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PROJECT 3 ABSTRACT
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The overall goal of this collaboration is to increase genetic resistance to Fusarium Head Blight (FHB) as quickly as possible in commercially grown USA barley varieties and thus significantly increase the production and yield stability of barley in the United States of America.

Specifically, the objectives of the project are:

- to provide agronomically suitable FHB resistant germplasm to US collaborators through pre-breeding activities using major USA cultivars;
- to conduct a world-wide search for and acquisition of suitable FHB resistant germplasm and to make this available to the US Wheat and Barley Scab Initiative; and
- to test USA germplasm at CIMMYT-Toluca field station and/or through the CIMMYT International Wheat Improvement Network.

Researchers at CIMMYT are working on incorporating genetic resistance for FHB into commercially grown varieties; specifically identifying and combining resistant types I (penetration), II (spread), III (low toxin content) and IV (tolerance, good grain fill in the presence of the disease). Sources of resistance from genetic sources have been identified in Brazil, Japan, Argentina, China, Korea and Uruguay. These will be evaluated by CIMMYT in Mexico, China and Uruguay and included in the breeding programs. The best sources of FHB resistance have been crossed with US parents and segregating populations will be screened for other foliar diseases during the 2003 cycle in Toluca, Mexico. The most promising materials will be shipped to US researchers in September 2003.

The project aims to develop as quickly as possible, FHB resistant germplasm that will minimize the threat of Fusarium head blight to the producers, processors and consumers of barley.