

# Seed Money Project: NUTRIFOODS

Replacing wheat by climate-resilient crops based on Dutch bakery expertise

Final presentation 14 December 2023

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# Background and objectives SMP NUTRIFOODS

- Africa growingly depending on imported foods, even for feeding the lowest incomes, local crops are underutilized
- Major economic and food & nutrition security concerns, vulnerable for disruptions
- Technology has been developed to fully replace wheat by local climate-resilient crops

## Objectives SMP:

- Mobilize Dutch industrial partners to optimize the products for African and Dutch market benefits
- Setting up a European-African partnership for implementation and scaling in various countries



Noort & Renzetti (2023)  
<https://doi.org/10.18174/583371>

# Insight supply chain Uganda

- 2 WFBR researchers visited 10 companies in the local grain supply chain: agronomic extension services, input providers, aggregators, millers, bakeries and other consumer goods.
- Semi structured interviews to identify bottlenecks and opportunities for local crops: high cost of production and underdeveloped value chain.
- Clear potential and interest for e.g. white and red sorghum among all actors in chain





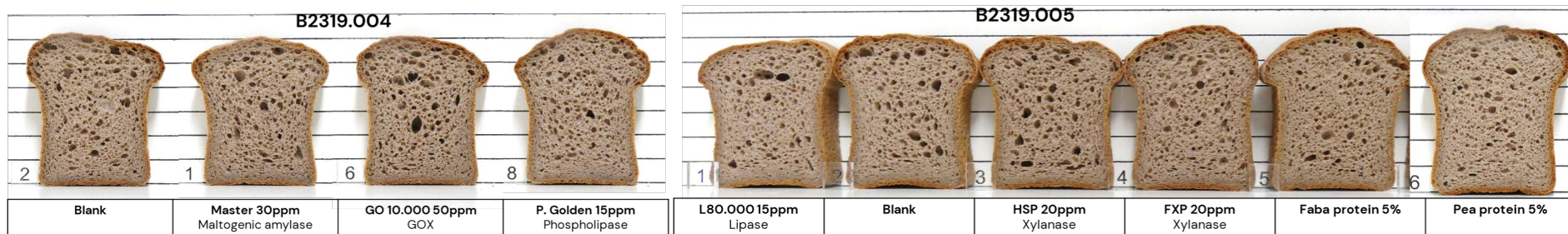
# Product optimization and consumer studies in Uganda

- Acceptability colour, texture, flavour?
- Consumer studies in Kampala showed that white sorghum chapatis were highly liked although they clearly differ from the known taste and texture of wheat chapatis.
- Consumers have strong initial preferences (some prefer brown sorghum, others white or wheat)
- High potential for viability, consumers have to familiarize with products



# Bread making tests

- Baking trials aim at improving the **quality** (volume, softness), **nutritional** (protein%) and reducing the **cost** (reducing psyllium)
- Collaboration Dutch partners (DSM, WUR, Wiltink, Verhoeven)
- Positive results, work ongoing
- Important for Dutch (gluten-free) and African market (wheat-free)



# Overall Conclusions

- African crops (e.g. sorghum, casava, cowpea) have potential for making healthy and sustainable foods for EU and local African markets
- Consumer acceptance substantiated in research (Uganda low-income) as well as in practice (Uganda high-end market)
- Commercial viability in different markets strengthened, but more work needed (supply chain, cost reduction, market introductions)



# Next steps: European-African programme

**Aim:** Setting up a European-African partnership with Dutch industrial partners to replace imported wheat by local climate-resilient crops in at least 5 countries which are both highly dependent on imported wheat as well as highly affected by climate changes.

- Together with Bopinc developed a proposition for an international implementation and scaling programme (~10M) - Shared with BHOS
- Development of ARFSA (RVO) project with Bopinc and a.o. GraceCo Nigeria - Negative advise for full proposal, requires more proof of commercial viability
- National programme in Senegal (scientific academy, ITA, WUR, millers etc) - preparing an FID proposal, will be submitted by local partners
- Together with WUF preparing a proposal for Mastercard Foundation and/or other potential donors.



# Impact of support SMP?

- For Ugandan market high-end product has been introduced successfully: Product well received and profitable @Bbrood in Kampala
- Low-end market introduction of chapati flatbreads @BISS is more challenging in view of cost: Replacing or reducing psyllium is most needed (baking tests with partners in SMP are ongoing).





# Thank you for your attention!

## NUTRIFOODS



[www.wur.eu/NUTRIFOODS](http://www.wur.eu/NUTRIFOODS)



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