

CBOT Wheat . US\$10c/bu (Mar 13) ▼ ASX Wheat \$A288.3/t (Mar 13) ▼

Cropping

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Unlocking secrets of African food security

By GREGOR HEARD

PLANT breeders working in Africa are striving to improve food security, but say they confront a range of issues not faced by those developing varieties in the Western world.

Plant scientist Tsedeke Abate, based in Nairobi, Kenya, is working on a project developing drought-tolerant maize for the different climatic zones of the continent.

Dr Abate, who works for CIMMYT, the world cereal breeder, was in Australia for the recent Food Security in Africa forum, an intergovernmental briefing involving the Australian Government and representatives from various African nations, along with plant scientists from Australia and Africa.

He said he had to work to develop varieties for vastly different climatic regions.

"Africa is a vast place, but we have it largely split up into three sub-regions: southern Africa, which includes Mozambique, Angola and Zambia; eastern Africa, made up of Kenya, Ethiopia and Tanzania; and west Africa, including Benin, Ghana, Mali and Nigeria," Dr Abate said.

The project was focused on 13 countries in particular, but there would be overflow into other regions, he said.

"A country like Rwanda is not directly involved, but it will benefit from the results," he said.

The project needed to do more than simply provide new varieties.

"The first part is obviously developing the varieties, but then the extension part, the product delivery, is really important in Africa, where farmers can be in very remote areas," he said.

Simple issues such as ensuring the seed the farmers received was still in sound condition were critical.

"Transport in Africa can be difficult, so sometimes the seed is compromised by the time the farmer gets it."



■ A farmer in Ethiopia prepares his paddocks the traditional way, using an ox-drawn plough.

Dr Abate said there was massive scope for an increase in African grain production.

"There are 200 million hectares of crops planted each year in Africa, with the largest crop 30Mha of corn," he said.

Wheat and barley were grown in drier environments, such as his nation of birth, Ethiopia, while traditional subsistence crops such as sorghum and millet and tuber crops such as cassava, yams and taro were also grown on a large scale.

African researchers were trying to get small-scale croppers to grow more legumes, not only for agronomic benefits, but from a dietary and economic perspective.

"Beans and peanuts are the major pulse crops, and they are very important in our view," he said.

"Not only do they provide nitrogen for the soil, they are a source of cheap protein for the producers and if there are any more than required, they are a very marketable product."

Dr Abate said the emphasis for crops in Africa, where farm-

ers often did not have access to synthetic fertilisers or herbicides, was to breed for toughness.

"There may be other lines that yield better with a fungicide, but as many growers don't have access to fungicides, instead we want to breed corn that is resistant to mosaic streak virus and the blights," he said.

"We don't release varieties unless they compete well against weeds and have good disease resistance."

Another factor considered in the breeding process was heat tolerance.

"Many of our areas are forecast to be affected by climate change, so we want to develop heat-tolerant varieties."

Dr Abate said his breeding team worked with government extension agencies, non-government organisations and seed producers to get the varieties out to growers.

He said many farmers had traditionally grown millet and sorghum, which were more reliable in a dry finish than corn, but with better corn genetics

available there was a swing towards it, particularly as its potential yields were much higher and its food products generally more palatable.

Unlike in Western countries, where farmers were happy to pay extra for hybrid seed with extra vigour, he said the focus was on open pollinated lines, where farmers could store their own seed for use the following year.

Although grain yield is the major goal, farmers also wanted biomass.

"A lot of farmers run mixed cropping and livestock operations, so having crops with some biomass for stock to graze is valuable," he said.

He said the breeders kept a range of lines in production for use in the different regions.

"Some of the Sahel areas of Nigeria and Ghana are very marginal and we need tough varieties there, but you have some very fertile land in Uganda, Kenya and Tanzania and we also need to ensure we optimise production in these regions."

STALKS AND SCREENINGS

With GREGOR HEARD



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Harvest receivals

GRAINCORP has received more than nine million tonnes into its storage network, Viterro more than 5Mt and CBH just shy of 7.8Mt, according to harvest reports from the bulk handlers.

In NSW, harvest is virtually complete, while the Victorian harvest is 60pc complete and the focus is on the Central Highlands and Western District.

In SA, the lower South East is at its busiest, while in WA, the major receivals were in the Albany zone, with significant tonnages still to come from the Esperance zone, which was held up by rain last week.

Inoculant app

BECKER Underwood has released an application developed specifically for agronomists, retailers and farmers to calculate legume inoculant needs.

The Becker Underwood Inoculant Calculator identifies the right strain of inoculant for each legume and calculates exact ordering requirements by the bag or carton for three methods of treatment: seed treatment, granular in furrow and furrow soil injection.

The calculator has been specifically developed for the iPhone, iPad, Android tablets and Android and Windows smart phones.

It is also available in a desktop format for downloading to a PC or Mac.

Glyphosate resistance

RESEARCHERS say 23 weed species are now at high risk of developing glyphosate resistance, including several major grass weeds and damaging environmental weeds such as fireweed and parthenium weed.

Australian Glyphosate Sustainability Working Group executive officer Andrew Storrie says most of the weeds tested are found throughout Australia and one in 10 weed species have a high risk of glyphosate resistance.

"While resistance to glyphosate in cropping has been making headlines around the world, this study suggests it could become a problem in any Australian weed management situation," he said.

Neutral Pacific

THE BUREAU of Meteorology (BOM) reports conditions in the tropical Pacific, a key driver for Australian weather, remain neutral.

There has been no trend towards the development of an El Nino or La Nina.

Falls are predicted in the southern oscillation index (SOI) as a result of Cyclone Evan, but climatologists say fluctuations caused by tropical cyclones are common but do not always reflect a trend.

NSW opposition

NSW Farmers has weighed into the test weights debate, voicing strong opposition to Grain Trade Australia's proposed increase in the wheat test weight standard from 74 to 76 kilograms per hectolitre (100 litres).

NSW Farmers grain committee chair Mark Hoskinson has criticised the proposal for failing to adequately consider the impact on farm revenues.

"We understand the change would see the number of wheat deliveries in NSW rejected from higher milling grades due to failing test weights rise by up to 8pc," he said. "Farmers would lose as much as \$50 per tonne on prices paid today."

No bulk cargo from the eastern States had failed to meet international standards for test weight, he said.

Chinese record

CHINA is likely to ease the pressure on coarse grain supplies, with Chinese officials flagging a potential record crop of 208 million tonnes for 2012-13.

This is up from China's production of 192.8Mt in 2011-12.

New pool provides fixed minimum price

GRAINCORP is hoping its new pool product, PriceGuard Plus will attract a new kind of pool participant.

GrainCorp pools manager Stuart Clarke said PriceGuard Plus was unique in Australia.

"To my knowledge there's nothing like it in the Australian industry," he said. "It's designed not only for people who frequently use pools, but for those who are more focused on cash sales."

The premise of PriceGuard Plus is a large proponent of the pool is paid upfront, or allocated for definite payment at a grower-nominated date.

"It can provide the cash flow and certainty of a cash sale, but you also have some exposure to the market, so if there are further rises in price you will benefit from that," Mr Clarke said.

He said GrainCorp had devised PriceGuard Plus after extensive

consultation with growers regarding their needs, with a major attraction being the fact that a minimum price is known and growers are not exposed to fluctuating returns and a final result markedly lower than the estimate.

He said GrainCorp was happy to take on the added risk of having more unsold grain on its books.

"We are comfortable managing risk," he said. "That's what we do and we do it well."

"We're moving away from the estimated pool return (EPR) model of showing prices."

He conceded it may be difficult to win tonnage initially when other pool operators were advertising potentially inflated EPRs, but he said he thought growers now were scrutinising the terms and conditions of pools.

"We are open and transparent with our

pools, and our actual returns are going to stand up, so in the long run it's going to attract customers," Mr Clarke said.

Along with PriceGuard Plus, GrainCorp was again offering its pre-harvest optimiser pool, which had already closed, he said.

"This is a 100pc segregated pool, which offers a maximum \$25/t washout fee. "It's designed at capturing early markets and adding value there."

Other innovations in GrainCorp pools included a switch to 10-month marketing with its traditional pool products to allow pools to be wound up by October, rather than December.

"This allows people to compare actual returns from last year when making their marketing decisions for the crop in the ground – by December it is too late," he said.

- GREGOR HEARD