Climate change is threatening food supplies and agricultural systems all over the world. Approximately two thirds of our food is produced by small-scale farmers globally, and these farmers are vulnerable to increasingly unpredictable weather systems.

As our population is set to reach ten billion by 2050, there is an increasing need for hardy crops resilient to climate change.

For many years, rice, wheat and maize have been global staples. This has often led to the crops being grown in inappropriate climates, negatively impacting the environment and adding to the many risks faced by farmers. Diversifying ingredients in the kitchen is one way chefs can directly create demand for interesting and flavourful foods. This creates opportunities for farmers to diversify what they grow. Chefs can literally cook up a storm of sustainability.
Changing the habits of what people eat is directly linked to changing the habits of what farmers grow. Enter sorghum: one of the world’s most unfussy and nutritious crops.

**Sorghum is a small grain with a big impact.**

Although particularly adapted to drought-prone areas that are too dry for maize, the diversity of this crop allows it to be grown in temperate and high-altitude conditions, too. Perhaps sorghum’s most impressive quality is its pure versatility. In addition to its culinary uses, its straw is often used for fencing and building; it is widely used to make gluten-free beer and animal fodder; and it is even grown as an energy crop, producing ethanol for biofuel.

In the kitchen, sorghum is a grain that ticks all the boxes. It is nutritionally dense (the bran layer has more antioxidants than blueberries) and an earthy, nutty flavour with a textured bite. Like many grains, sorghum is perfect for soaking up flavour in dressings or sauces, and so works as a salad base to mix with seasonal produce. The list of delicious sorghum products is long, ranging from sorghum flour and sorghum syrup to sorghum popcorn (popping the grain like corn maximises the toasted flavour and creates a crunchy texture). Another intriguing quality is its colour.

Depending on the particular variety and the region in which it is grown, sorghum’s colour varies from pale cream to yellow, red and even dark black, giving the milled flour extraordinary tints and character to add to doughs and breads and creating a buzz of excitement around a table of food. This is a grain that is made to be a part of a creative plate, and using it is one way to talk a little louder about your sustainability journey.

The Crop Trust is an international organisation based in Bonn, Germany with the unique global mission to ensure the conservation of crop diversity in genebanks, forever. The Crop Trust, the United Nations Food and Agriculture Organization (FAO) and other partners started the Food Forever Initiative in 2017 to raise awareness on the importance of safeguarding agrobiodiversity to build resilient food systems.
My story using sorghum

Ten years ago, I founded the Tiyya Foundation, an award-winning grassroots organisation that supports families of immigrants, refugees, and displaced Americans. Branching out from the foundation, we built a successful catering business, which grew into the restaurant Flavors from Afar, a social enterprise that employs former refugee chefs in Orange County and Los Angeles.

The catering business, which started in 2018, was set up to sustain our youth and family programmes at the Tiyya Foundation. We realised that a lot of people in our area do not have access or an understanding of international cuisine, but are curious and fascinated by food from all over the world. We had so much raw talent within our community, and there was a clear need for it to spread beyond, too. After a lot of hard work and learning, myself and my business partner Christian Davis decided to open our location in Little Ethiopia, Los Angeles. Unfortunately, our opening coincided with the outbreak of Covid-19, so we had to shift to a take-out service instead, which has been incredibly challenging. Our offering is still delicious food from all across the world, sent out with love!

The ethos of our food is simple: food exploration stimulates social inclusion. As a child growing up in a refugee household, I knew that as my mum was learning English and working entry-level jobs, she was always strongly skilled in the kitchen. The kitchen was a place where not only was food prepared but families bonded and generations gathered. I realised that these skills were sharable in our new neighbourhood, where plenty of people had this transferable knowledge, to cook and nourish the community. This is the realisation Flavors from Afar was born from, to provide employment, expose diners to diverse cuisines and ingredients, and provide meaningful work for refugees.

For all of us, ingredients are much more than just a plate of food. A plate of food communicates histories, homes, sometimes pain and sometimes joy. Bringing these ingredients from homelands into dishes in the restaurant makes our chefs happy and joyful, and gives them the feeling of being part of a new community. It is important to highlight these resilient crops wherever we can. Often the areas we as refugees come from are hard-hit by unpredictable weather systems, and so farmers need to grow food that is tough. Over time, these foods have become a part of a culture to the point where it is easy to forget that they are so important for food security, too.

One of our chefs, Chef Menal, created a dish that was particularly enjoyed by our local media. It is really beautiful and whenever she cooks it in the restaurant, diners love it. This is how she explains her choice to use sorghum: ‘my lamb okra dish, which is known as bamya back home, is one of Eritrea’s most popular dishes and also found in the Middle East. Our recipe includes cardamom pods, cloves, and various spices. What makes the dish special is the sorghum we use. Sorghum is high in antioxidants and very nutritious. I enjoy the texture and customers enjoy the flavours!’

CALL FOR ACTION!

I think people are interested in international foods and dishes. If we can help stimulate this interest on our menus, we can create a plate of food that is not only delicious but also educational and sustainable.
My story using sorghum

Throughout my career, I have worked both nationally and internationally to champion Kenyan cuisine and ingredients. From teaching the basics of cooking, highlighting the need for smallholder farmers to adapt to climate impacts, to protecting food security, my work is rooted in sustainability. I try to act as a loudspeaker for biodiverse ingredients.

Sorghum is an amazing ingredient! It grows with little water and is readily available, anytime and anywhere in my country. Yet, we do not incorporate it in the main part of our diet. Culturally I believe people have not yet developed the love for it, they do not know the nutritional value and resilience it offers farmers.

One part of the challenge is that for many Kenyans, a maize-based porridge called ugali already makes up a large part of the diet. Maize, however, is a water-thirsty crop and vulnerable to climate change. Once maize becomes scarce in our country, sorghum will become even more important. I believe bringing sorghum to the main stage will happen in slow steps. Currently, farmers who are working with sorghum are exporting most of it and using some as animal feed but not necessarily cooking with it. It all goes back to education: teaching people how versatile and easy this grain is to cook with and how nutritionally dense it is. Essentially, we need to change the view people have of this important crop and bring it back to the plate in the most delicious ways we can.

I have a fond and clear memory of eating sorghum-flour bread that my grandmother used to bake. With a nutty flavour, the flatbread was cooked over hot coals. Crispy and charred when done, she would brush it with a little honey or ghee, or both. It was just delicious!

CALL FOR ACTION!

The staples that were once part of our diets need to come back. Reviving them is my goal. We need to incorporate a rockstar element to the ingredients and make them fashionable for the youth. I think sorghum needs support and a lot of education around it. For chefs, it is important to experiment and substitute it anywhere you would use another grain. Sorghum cooks like any other grain, so try it in some familiar recipes – the sky’s the limit! Whether used for breads or desserts, the flavour of sorghum is unique and brings something exciting to any dish. It tastes healthy with lots of mineral flavours, and has that organic, straight from the farm kind of flavour.
Sorghum is a hugely diverse crop in both plant species and food uses. Along with the many different varieties of sorghum come different recipes. The colouring of sorghum is also unique – it comes in shades from pale cream-white to reds, browns and black grains. These colours often dictate how sorghum is used traditionally in different dishes. In larger-scale food production this tends to be a challenge because the colour is caused by antioxidants, which can be unpredictable. Some bakers are not so keen to end up with pink or grey baguettes after using a portion of sorghum flour! To chefs, however, this could be an exciting factor and a way to produce a very unique, artisanal product.

In terms of flavour, the biodiversity of sorghum available is intriguing because no sorghum tastes like another. They all have their terroir, so you might not have predictability, but you will certainly have the true, local flavours of a particular strain of sorghum to work with. It is very encouraging to see grains like sorghum on local menus where it is grown. In East Africa it is often incorporated into the porridge-like *ugali*, and called brown *ugali* on menus because of its colour.

Sorghum is tough and will grow where most other grains – in particular rice and maize – will not. Given the large variety of types, sorghum is a very important crop for small-scale farmers living in arid areas or dealing with low-quality soil. When using sorghum grains in the kitchen, it is therefore important to remember that you are supporting producers who might not have many other options.
The genebank at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Hyderabad, India holds more than 41,000 samples of sorghum.

The Svalbard Global Seed Vault holds more than 37,000 accessions of sorghum.

The name ‘sorghum’ is actually a misnomer - it comes from the Latin ‘syrucum' meaning ‘grain of Syria'.