, national production, installed processing capacity, consumption, imports and other market dynamics in order to inform policy. This work was supported by UK Research and Innovation as part of the Global Challenges Research Fund, Grant Ref: BB/P027784/1





About the Agricultural and Food-system Resilience: Increasing Capacity and Advising Policy (AFRICAP) programme The Agricultural and Food-system Resilience: Increasing Capacity and Advising Policy (AFRICAP) Programme is a fouryear research Programme focused on improving evidence-based policy making to develop sustainable, productive agricultural systems, resilient to climate change. The Programme is being implemented in Malawi, South Africa, Tanzania, Zambia, and the UK and is led by the University of Leeds, a leading Russell Group university in the north of England, in partnership with the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), a pan-African multistakeholder policy network. The Programme is funded by the UK Government from the Global Challenges Research Fund (GCRF), which aims to support research that addresses critical problems in developing countries across the world. It is administered by the UK's Biotechnology and Biological Sciences Research Council (BBSRC)- UK Research and Innovation (UKRI).

Implementing Partners: FANRPAN; University of Leeds; University of Aberdeen; the UK Met Office; Chatham House- Royal Institute of International Affairs; the Civil Society Agriculture Network (CISANET), Malawi; Department of Agriculture Research Services (DARS), Malawi; National Agricultural Marketing Council (NAMC), South Africa; Economic and Social Research Foundation (ESRF), Tanzania; and the Agricultural Consultative Forum (ACF), Zambia.

