

## Plant breeding strategies to improve bioactive food components

**Project Title:** P2212 - Test a high-throughput phytic acid assay for phenotypic evaluation of nutrition in maize.

**Description of the innovation:** This could be done through exploiting natural variation, genetic and genomic selection methods, and mutagenesis and transgenesis in order to modify cell wall polysaccharides, and specifically to improve the starch composition and structure in breeding material through natural and induced mutations.

**New Innovation:** Yes

**Stage of innovation:** Stage 1: discovery/proof of concept (PC - end of research phase)

**Innovation type:** Biophysical Research

**Geographic Scope:** Global

**Number of individual improved lines/varieties:** <Not Applicable>

**Description of Stage reached:** It is necessary in order to explore, explain and exploit the contribution to diets of hitherto less-researched nutrient-dense crops and other foods - biomedical research continues

**Name of lead organization/entity to take innovation to this stage:** CIMMYT - Centro Internacional de Mejoramiento de Maíz y Trigo / International Maize and Wheat Improvement Center

**Names of top five contributing organizations/entities to this stage:**

- CDPR - Center for Development Policy Research, School of Oriental and African Studies

**Milestones:** No milestones associated

**Sub-IDs:**

- 15 - Increased access to diverse nutrient-rich foods
- 14 - Increased availability of diverse nutrient-rich foods
- 16 - Optimized consumption of diverse nutrient-rich foods

**Contributing Centers/PPA partners:**

- CIMMYT - Centro Internacional de Mejoramiento de Maíz y Trigo / International Maize and Wheat Improvement Center

**Evidence link:**

- <https://repository.cimmyt.org/handle/10883/21504>

**Deliverables associated:**

- D26350 - 1. Assay performance assessment (<https://www.frontiersin.org>)

**Contributing CRPs/Platforms:**

- Maize - Maize