



A G S O L

BETTER FOOD 

CHAMPIONS

OF THE

FUTURE 

TRANSFORMING STAPLE FOOD PROCESSING:  
FORTIFYING NUTRITION, GENDER EQUITY &  
CLIMATE CHANGE ADAPTATION

MARCH 2024





# CHANGING THE

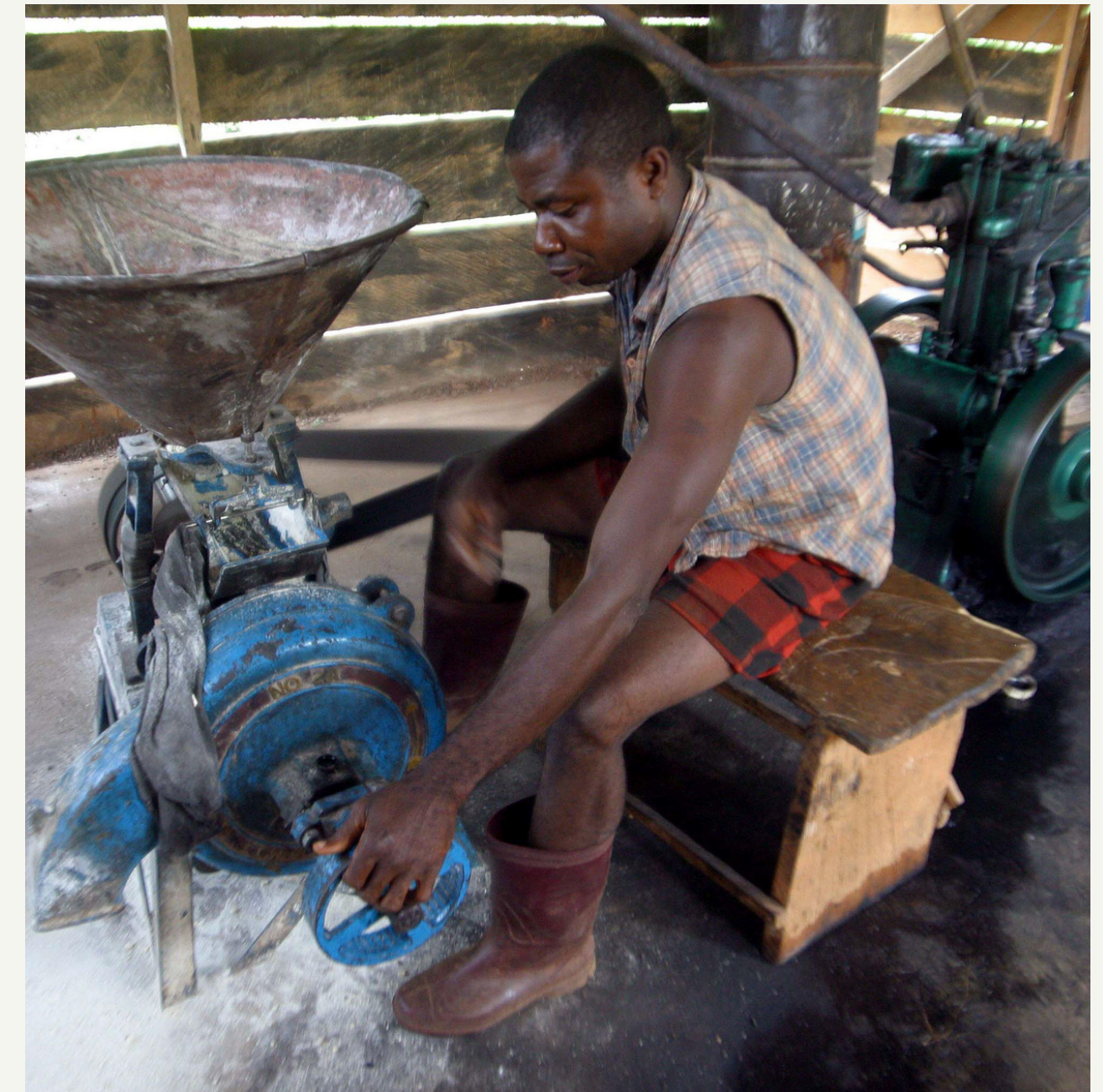
## GATEWAY



TODAY, OVER HALF A BILLION PEOPLE IN AFRICA RELY ON DIESEL MILLS AS THE 'GATEWAY' TO PROCESS THE STAPLE FOOD THEY GROW AND DEPEND ON. CHANGING THIS GATEWAY HOLDS THE PROMISE TO DELIVER IMPACT AT A PROFOUND SCALE FOR THE WORLD'S POOREST.

### Diesel mills are unhygienic, inefficient, expensive and polluting

- **Unfortified flour is contaminated** by rancid residues and smells and tastes of diesel fumes
- **Cost of food** is linked to **global oil prices**
- **900M litres of diesel** (2.3M tonnes CO<sub>2</sub>) consumed by diesel mills in Sub-Saharan Africa (SSA) each year for maize alone [1]
- **40 billion hours** of women's time wasted annually accessing milling services across SSA [2]



The responsibility for safe and hygienic processing of flour, along with the cleanliness and proper storage of grains, quite literally rests in the hands of male mechanics!





# THE DARK SIDE OF DIESEL MILLS

With high maintenance and running costs, diesel mills are typically found in market centres where turnover is high enough for millers to generate a profit. Smallholder farmers are forced to bring their grain from rural areas for processing – which generally involves women carrying heavy sacks long distances on foot. The diesel mill is a cumbersome and dirty machine with high maintenance requirements and typically operated by a male mechanics in an environment saturated with oil and grease. Fortification is seldom an option, and the farmer pays for the milling service dictated by global oil prices, and carries her contaminated, low-nutrition flour back home to her family.

WHAT HAPPENS

WHEN WE CHANGE

THIS

GATEWAY? 

"Ideally, every village should have a modern, solar-powered mill fitted with a dosifier to mix vitamins and minerals into the flour."

GLOBAL ALLIANCE FOR IMPROVED NUTRITION (GAIN), 2023 [3].





# BENEFITS OF SUSTAINABLE



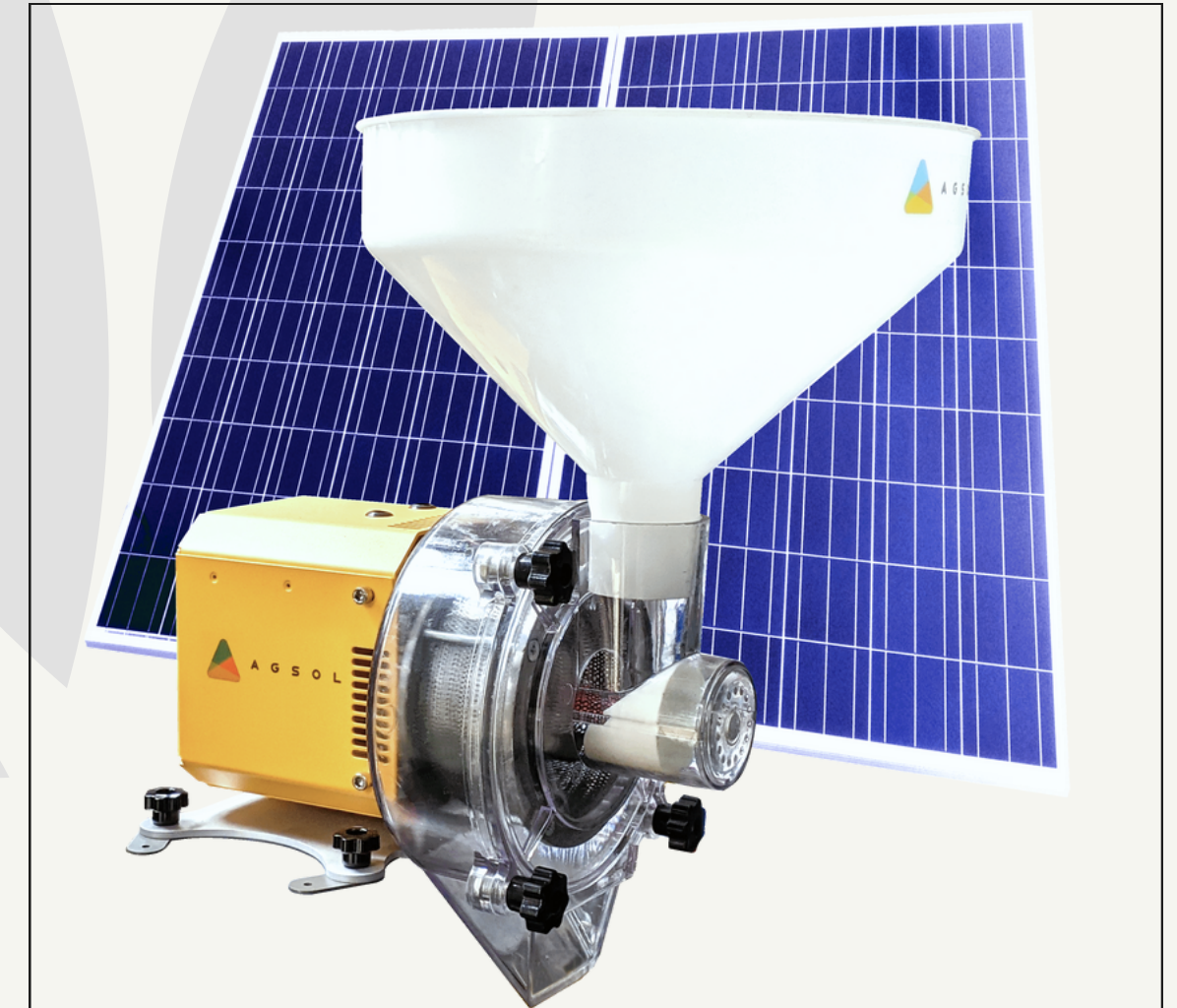
**Agsol's solar-powered electric mill – the MicroMill – is a revolution for the informal milling sector.** Compared to diesel mills they are more affordable, more profitable, fully automated, maintenance-free, and produce better quality flour. They democratise and decentralise the important rural economic activity of milling and bring milling services closer to where they are needed. The technology naturally promotes a cleaner milling environment and opens the door for a new type of miller – more conscientious, more concerned about food quality, more women. These are the better food champions of the future!

**As Agsol scales to 100,000 product sales that feed 25 million people over the next 5 years, we ask ourselves**  
*“What else we can do to promote better food outcomes?”*

Agsol can imagine a future where women mill owners across Africa are not just millers, but custodians of healthier and more nutritious food outcomes for the masses. How we go about this and what we should prioritise are presently open questions.

We could, for example, use our distribution network to supply hermitically sealed bags, clean storage vessels, kits for testing for aflatoxin, or pre-mix fortification? Or we could deliver new skills or knowledge such as food handling training, food-to-food fortification, grain drying know-how, or information on drought resistant native crops?

We don't know the answers to these questions, but we recognise the opportunity and believe the benefits could be truly extraordinary.



## The MicroMill delivers:

- Hygienic flour with over 65% longer shelf life
- More affordable food – 41% cheaper on average than diesel mills [4]
- New revenues – 1.8 million USD per year from just 1,000 MicroMills
- CO2 avoided – 1,700 tonnes per year from 1,000 MicroMills



# SEEKING PARTNERSHIPS

Cross-sector partnerships are essential to accelerate and scale these efforts. As a product manufacturer, we can't drive this development in isolation. But we can be a vehicle to help deliver better food outcomes in parallel to our commercial expansion.

To instigate systemic change from diesel to solar, to include women in the sector, and eventually to create the highest nutritional impact, we are currently seeking partnerships in the following areas:

1. **Advisory partners** to share technical know-how on navigating the complexities of the food system–nutrition–behaviour change space.
2. **Research partners** to collaborate on knowledge and technology sharing around fortification of informally milled flour e.g. food-to-food blending.
3. **On-the-ground partners** to empower female mill owners by providing (i) business support to effectively run the MicroMill, and (ii) educational materials on food handling and flour fortification, enabling women to become champions of nutrition in their communities.
4. **Funding partners** to support our efforts in the fields of nutrition, food security, climate change mitigation and adaptation, and decent job creation, as we move towards full commercialisation.



Agsol is a social impact business and manufacturer of the **world's most efficient grain mill**. We're on a mission to eradicate diesel mills from the continent and the raft of hardship they bring to the world's poorest.

Established in 2018 in Kenya, we commercialising the MicroMill and expanding operations across sub-Saharan Africa in coming years.

We work closely with local distributors and financing partners to bring our technology to marginalised communities. Agsol is committed to monitoring and measuring the impacts of our work.





If you are interested in collaborating with Agsol or would like more information, please get in touch.

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