

## Food Processing and Post-Harvest Innovation Lab (FPL) Core Component One

### Post-harvest Handling and Storage

- Affordable and efficient drying and moisture determination technologies
- Safe and effective grain storage
- Improved post-harvest handling logistics from field to storage
- Supply chain development for developed technologies

### Key Accomplishments to Date:

- ❖ Low-cost moisture detection device (roughly 2.00 USD per unit) being commercialized in Kenya and Senegal.
- ❖ Hermetic bags reaching smallholder farmers in new parts of Kenya and Senegal.
- ❖ Two low-cost solar dryers being developed for commercialization in Kenya and Senegal.
  - Picosolar crOp Dryer (POD) targeting smallholder farmers
  - Multi-purpose solar dehydrator (45 kg wet maize per batch) with drying trays or baskets (5 kg wet maize per tray)
- ❖ 7,000+ farmers and traders in both Senegal and Kenya trained on best practices for post-harvest drying and storage by the end of 2018.
- ❖ Identified most cost-effective combination of post-harvest practices and technologies to reduce aflatoxin in stored maize.

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Hygrometer: low-cost moisture detection device



Purdue Improved Crop Storage (PICS) bags



Picosolar crop Dryer



Multi-purpose solar dryer + trays





## Food Processing and Post-Harvest Innovation Lab (FPL ) Core Component Two

### Food Processing and Nutrition

- Expand grain markets in urban/rural areas through application of food technology
- Improve nutritional quality of food products using local nutrient-rich plants
- Enable market-pull for food fortification through nutritious food products that meet consumer demands
- Support entrepreneurship through public-private partnerships

### Key Accomplishments to Date:

- ❖ Introduced extrusion technology, a precooking process used to produce instant or ready to eat flour-based products, to deliver affordable, safe, and nutritious food products.
- ❖ Developed high-quality, new and improved flour-based food product prototypes that meet urban and local market demand:
  - Conventional and instant products.
  - Nutritious products fortified naturally with nutrient-rich plants and/or with vitamin-mineral premixes to meet 25% RDA for iron, zinc, and pro-vitamin A per serving.
- Introduction of market-led fortification strategy, which provides affordable, locally processed, nutritious products that consumers want to eat.
- Introduced the “Hub-and-Spoke” Incubation Centers to disseminate food and nutrition technologies and to strengthen entrepreneur processing enterprises.
- 100+ processors in both Senegal and Kenya trained on processing of high quality market competitive and nutritious food products.

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### Extrusion technology for making instant products



### Food Processing Training and Incubation Center (FPTIC) at University of Eldoret/Kenya



### FPTIC Incubatee’s brand label of fortified instant product

