

A step towards food security: German and Mexican researchers working jointly on the wheat of tomorrow

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The International Maize and Wheat Improvement Center (CIMMYT) from Mexico and the German Julius Kühn Institute (JKI) signed a Declaration of Intent to intensify joint research on disease-resistant and stress-tolerant wheat. Representatives of both institutions met in Berlin at the International Conference on Improving Drought Stress Tolerance of Crops.

The International Maize and Wheat Improvement Center (CIMMYT) in Mexico is an international leader in improving wheat breeding and adapting the crop to different environments and climatic conditions. *"The so-called 'Green Revolution' began at CIMMYT and to this day, through its research and breeding work, CIMMYT contributes to the improvement of wheat and maize varieties and thus to higher yields,"* says Dr. Hans-Joachim Braun, director of CIMMYT's Global Wheat Program. The breeding researcher knows about the importance of wheat for world nutrition, but also as about the race against time in which research is being conducted to adapt wheat to the changing cultivation conditions.

Yields must increase to provide protein and carbohydrates to the growing world population, varieties must become more resistant to diseases and pests to avoid yield losses and ensure environmentally friendly production, and they must become more resilient to heat and drought stress. *"In order to meet these multiple challenges, the Julius Kühn Institute and CIMMYT intend to pool their expertise and work more closely together in the future,"* declares Prof. Dr. Frank Ordon, President of the Julius Kühn Institute. To this end, on the evening of 19 November 2019 on the margins of an international conference, both institutions signed a declaration of intent, enabling them to better cooperate at scientific level in the future.

The Berlin conference "Genetic diversity - the key for improving drought stress tolerance in crops", organized by JKI and the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) on behalf of the Federal Ministry of Food and Agriculture (BMEL), brought together internationally renowned scientists who discussed the possibilities of improving drought stress tolerance in several crops. *"The key to this lies in the genetic resources and thus in the genetic diversity as it is stored worldwide in gene banks,"* explains Dr. Hans-Joachim Braun from CIMMYT. Prof. Ordon adds: *"We are therefore looking in gene banks for plants with, for example, improved drought stress tolerance, and in the next step we are trying to identify genes or gene clusters that are responsible for this trait in order to use them for breeding purposes. This requires coordinated, international cooperation and research".* The signing of the Joint Declaration of Intent between JKI and CIMMYT is another important node in the worldwide research network for the improvement of wheat, in addition to the Wheat Initiative, which has had its office at the JKI site in Berlin since 2018.

Source: Julius Kühn-Institut, Bundesforschungsinstitut für Kulturpflanzen via IDW Nachrichten

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