

Delivering the vision

Competitive grants

The core of IWYP's discovery program will be delivered through peer-reviewed competitive grants. These will support innovative research and discovery projects in the six key research areas.

The IWYP Research and Breeding Hub

IWYP will benefit from access to a research breeding Hub that can be used by the wheat research and breeding communities. Run by CIMMYT, the Hub will use extensive crossing and trialing, state-of-the-art marker-assisted breeding and bioinformatics to develop elite wheat lines from new germplasm arising from IWYP projects and aligned programs.

In-kind contributions

Existing researchers, funders and others working to improve wheat yield will be able to become part of IWYP and access its research facilities and contribute to IWYP research programs.

Working in partnership

IWYP is committed to working in partnership with other programs across the globe such as WISP, WHEAT, Triticeae CAP, Canadian Wheat Alliance, Breedwheat and the Wheat Initiative. By working together and sharing results and outputs, impacts can be maximized.

IWYP will also work closely with the private sector and establish a range of mechanisms to enable both small and large companies to be part of the effort.

How can you be involved?

IWYP is independently managed by a Program Director. Overall Program information and updates including research activities and funding as well as other announcements will be published on the IWYP website.

For more information, or if you would like to help IWYP deliver the vision to improve wheat yield, please contact IWYP through iwypsecretariat@iwyp.org or the web at www.iwyp.org



CIMMYT

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**International
Wheat Yield
Partnership**

Research to Deliver Wheat for the Future

The challenge

Wheat is one of the world's most important crops, providing 20% of all calories consumed by people worldwide. It is the leading source of vegetable protein for humans and is also a significant source of food for animals.

With the world's population projected to reach over nine billion by 2050, wheat production will have a crucial bearing on food security and the global economy in the coming decades.

The World Bank estimates that global wheat production will have to increase by 60% between 2000 and 2050 to meet rising demand. However, the rate of wheat yield increases in developed nations has slowed since 1990. There have been politically destabilizing wheat price spikes as seen in 2007-8 and 2011 and more are likely if wheat production falls short of demand.

The solution

Public and private funders from across the globe are uniting to address the challenge of increasing wheat yield. The International Wheat Yield Partnership (IWYP) will stimulate research and its application through a combined approach that puts together the best scientists to work towards the common goal of raising the genetic wheat yield potential by 50% within 20 years.

IWYP plans to invest around \$100 million within the first five years. To date it has commitments of \$65 million from around the world including from major donors in Europe, North America, Latin America and Australia.

IWYP is working closely with existing wheat research activities, to ensure that the scientific community works together to improve wheat. For instance, IWYP will deliver one of the Wheat Initiative's key aims.

IWYP science

The focus of IWYP's funding will be directed towards increasing the genetic yield potential of wheat in environments all over the world.

This will be achieved by improving wheat's photosynthesis and making sure that the captured carbon ends up in the grain of wheat.

To deliver increased wheat yield, a combination of fundamental bioscience and applied research will be needed. Together a program of research will develop new knowledge, models and wheat lines that can be used to improve wheat.

IWYP will target six key research areas:

- 1 Uncovering genetic variation that creates the differences in carbon fixation and partitioning between wheat lines
- 2 Harnessing genes from wheat and other species through genetic modification to boost carbon capture and fixation to increase biomass production
- 3 Optimizing wheat development and growth to improve grain yields and harvest index
- 4 Developing elite wheat lines for use in other breeding programs
- 5 Building on discoveries in wheat relatives and other species
- 6 Fostering breakthrough technology development that can transform wheat breeding

