proWeizen
Alliance for Wheat Research and Breeding

Aims and objectives of the wheat research and breeding alliance proWeizen

- According to the Food and Agriculture Organization of the United Nations (FAO), agricultural production will have to double worldwide by 2050.
- Wheat, as one of the main crops, will play an important role.
- Larger and more reliable yields of wheat will need to be produced through greater intensification which takes into account the aspects of sustainability.
- The potential of the "knowledge revolution" in biology will need to be harnessed for practical wheat breeding.
- In this effort Germany as a hub of high technology can make significant contributions.
- The proWeizen alliance should join the forces of wheat research and wheat breeding nationally and internationally.

proWeizen

Alliance for Wheat Research and Breeding at Gesellschaft für Erwerb und Verwertung von Schutzrechten - GVSmbH

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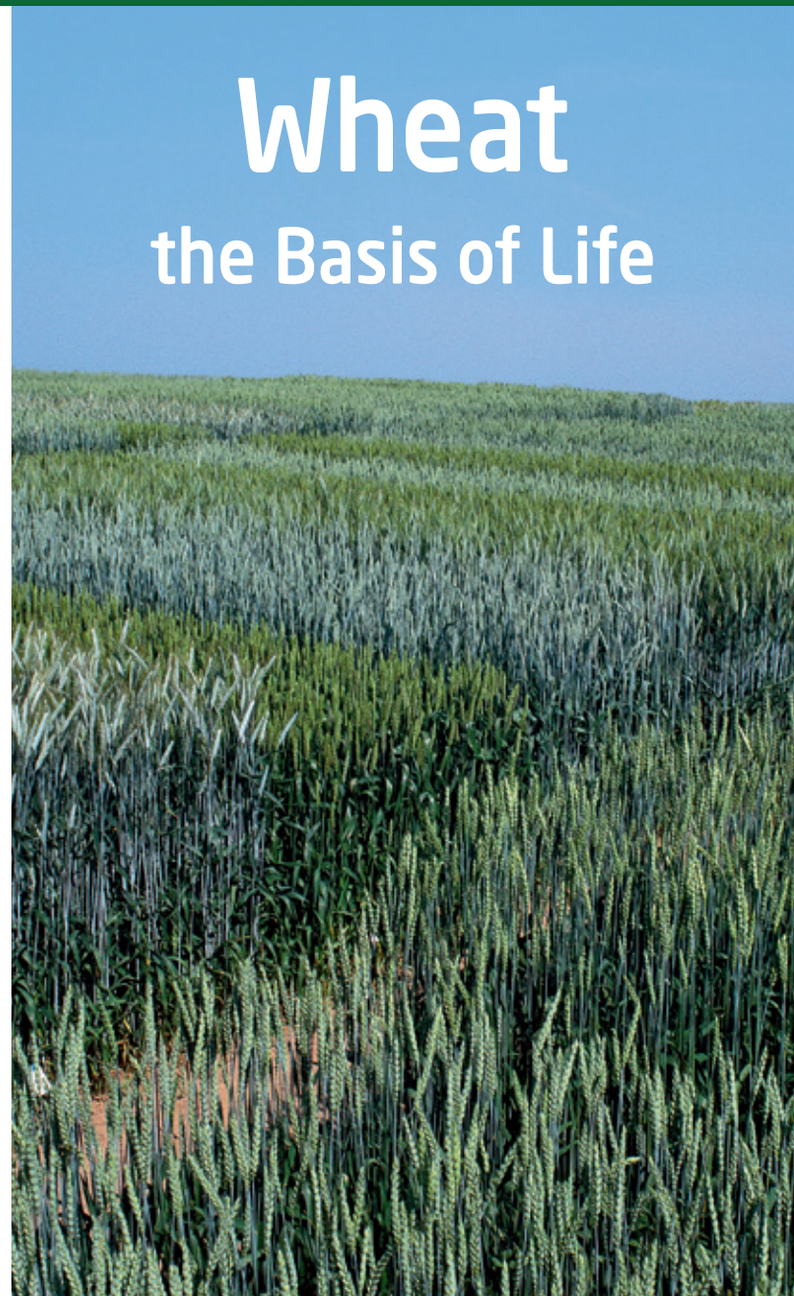
Wheat
the Basis of Life



Research and breeding alliance for sustainable intensification and yield increase

Wheat is one of the world's most important crops and thus fundamental to the global food supply. Germany is among the ten most important wheat producers in the world.

The solution to many global issues - not least global food supply in the face of the steady increase in world population - requires a significant increase in and stabilization of the wheat yield. This has been recognized and has resulted in the establishment of an international wheat initiative which Germany also belongs to. Europe and especially Germany, with its fertile soil, its moderate climate and its highly developed agriculture, can contribute significantly to the required sustainable intensification. This means that future increases in wheat yield will have to be sustainable, environmentally friendly and resource-saving, as well as adapted to changing climatic conditions.

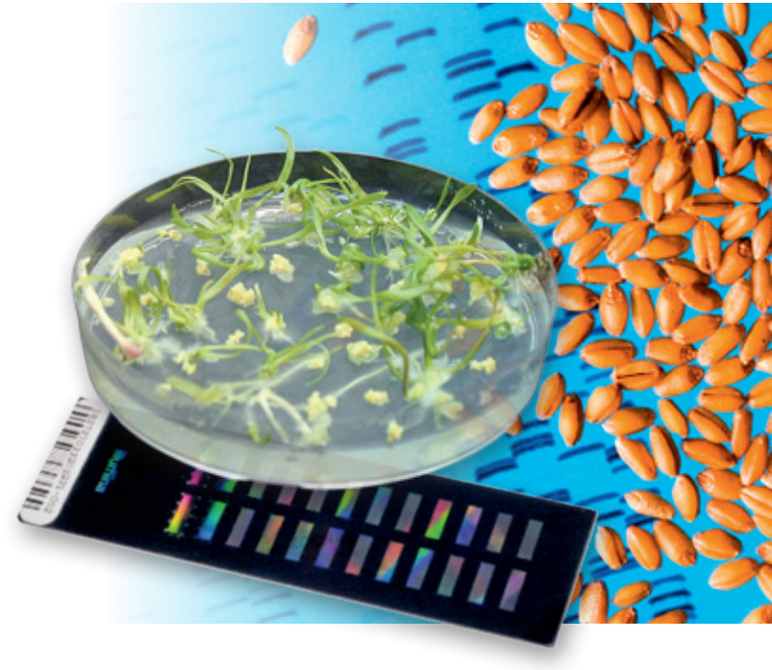
International Research Initiative for Wheat Improvement (IRIWI)

In Paris in June 2011, the agriculture ministers of the G20 countries founded the International Research Initiative for Wheat Improvement. The initiative is aimed at joining and coordinating international research activities on wheat. Primarily, the stagnation in wheat yields of recent years should be sustainably reversed (http://www.wheatinitiative.org).

Plant breeder´s traditional work ...

In recent years, progress in wheat yields have been perceptibly lower than those of other crops. A basis for improving this situation has been provided by the tremendous progress made in the life sciences, which has been described in such terms as "knowledge revolution" and "century of biology". With wheat in particular, because of its complex genome and the lack of suitable biological hybrid systems, there is a considerable need for research and for putting knowledge into practice. Thus yields have to be significantly improved and stabilized under a variety of growing conditions by simultaneously maintaining the required high quality.

The initiators of proWeizen have recognized this challenge and intend to unite the scientific excellence in wheat research and to combine it with breeding expertise. It is important to join forces and to support the consistent expansion of wheat research and breeding. As a result, Germany should strengthen its position as a global partner in the international division of labour in wheat research. This is especially true for the international initiative for the improvement of wheat. If science and industry can combine forces within the ProWeizen/proWheat alliance and if additional partners will join, a nucleus for the broadest possible approach to achieving those goals will be established.



... gets substantial support by modern methods of cellular and molecular biology.

ProWeizen will give priority to the following three approaches:

- **hybrid breeding**
- **molecular yield physiology**
- **sensor-based non-invasive phenotyping**

With this focus, there are excellent prospects for proWeizen – both nationally and internationally – to set up visible capacities and to carry out scientific as well as developing distinctive unique selling propositions.