# Fortified Rice Webinar

## Fortified Rice Shelf-Life Project

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by

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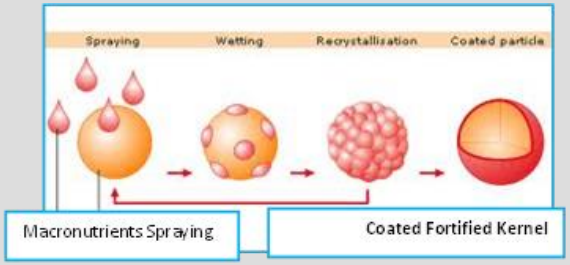
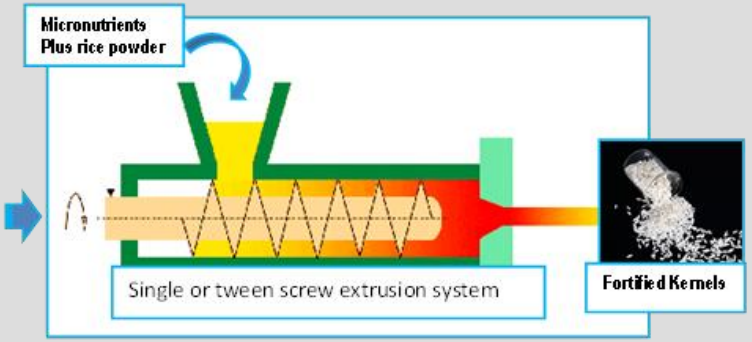
## Rice fortification Technologies

A. Coating Technology




B. Extrusion Technology




C. Fortified Rice Blending

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# Original Research question USDA/USAID & WFP:

## Is coated comparable to extruded fortified rice?

- **An international group was assembled:** Led by USG (USAID and USDA, Ruffo and Paul) and WFP (Sakia DePEE), and included suppliers, premix vendors, and others. WFP used funding from McGovern Dole programs and FFP General contribution
- **Acceptability compared fortified to normal rice** – assessing among school children and women in Cambodia; 2 coated, 2 extruded; fortified with 8 MNs, same premix for all
- **Retention** – Test same 4 samples, compared different preparation methods, at ETH, Zurich
- **Absorption (or bioavailability)** – Use stable isotopes for Fe and Zn, with the 6 other MNs; 1 coated, 1 extruded; ETH, Zurich

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# Fortified Rice Shelf-Life Project

**Main Goals (**Identifying the right packaging**)**

1. Protect integrity of commodity (i.e. micronutrients) and preserve shelf-life (Shelf-life?)
2. Limit infestation
3. Enable optimum handing through out the supply chain
4. Optimize shipping/warehousing
5. Improve final distribution and use by final consumers
6. Contribute to overall cost-effectiveness

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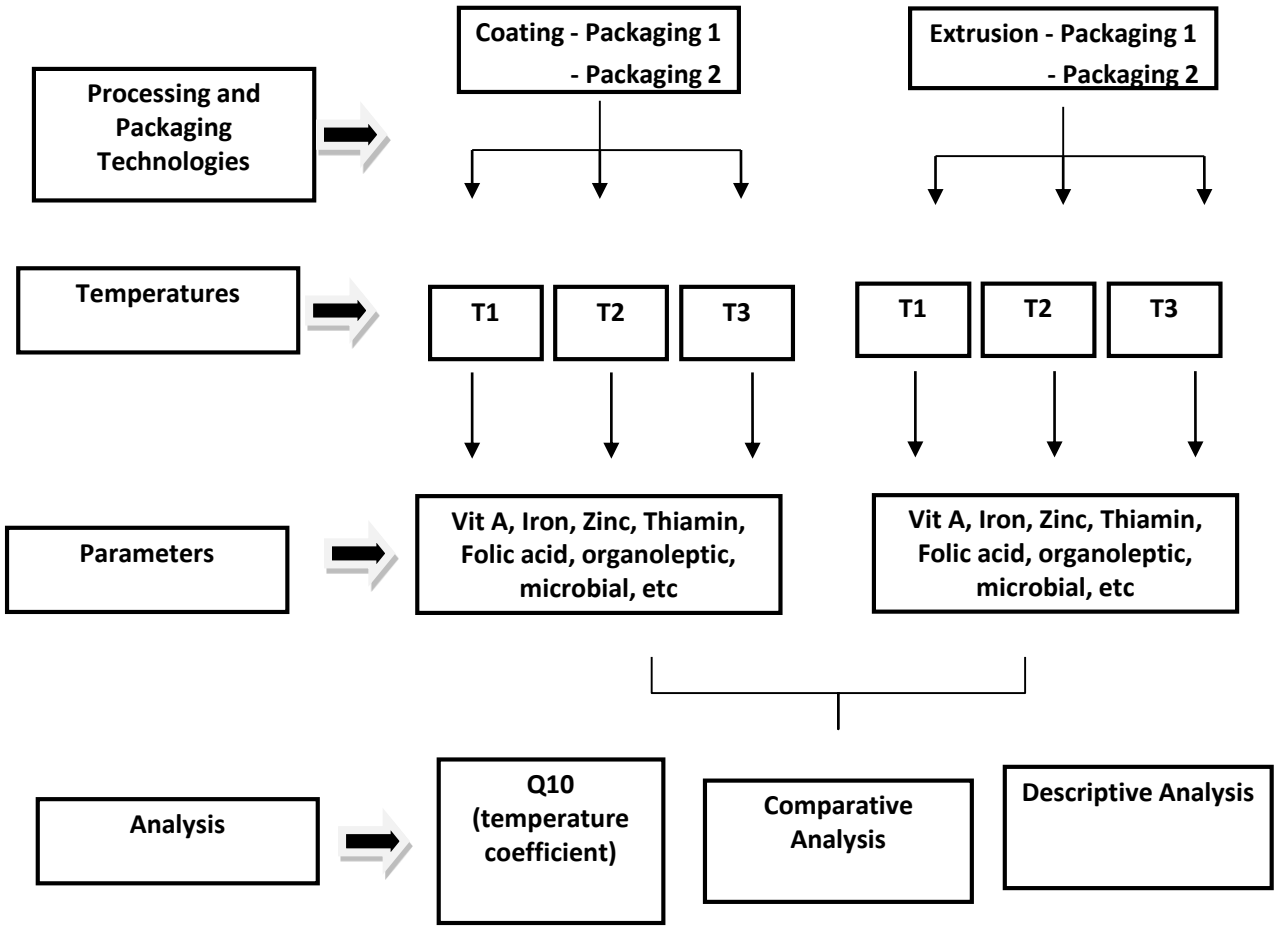
# Experimental Design for Accelerated Shelf Life (ASL) Study



# Objectives specific to packaging

- Reduce the breakage of bags throughout the distribution cycle
  - During the distribution cycle, the US AID bags are manually handled dozens of times. This handling results in excessive breakage and product loss.
- Eliminate pest infestation of the product
  - In addition to breakage, a significant amount of product is lost due to pest infestation.
- Maintain use of existing filling equipment
  - In order to prevent suppliers from having to retool, the mandate was to offer solutions that used the existing filling equipment.
- Suggest a size for 12.5 kg packaging
  - The main recipients of the US AID bags are women. A request was made to suggest a 12.5 kg size to make the filled bags easier to carry.

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## Coordination, Implementation and Stakeholders

1. **Funding**: USDA/FAS/McGovern Dole (~$120,000)
2. **Implementation**: Kansas State University (Dr. Sajid Alavi)
3. **Technical Lead**: Inter-Agency coordination (USAID, USDA, WFP) Overall Lead: Ruffo Perez/USAID
4. **Other Stakeholders**: Rice suppliers, packaging technology vendors, premix technology vendors

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# Thanks

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