CIMMYT

Delivering the vision

The core of IWYP's program will be delivered through "Translational Hubs". These deliver outputs to breeders around the world, public and private

The IWYP Research and Breeding Hubs

IWYP benefits from access to research breeding Hubs. Run by CIMMYT, Mexico, Kansas State University in USA and the National Institute of Botany in the UK the Hubs use extensive crossing and trialing, state-of-the-art marker-assisted breeding and bioinformatics to develop elite wheat lines from new germplasm arising from projects and programs around the world.

In-kind contributions

Existing researchers, funders and others working to improve wheat yield can become part of IWYP and access its research facilities and contribute to IWYP research programs, including those of the Hubs.

Working in partnership

IWYP is committed to working in partnership with other programs across the globe. By working together and sharing results and outputs, impacts can be maximized.

IWYP works closely with the private sector via 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 are 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*

IWYP | International Wheat Yield Partnership

Research to Deliver Wheat for the Future

All images istockphoto.com unless stated otherwise.

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) stimulates research and its applications to work towards the common goal of raising the genetic wheat yield potential by 50% within 20 years.

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

IWYP science

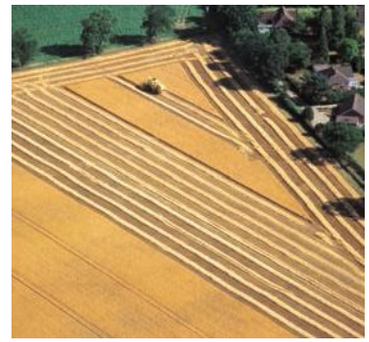
The focus of IWYP's funding will be directed towards increasing the genetic yield potential of wheat in environments all over the world in the contexts of climate changes.

This will be achieved by improving many of wheat's processes that limit grain production.

To deliver increased wheat yield, a combination of fundamental bioscience and applied research is deployed to develop new knowledge, models and wheat lines that can be used by breeders to improve wheat in local environments around the world.

IWYP embraces six key research areas:

1. Uncovering genetic variation that creates the differences in radiation use efficiency and carbon partitioning between wheat lines
2. Harnessing genes from wheat and related species to boost carbon capture and fixation to increase biomass production
3. Optimizing spike development and growth to improve grain yields and harvest index
4. Developing elite wheat lines and trialing them in diverse environments for use in breeding programs
5. Exploiting genetic variation wheat relatives and other species
6. Fostering breakthrough technology development that can transform wheat breeding



CIMMYT