CEREAL BIOFORTIFICATION BY GERMINATION
A SOLUTION TO OVERCOME NUTRITIONAL DEFICIENCIES?

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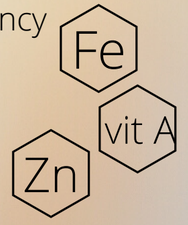
THE HIDDEN HUNGER

- 1/3 of global population suffer any nutritional deffiency
- Importance of minerals and vitamines in our diets
- Importance of cereal production and consumption
- Biofortification by germination may be the solution



OBJECTIVES

- To describe what biofortification is and what methods exist
- To determine how biofortication by germination affect mineral concentration, germination rate and antinutrient levels
- To define what can be the weak points of this methods

WHAT IS BIOFORTIFICATION?

It is defined as the process in which the nutritional quality of a food product is improved. It's aim is to increase nutritional value while the crop is growing.

METHODS

1. Agronomic methods
2. Selection of interest varieties
3. Germination

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Traditional fortification

cereal + nutrient = cereal with added nutrient

BIOFORTIFICATION BY GERMINATION

Cereal grains are soaked in a solution of destilled water and the mineral of interest

Cereal grains start the germination process in suitable conditions

The expected result are grains with increased mineral concentration and improved bioaccessibility

CONCLUSIONS

Promising and effective method wich could put and end to micronutrient deficiencies

Mineral concentration → INCREASES
Germination rate → NO SIGNIFICANT CHANGES
Bioavailability → IMPROVES

Weak points to control: grinder, mineral solubility, homogeneous germination, moulds.

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