

# Opinion&Analysis

## ■ QUOTE OF THE DAY

**I believe life is a series of near misses. A lot of what we ascribe to luck is not luck at all. It is seizing the day and accepting responsibility for your future.** – Howard Schultz, American businessman

# Biofortification a bowl of hope for Africa's malnourished

## NUTRITIONAL ADVANCE

Busani Bafana

**M**ANY people who live in Lira district in northern Uganda consider Perpetua Okao a farmer and a life saver – and it is easy to know why. Her neighbour's son was malnourished and often sickly. But after feeding him a diet of vitamin A-rich orange-fleshed sweet potato, the boy's health improved dramatically in just a few days. Okao is among some 126 000 Ugandan farmers growing the orange-fleshed sweet potato, a new variety of potato enriched with vitamin A through biofortification.

Biofortification is a process by which crops are bred in a way that increases their nutritional value. The idea behind biofortification is to breed nutritious plants, a process that experts consider much cheaper than adding micronutrients to already processed foods. It is a smart method to fight malnutrition, say agriculturists and nutritionists. The Food and Agricultural Organisation (FAO), a UN food agency, considers malnutrition-caused by a lack of essential micronutrients such as iodine, iron, zinc and vitamin A in diets a threat to millions of African lives.

### Uganda's example

Biofortification can mitigate the effects of vitamin A deficiency in people, reports HarvestPlus, a research centre committed to fighting global hunger. Microsoft co-founder and philanthropist Bill Gates provides financial support to HarvestPlus.

The organisation further notes that

vitamin A deficiency is a serious health problem in more than 90 countries but more acutely in Africa and Asia. The deficiency causes preventable blindness in children and increases the risk of disease and death from severe infections. It also causes night blindness in women and increases the risk of maternal mortality.

In Africa, HarvestPlus estimates that 42 percent of children under the age of five and women between 15 and 49 years of age suffer from vitamin A deficiency. Uganda, which is severely affected, is extensively producing the orange-fleshed sweet potato variety rich in beta-carotene, an organic compound that converts to vitamin A in the human body.

In 2012, HarvestPlus and the US Agency for International Development (USAID) launched a "Feed the Future" programme and introduced the new sweet potato variety. Okao, along with the Ugandan government, USAID and HarvestPlus, provided enriched sweet potato plants to breed with the local white or yellow variety to more than 10 000 farming households.

The results so far indicate that 60 percent of the households replaced a third of the traditional sweet potato varieties. Thanks to the new sweet potato variety, vitamin A levels have increased among Ugandan children, making them healthier than before, according to HarvestPlus.

### Africa confronts challenge

But malnutrition is not just a Ugandan problem; it is widespread in Africa, says the FAO. The agency estimates that 30 percent of Africa's children are malnourished and stunted, have reduced learning and earning potential, and are vulnerable to infections and early death.

The quest for more nutritious foods for Africans was the subject of a three-day conference on biofortification last April in Kigali, Rwanda. At that conference, more than 275 top government, business and civil society leaders discussed ways to start a continent-wide adoption of

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biofortification.

Akinwumi Adesina, Nigeria's agriculture minister, wants his country to become Africa's lead producer of bio-fortified foods. Under its agriculture-for-health programme, Africa's most populous country wants to develop vitamin A-enriched cassava varieties to address micronutrient malnutrition.

Nigeria has incorporated pro-vitamin A cassava and orange-fleshed sweet potatoes in its Growth Enhancement Support Scheme, whose goal is to reach 2.5 million farming households.

Like Nigeria, Zambia has introduced pro-vitamin A cassava and maize. In Rwanda, about half a million farmers are growing new varieties of beans rich in iron. Farmers using these varieties are harvesting more yields per hectare and earning more income selling the surplus.

Martha Birungi, a farmer in Rwanda's eastern district, is currently growing nutritious and high-yield iron-rich beans and earning a higher income than before. "The new varieties of beans are big in size and when you cook them they expand and are very delicious. They have higher iron content when compared to the indigenous ones we were used to," Birungi said.

She added that the enriched-iron beans provided more than three tons per hectare compared with less than a ton from indigenous bean varieties.



**A woman harvests beans high in iron in Rwanda. Farmers using this variety are harvesting more yields per hectare and selling the surplus.**

PHOTO: HARVESTPLUS

### Scaling up efforts

HarvestPlus and partners plan to develop more varieties of crops that will provide adequate vitamin A, zinc or iron to more than 2 billion people worldwide. "We're just beginning to scratch the surface... We want to increase access to these nutritious crops as quickly as possible," Howarth Bouis, the director of HarvestPlus, said.

He added: "I think we have had unequivocal success in Africa with the orange flesh sweet potato."

Yassir Islam, the organisation's spokesman, told Africa Renewal that they had scaled up interventions in about 15 African countries, including in the Democratic Republic of the Congo (DRC), Kenya, Mozambique, Rwanda, Uganda and Zambia, with most of the work carried out by the International Potato Centre, a Peru-based research centre.

Islam said Rwanda was the first target

country because beans were one of its most important staple foods. HarvestPlus moved on to Uganda and the eastern DRC, even as they planned further interventions in more African countries.

The World Food Programme (WFP), a UN agency, has noticed the success stories in the malnutrition fight in Uganda, the DRC and Rwanda. The WFP now buys more than \$1 billion (R11bn) worth of food each year from developing countries, and has 77 tons of iron-fortified beans for its food support programmes, according to Ken Davies, the WFP's global co-ordinator.

"The potential for introducing micronutrient and biofortified foods into the WFP's food basket is immense because small-holder farmers in many countries are challenged by micronutrient deficiencies," noted Davies, who added that there was still a long way to go in the fight against malnutrition.

### Accepted reality

Jeff Waage, the technical adviser at the Global Panel on Agriculture and Food Systems, an expert group tackling challenges in food and nutrition security, said the benefits of biofortification in crops were obvious. What remained was unlocking the potential for biofortification to engender better agriculture and food policies that promoted nutrition.

The World Bank's vice-president Rachel Kyte concurs and highlights the bank's commitment to boosting production of bio-fortified crops. Biofortification, Kyte said, provided a pathway to nutritional security for Africa's food system. She said scientific research on the possibilities of biofortification was no longer up for debate; it was an accepted reality.

Concerned about malnutrition rates in the region, African policymakers and foreign partners were beginning to appreciate the value of the science behind biofortification, said Robin Buruchara, the regional director for Africa at the International Centre for Tropical Agriculture, which works with 30 countries in east and southern Africa. "We are flipping the conversation from: 'Is it possible, can we do it, is it safe, do we get greater yield?' to 'How do we get this into the bowl and hands of children across the continent in Africa.'"

With increasing foreign direct investment flows in Africa and a growing gross domestic product driven in part by a mining boom and agricultural growth, filling empty stomachs in Africa is urgent, experts say. Biofortification is an area in which Africa is taking the lead.

"This [biofortification] is one of the greatest innovations in the world and it is being driven by Africans from Africa and it will be Africa in the forefront," Kyte told Africa Renewal. "This is not Africa following the rest of the world, this is Africa saying we are going first."

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# Trade paints over South-East Asian simmering tensions

## CHINA'S ECONOMIC TIES

Volker Stanzel

**T**HE WORLD debate may be pre-occupied with "hot" crises in the Middle East, Isis, Eastern Ukraine and fighting Ebola. Yet tensions in East Asia have not subsided. Even though the region has seen quite a remarkable level of peace ever since China's war with Vietnam in 1978/79, there is a new uncertainty.

The major cause of past progress was the security guarantee provided by the US, coupled with China's intent to "rise" peacefully. Another key stabilising factor has been the gradual economic integration among the countries of South-East Asia and in East Asia. Together, this has brought slow, but continuous accommodation of one another's political interests and objectives across Asia.

If there is talk now of rising tensions in East Asia and a growing apprehensiveness, then usually it is China which is seen as responsible. More precisely put, the tensions are seen as a consequence of China's rise.

As things stand, it appears that whenever a neighbour of China acts in a way that may be interpreted in Beijing as an even minor provocation of China, China

## the Globalist

will assert itself robustly and change the overall situation to its advantage.

To give but one example, when the Philippine navy in May 2013 tried to expel Chinese fishermen from the Scarborough Shoal reef, 130 nautical miles from the Philippine coast (and 550 such miles from the Chinese coast), the Chinese navy intervened. Today, the reef is de facto in Chinese hands.

It seems that the way in which China's leaders regard the future role of their country in the region and the world has changed.

Both the "peaceful rise" rhetoric and statements made only ten years ago to express the intention that China's rise will remain compatible with the interests of its partners seem to have made room for a new way of thinking.

This issue loomed large again in the background of the recently concluded Apec Summit. For all the official focus on economic co-operation, geopolitical and strategic issues always lurk large, even though they are not on the "official" agenda.

While this is no surprise to Asians, what may surprise them is how much this is also a matter of global interest. The rea-



**Shipping containers sit stacked among gantry cranes at the Kwai Tsing Container Terminals in Hong Kong this week. China has intense economic relationships with countries all over the globe.**

PHOTO: BLOOMBERG

son for that is twofold: First, looking ahead, Asia may eventually become the most important part of the global economy.

And second, China already has intense economic relationships all over the globe, including in Europe and the US. That's why other nations outside of Asia are greatly concerned if China's relationship with the rest of the continent remains unsettled.

One key question at this juncture is what the other countries in Asia can do to keep their relationship with the Chinese on a constructive footing and to do their part in securing the future prosperity of Asia. It is here that the European example and the importance of relying on trade relations as a key confidence-building measure may be of use. For real progress to be made, countries have to be able and willing

Far beyond the 'China factor' in Asia quite a lot of nations across Asia have quite a loaded history when it comes to their neighbours.

to jump over the shadows of the past. That is no easy feat.

However, strengthened trade relations have the advantage of incentivising countries in that critical regard. They offer up

meaningful progress in people's daily lives through greater economic integration across the entire region.

At a time when progress towards freer global trade at the multilateral level move, at best, at a glacial pace, bilateral and regional trade deals assume a bigger importance. And despite general concerns that this may lead to a fracturing of the global trade landscape, certainly with regard to Asia such agreements – whether bilateral, trilateral or multilateral – could turn into true progress.

Far beyond the "China factor" in Asia, quite a lot of nations across Asia have quite a loaded history when it comes to some of their neighbours. Trade agreements can be a useful lever to overcome such shadows of the past.

One particularly inspiring example in

this regard – and one that ought to impart courage to other Asian countries with similarly fraught relationships to take similar steps – concerns the change in relations between South Korea and Vietnam. Fifty years ago, South Korean troops fought in Vietnam alongside the Americans, all in the name of checking the Iron Curtain.

In spite of that painful past, South Korea and Vietnam are now set to ink an FTA of their own by year's end. Constructive steps like that show the way forward for all of Asia.

Volker Stanzel is former German ambassador to Japan and China, and former political director of the German Foreign Office. Copyright The Globalist, where this article first appeared. Follow The Globalist on Twitter: @theGlobalist

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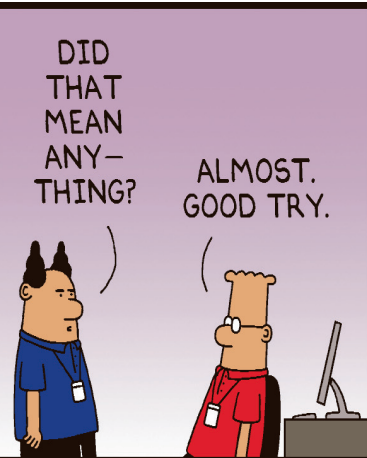
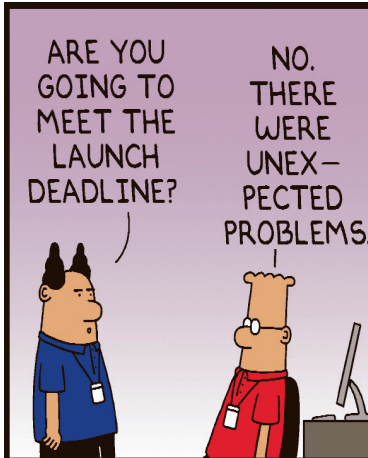
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## ■ DILBERT



## ■ DIARY

### Playing team sport is good for salary as well as health

PLAYING sport once a fortnight can boost annual earnings by almost £11 000 (R189 128) – the equivalent of more than £500 000 over the course of a career, a new study has found.

Those involved in regular organised sports could boost their annual salary significantly due to the skills they gained from participating in group activities, experts said.

The research, which was commissioned by property firm CBRE and consulted 2 000 workers, found

that employees who did not take part in organised sports earned just under £24 000 on average.

In contrast, those who engaged in sporting activities earned £11 000 more than the average wage, with triathletes topping the list of salary earners with an average pay of £44 375.

Cyclists, cricketers and rowers also fared well, while those who engaged in football, rugby, lacrosse, squash and netball ranked further down the pay scale.

The study, conducted by

Opinion Matters, found that those who had taken part in organised sport between two and four times a month since childhood earned on average just under £35 000.

Over an average 47-year career, researchers found that the difference between playing regular organised sports and not taking part amounted to about £522 000.

The benefits gained in the workplace included good communication skills, better teamwork and improved confidence, the study found. – Daily Mail