

Title Cimmyt seed health laboratory: a guarantee for the safe exchange of wheat and maize seed around the world

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Abstract

Seed-borne pathogens can infect or kill plants and cause chemical changes in grain, degrading grain content or releasing mycotoxins, with potentially harmful effects on humans or livestock. To guarantee the safe movement of CIMMYT germplasm with partners in more than 100 countries worldwide, the CIMMYT Seed Health Laboratory (SHL) monitors and certifies the quality of Center germplasm products for the absence of pathogens and for seed viability, as well as guarding against the establishment or spread of exotic pests and diseases on imported seed. The SHL applies national and international standards for seed testing to guarantee quality and reliability; in 2006, the laboratory obtained full accreditation with the ISO/IEC 17025-2005 norm, *General requirements for the competence of testing and calibration laboratories*. In 2006 the SHL tested 5,000 maize, wheat, barley, and triticale samples for the presence of seed-borne fungal, bacterial, and viral diseases, including pathogens of quarantine importance such as *Tilletia indica*, *Fusarium verticilloides*, *Pantoea stewartii*, *Xanthomonas translucens* pv. *undulosa*, *Barley stripe mosaic virus*, *Wheat streak mosaic virus*, and *Maize dwarf virus*. During 2006, CIMMYT sent 368 shipments of small grain cereals (wheat, triticale, and barley) to more than 100 countries and 298 shipments of maize to more than 150 countries.