

Making News

CIMMYT new partner: A new international partnership, which aims to increase wheat yields by 50 per cent by 2034, was launched at the Borlaug Summit on Wheat for Food Security in Mexico last week.

The International Wheat Yield Partnership (IWYP) brings together research funders, international aid agencies, foundations, companies and wheat research organisations.

CIMMYT Global Wheat Program director Hans Braun, said research focused on yield was critical for providing calories and protein to the 4.5 billion people who depended on wheat for their sustenance.

"Wherever breakthroughs are found they'll be bred as rapidly as possible into elite, commercially viable seed by CIMMYT or other public sector breeding programs and also by the private sector," he said.

"The potential of these breakthroughs will then be evaluated in relevant environments across the world and continually developed until those capable of achieving the desired yield gains can be released as finished varieties."

IWYP board of founding partners chairman Steve Visscher said the world's population was estimated to reach 9.6 billion by 2050 and wheat production would play a crucial role in food security and the global economy.

Video ode to Norman Borlaug: A quirky music video merging the words of Norman Borlaug with a catchy melody has been released to commemorate what would have been the wheat breeding icon's 100th birthday.

The video was compiled by US-based plant science communicator Karl Haro von Mogel who runs the Biology Fortified website and the International Center for Maize and Wheat Improvement (CIMMYT).

Mr Haro von Mogel said Dr Borlaug was a legendary CIMMYT scientist who developed high-yielding, semi-dwarf wheat that started the Green Revolution, which is credited with saving more than one billion people from starvation.

"His message of increasing food production and the importance of using science in this effort are still important today," Mr Haro von Mogel said.

"We hope this video will help inspire people to learn about the challenges we face with the future of food production and distribution."

The video features Dr Borlaug delivering some of his signature phrases, and passion for using science to make the world a less hungry place, to music.

It combines archival footage of Dr Borlaug and an inspiring soundtrack.

Dr Borlaug was awarded the Nobel Peace Prize in 1970 in recognition of his contributions to world peace through an increased food supply.

His wheat varieties were grown in Mexico, Turkey, India and Pakistan, boosting harvests, avoiding famine in South Asia and sparking widespread adoption of improved crop varieties and farming practices.

He is one of only six people to have won the Presidential Medal of Freedom, the Congressional Gold Medal, and the Nobel Peace Prize.

■ Visit www.theland.com.au to view the YouTube video.



CIMMYT Board of Trustees chairman and South Australian farmer Andrew Barr in a wheat field at the Norman E. Borlaug Experimental Station, Obregon, Mexico, during the Borlaug Summit.

Wheat's hallowed ground

By NEIL LYON

Industry gathers in memory of leading breeder

THE world's leading wheat scientists gathered in Mexico last week for a special Borlaug Summit marking the 100th birthday anniversary of renowned international wheat breeder, Norman Borlaug.

Dr Borlaug, who died in 2009, spent much of his working life with the international wheat and maize research organisation, CIMMYT, in Mexico and was credited with developing wheat varieties that saved Mexico, India and Pakistan from famine in the mid-1900s.

He was awarded the Nobel Peace Prize in 1970 and became popularly known as the Father of the Green Revolution.

The week-long program of conference sessions and field visits was held at Obregon in the Yaqui Valley in Mexico's north-west where Dr Borlaug conducted much of his work.

The Yaqui Valley is one of Mexico's key breadbasket regions built around a 220,000-hectare, wheat-based irrigation area fringed by desert.

It is also the site of a large field station, the Norman E. Borlaug Experimental Station, where CIMMYT scientists develop new varieties and farming systems, primarily for the developing world.

Australia has had long-standing links with CIMMYT through extensive levels of funding and the involvement of a large contingent of Australian agricultural scientists across many decades.

The majority of wheat varieties grown in Australia have been derived from the CIMMYT program.

Australian farming.

"Of all the places around the world where genetic resources have contributed to Australian wheat breeding, CIMMYT has by far the biggest influence," he said.

Dr Barr said the organisation was continuing to expand on the work conducted in the 1970s and 1980s by Dr Borlaug who developed a "shuttle breeding" program utilising high altitude and low country sites that gave researchers in Mexico the opportunity to grow two generations of crop in a year, vastly speeding up research.

"In more recent times CIMMYT has expanded that shuttle breeding program that was previously just in Mexico to include places in other parts of the world that contribute different things now to the genetic base in CIMMYT," he said.

"The change in the past 10 years has been the incorporation of Njoro in Kenya near where the new stem rust race, Ug99, occurred. It is a very virulent rust and knocked over 79 per cent of the world's wheat varieties.

"Australia hasn't had stem rust Ug99 yet, and we don't have some of the stripe rust races that are in Kenya either.

"But Australian breeders now have had a chance to see how their material would fare against a formidable opponent. It is pre-emptive action."

Dr Barr said CIMMYT offered Australian researchers the unique opportunity to access 600 trial sites throughout the world.

"So, if we want to breed for resistance for a particular disease

What is CIMMYT?

- Spanish acronym for The International Maize and Wheat Improvement Centre, based in Mexico
- One of 16 internationally-funded research centres around the world supported by the Consultative Group on International Agricultural Research
- Holds the largest collection of wheat varieties in the world
- The majority of Australian wheat varieties originated from CIMMYT
- At last week's Borlaug Summit, CIMMYT was presented with the World Food Prize for its work in improving the quality, quantity and availability of food in the world

we can identify the most reliable sites in the world," he said.

"We have done that for stem rust, stripe rust, leaf rust, fusarium, septoria, heat stress, drought stress, waterlogging, acid soils – all the things that affect the way a wheat plant performs."

Dr Barr said the biggest challenge facing Australian wheat producers and breeders was "always rust", followed closely by the need to keep increasing yield.

He said there was debate among scientists at the summit about whether wheat yields had plateaued and whether there was any realistic chance of further yield increases, but figures showed the global rate of yield gain was being maintained at 1pc.

■ Neil Lyon travelled to Mexico with the assistance of the Crawford Fund and the Department of Foreign Affairs and Trade's Council on Australia Latin America Relations.



Who was Norman Borlaug?

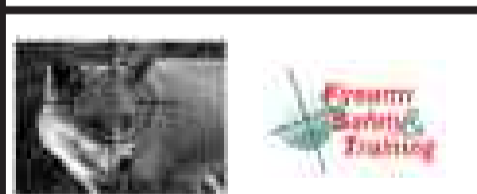
- Born in Iowa, USA in 1914
- Developed high yielding, disease resistant wheat varieties and farming practices.
- Introduced dwarf wheat that halved losses, stalk and panicle, because self-sufficient in wheat production.
- Credited with saving as many as 1 billion people from starvation.
- Recognised as the Father of the Green Revolution.
- Won Nobel Peace Prize in 1970
- Died in 2009 aged 95.
- This statue (left) was erected in his memory at the Norman E. Borlaug Experimental Station, Obregon, Mexico.

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