What diet and related agriculture changes have you seen in Africa?

Across Africa the diets are changing. Twenty years ago rice was not a very common food in Africa. It was bought and consumed on occasions because the price was high. But the price of rice coming from the East, is cheap and is comparable to some of the cereals. Because of the low price, there was a big move towards rice consumption. Also, the countries in Africa have developed irrigation schemes and the local production is converting to rice.

When we have drought situations and famine - what do the governments bring in? The donation is typically maize. And once people’s palates have tasted maize and they realize that the government’s going to provide that year in year and out, they don’t grow sorghum and millets, which would naturally be the crops most suitable for those drought prone areas. So people who have traditionally grown sorghum and millets then change to maize.

However, some organizations like World Food Program (WFP) are now changing that. For areas that have famine or flood but are predominantly millet or sorghum consuming areas, WFP try and procure sorghum and millet for those areas so as to not drastically change people’s diets and so people do not become dependent on maize which regularly fails in those agro-ecologies.

Also maize mills were brought into villages and these mills don’t process any of the other grains. This convenience of mechanical processing further encouraged people who had traditionally grown sorghum and millets to change to maize. Processing of the traditional grains became something only your grandparents could do.
We are seeing a number of health related diseases and we think it’s because of this change in the diet. Also people are going for highly processed foods. I think the time for popularizing Smart Food like millets, sorghum and legumes in Africa is now.

Moses Siambi is the Regional Director for East and Southern Africa, for the International Crops Research Institute for the Semi-Arid Tropics, which works in the dry zones and has a specialty some of the crops that survive best in the harsh environments – millets, sorghum, pigeonpea, chickpea and groundnut.

VIDEO: https://drive.google.com/open?id=1qQQxoeW05w8pFtQj4TkRrWEPjd9KbHP

Video transcript:

The beauty of our crops especially the cereals, is that most of our diets are cereals-based in Africa now of course, because maize has been so successful in taking a lots of land area. And our cereals are usually the last standing crop during drought. And it is almost certain that in every country after drought, there will be a massive campaign about our cereals crops. Then it rains and they are forgotten. So the issue is the drought aspect is very key... That they are withstanding drought, therefore you can produce them with less rainfall. What for me I have asked is rather, what I’m always discussing with policy makers is, it shouldn’t be when there is no rain. In the marginal areas where we work, maybe three out of ten year we get above average rainfall; so what happens the rest of the years? The rest of the years the farmer is not getting a good crop. The maize are what they are planting. Yet the rain is enough to produce a very good harvest over the sorghum and millet so it doesn’t have to be in a drought year. It just needs to be something that farmers grow over all the time and be able to get a good harvest.

I think the time for popularizing Smart food in Africa is now and in my view the reason for that is because of the changing diets. But importantly our approach over the past three years in bringing that by creating more and also approaching the private sector about processing. Now the approach we had before was that if we improve the product, then the utilization would happen. But over the years we realized that we need the product end to convince the consumer about our product and not necessarily the farmer, as we have done in the past.

What approaches have you taken to popularize Smart Food among consumers?

In Kenya we have two approaches – 1. Looking at prepared products that will have an urban appeal which means products that are convenient and easy to cook; 2. For the rural areas, we are looking at products that diversify the diet.

For the people in the rural areas to consume these traditional Smart Foods, it is behavior change we need at the household and at the farmer level. The farmers and their families are the first market. It is good for them and it is good for the processor to put it out in the market. So our approach on behavior change is really on those two levels.

We created an African recipe book for easy ways to cook sorghum and millet. We also ran a season of a Smart Food Reality TV show with a competition to cook sorghum, millets and legumes. This was all part of a USAID funded project (AVCD).

The approach for making the product available in the urban areas, requires that we work closely with the private sector for the processing. For the rural areas we think awareness is important. Engaging with schools is one approach that is happening now. The reason for this is because many of these children are growing up when some of those crops are no longer being utilized at the household level and they are losing out on the benefits but also on the awareness that these are nutritious foods.

We conducted the field days differently. We had a product that people can taste, people can feel, people can see, and if you have a
number of products, people have choices and they see that you can make so much more other than just showing grain at a field day.

The push towards behavior change and being able to communicate the nutritional benefits I think have been the game changer. I wish we had more money to invest in terms of behavior change, trying to get people to appreciate the products more and the many ways we can utilize them.

And for me personally, working from this angle – focusing on uptake and utilization - is very different from working as a crop scientist, where I looked at production as the answer to adoption. Focusing on communication and behavior change is a whole new approach.

Behavior change is important. People want convenience because of the change in lifestyle. Is there something that I can prepare quickly? It is important that people then understand the benefits over the years of diet based solutions, and understand, maybe instead of popping a tablet of folic acid you need to be ready to consume the right food. That is why we are approaching it from the angle of behavior change.

What do you think has changed since the launch of Smart Food?

I think one major change has been the private sector embracing processing of these traditional and Smart Foods.

The fact that we are now able to process a number of products from e.g. either finger millet or sorghum or even pigeon pea, this has attracted attention. Even the media has started focusing on the benefits of these Smart Foods.

Now that the private sector has taken them up, it doesn’t matter where you are from, if you like the taste, it’s there available for your convenience to pick it off the supermarket shelf. This has happened in less than ten years. Previously, if you wanted to consume these products, you had to be from an area where they are grown and you needed to know how to process them. So that has been a very big transition thanks to the private sector initiatives.

How is the overall response of Smart Food?

Smart Food in particular is a good name. We realise that people pay attention when we talk about Smart Food, even if we are talking about traditional crops.

Now that we are calling them Smart Food, people realize the benefits from these traditional crops and that there is more than what they knew before. In terms of the Smart Food initiative, I think we are likely to succeed in the coming years working with the processors, because product development and retaining the nutritional value, is going to be very important.
There are a number of countries, because of the prevalence of drought, are now given a lot of importance to the millet and sorghum cereals. Zimbabwe is one of them. And what is interesting about Zimbabwe is that we haven’t yet made the push to create processed products. So it is essentially consumed as a staple in the rural areas. Other countries that have great potential are for example Botswana and Namibia, where millets and sorghum are the only cereals that can survive well in the harsh conditions and they are the staples.

There are countries like Ethiopia where sorghum injera is now becoming very popular not just in the drylands, but also in the highlands. So in those areas it is much easier to popularize any other sorghum or millet product because people are already consuming there.

We have seen some tremendous changes both in awareness in the urban areas and also in the rural areas about the benefits of these Smart Foods. And we can foresee trends like in Kenya, where even the government has also started taking interest; and right now they have a legislation to make it compulsory to blend sorghum and millet with maize flour, which we think is a big, big development.

The beauty that our products offer is that it is natural; they don’t have to use chemicals to fortify. And we think that the knowledge that we are now providing both in terms of science from the background of our production to the nutrition information, is providing confidence that the food we are talking about is super healthy and should be part of the diet.

**What are the key learnings from leading some of these new Smart Food approaches?**

One thing I have learned in the last three years is that the way we had assumed that if we put this information out there, the processors will pick it up. The processors actually wanted a dialogue and they want assurance from the people who know what they are talking about. These are not the mainstream products; why would they invest in them? It hasn’t been new information but it is just that we have been able to have a dialog with them and they gain confidence that these products can be marketed. A lot of small scale enterprises are also taking up a number of products.

I think what we are lacking now and what we are hoping to achieve in next few years is to bring in the sort of high end products made from these crops that are then available to a larger number of people.

For now the processing in Africa has focused mainly on flour, not because it is complicated to make biscuits and other products but I think people are just not aware of the different ways you need to mix the ingredients to make these other products; and we are hoping that with our understanding and the way we are helping develop products, the food processors can fine tune this and commercialize more products. We can only pilot and say that this is the range and then let the industry know.

Marketing is important. We cannot just hope that somebody else will come and take on these Smart Foods and popularize them. We must be prepared to invest. This is the first stage to be able to move it to a higher level.

It is important to recognize that we can be very good at the science but we have to deliver a product that contributes to food and nutrition security. We want to see the smallholder famers achieve both food and nutrition security and of course improve their incomes along the way. When it comes to food and nutrition security and the approach, being able to take these products beyond the traditional consumption and putting more products on the table for people to consume means that
we are taking food and nutrition security to urban areas. By reaching out to consumers, we are pushing our boundary beyond the smallholder farmer where we always use to work.

My big message would be that if we care about the smallholder farmers in Africa, especially those in the marginal areas and you want to change their life and livelihoods - invest in Smart Foods like millets and sorghum because they will be able to have a consistent harvest whether in good or bad years, they have good nutrition and they can make money.

*We need to understand some of the softer skills that are around behavior change, around communication, marketing and how to package and deliver a product beyond just our science, because at the end of the day people are eating the product of the science; they are not eating the science.*

**About Dr. Moses Siambi**

Dr Moses Siambi is the Research Program Director - Eastern & Southern Africa and Country Representative, Kenya, and has been leading the Smart Food work in Kenya, designing new approaches to popularize and mainstream Smart Food like millet, sorghum and legumes. He has a PhD in Crop Physiology and Soil Fertility and Management from Iowa State University, USA. He has over three decades of experience in agricultural research related to crop production, soil fertility management, and simulation modelling of systems of major grain legumes and cereals in the less climatically favorable environments in Eastern and Southern Africa.

Interviewed by : Joanna Kane-Potaka, Assistant Director General, ICRISAT

**About SmartFood**

**Smart Food** is a global initiative that comprises food that is: Good for You - Good for the Planet - Good for the Farmer. Smart Food is one of the solutions that contributes to addressing some of the largest global issues in unison: poor diets (malnutrition to obesity); environmental issues (climate change, water scarcity and environmental degradation); and rural poverty. The Smart Food initiative aims to “mainstream” selected Smart Foods back as staples in developing countries. The approach is to drive consumer demand – but also encompass all segments to ensure the whole value chain is developed and connected back to farmers. The global initiative is driven by Africa and Asia and led by:

- Forum for Agricultural Research in Africa (**FARA**);
- Food Agriculture and Natural Resources Policy Analysis Network (in Africa) (**FANRPAN**);
- West and Central African Council for Agricultural Research and Development (**CORAF**);
- Asia-Pacific Association of Agricultural Research Institutions (**APAARI**); along with the International Crop Research Institute for Semi-Arid Tropics (**ICRISAT**).