Clean Milling, Safe Food

Last week, we had the opportunity to attend a 3-day training on Aflatoxin Detection and Control organized by the **Eastern Africa Grain Council (EAGC)** in partnership with the **World Food Programme (WFP)** in Uganda. As a manufacturer of clean and efficient agri-processing machinery, we at Agsol understand that food safety is as important as productivity. Our responsibility goes beyond delivering high-quality machinery—we feel it extends to educating farmers and millers on issues like aflatoxin contamination, which affects all of us, from the farmer to the end consumer.

The Aflatoxin Challenge in East Africa

Aflatoxin contamination remains a critical issue in East Africa, particularly in staple crops like maize and groundnuts, which are consumed by both humans and animals. These toxins, produced by certain molds, can't be seen or smelled but pose serious health risks, including liver disease, cancer, and stunted growth in children. A major cause of contamination is poor post-harvest handling, inadequate storage, and the region's climatic conditions.

Recent studies have shown widespread contamination across East Africa, leading to significant food safety concerns. Beyond human health, livestock fed with contaminated grains can produce unsafe meat, milk, or eggs, which creates a ripple effect across food systems. The EAGC has also highlighted the economic impact, with grain rejections due to aflatoxins costing millions in lost revenue and disrupting intra-regional trade.

Agsol's Commitment to Safer Food Systems

In the agricultural sector, more than half of the maize flour in countries like Kenya is produced in informal settings, often using diesel-powered mills. These mills not only contaminate flour with diesel fumes but also trap moisture, creating environments where aflatoxins thrive.

Agsol's solar-powered MicroMill aims to change this by offering a cleaner, healthier, and more efficient alternative for processing grains. While we've designed our technology to promote system cleanliness and transparency, addressing aflatoxin contamination requires more than just technology—it requires education and collaboration.

Partnering for Impact

We recognise that addressing aflatoxin contamination requires collective action. We are eager to collaborate with organisations that share our vision for clean, sustainable, and safe agricultural practices. Together, we can tackle the root causes of contamination and empower farmers with the tools they need to improve food safety.

We are actively seeking partnerships with:

- **Development Agencies and NGOs:** Partner with us to train farmers and millers in good agricultural practices (GAPs) and provide them with access to aflatoxin testing, solar-powered drying, and clean milling technologies like our MicroMill.
- **Technology Providers:** Let's work together to integrate solar-powered drying and storage solutions that complement our clean milling systems, providing a holistic post-harvest solution for farmers.
- **Agricultural Cooperatives and Farmer Associations:** Engage with us to disseminate critical knowledge on aflatoxin control at the community level, ensuring that even the most remote farmers have access to life-saving information.

Agsol is now certified by the Eastern African Grain Council (EAGC) on Aflatoxin Detection and Control

Practical Tips for Farmers

During the training, several practical methods to reduce aflatoxin contamination were discussed. By following these steps, even off-grid farmers can reduce aflatoxin levels, ensuring safer crops for both consumption and sale. Here are some key takeaways for farmers:

Choose Resistant Seeds
Plant varieties that are less susceptible to mold. Ask local seed suppliers for advice, and if available, use biocontrol products like Aflasafe, which helps reduce aflatoxin-producing molds in the field.

Harvest on Time and Handle with Care
Harvest crops as soon as they mature to avoid moisture buildup, which encourages mold growth. Minimize damage during threshing, as broken kernels are more prone to contamination.

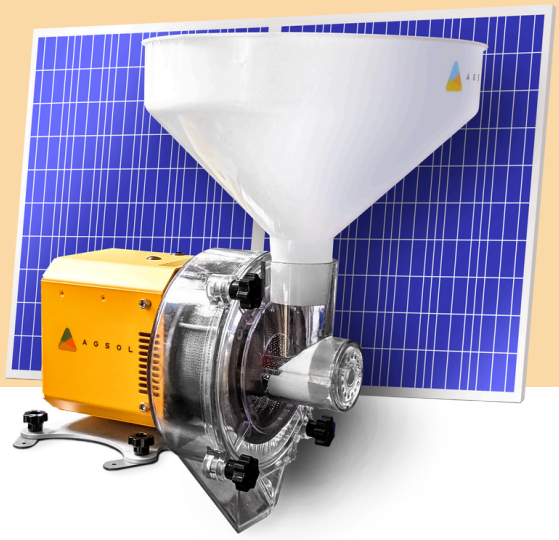
Dry Crops Properly
Without access to electricity, sun-drying is an effective method. Use dark tarps or raised platforms to dry crops, ensuring they don't touch the ground. Dry until grains are hard and make a cracking sound when bitten. If possible, use a moisture meter to check that maize is dried to 13.5% moisture content or below.

Hand-Sort Crops
Before storage, carefully remove any moldy or damaged grains. While it may be time-consuming, sorting ensures good grains remain uncontaminated.

Store Grains in Airtight Containers
Store grains in hermetic bags or other airtight containers to protect them from moisture. If these aren't available, farmers can use sealed clay pots or drums as makeshift airtight storage solutions.

Feed Livestock Clean Grains
Avoid feeding moldy grains to livestock, as this can affect their health and contaminate animal products like milk and meat. Only use clean, dry grains for animal feed.

Utilize Community Testing Services
If individual testing is inaccessible, collaborate with local cooperatives, agricultural groups, or markets that offer aflatoxin testing services. Some organisations may even provide portable test kits.



Looking Ahead

The fight against aflatoxin contamination requires both technology and knowledge-sharing. We welcome partnerships that leverage both technology and education to build resilient food systems in East Africa. By joining forces, we can create a future where safe, healthy, and aflatoxin-free food is the norm, not the exception.