

Hermetic Bags for Safe Storage of Wheat



Different brands of hermetic grain storage bags are available from agrodealers



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Low-cost storage technologies for grain

Hermetic bags technology is a triple layer hermetic storage bag which has an outer woven polypropylene bag and two inner bags of high density polyethylene (HDPE). The inner bags have very low gas permeability and are water repellent. The outer bag has the strength to handle the weight of the grain it contains. Hermetic bags are tight bags that preserve the contents while restricting the existence of cereal pests by depleting oxygen supply levels and producing carbon dioxide.

This technology is **TAAT1 validated**.

8-7



Scaling readiness: idea maturity 8/9; level of use 7/9

Project adoption

The technology has been integrated in the **ENSURE project**: in 7 regions of the East African Community



Unknown

Problem

- Large post-harvest losses of wheat due to improper storage techniques and pest infestation.
- Immediate sale of grains after harvest at low market prices to avoid risk.
- Damage by insects such as beetles, weevils, moths, mites, and borers.
- Development of fungi that contaminate the grain.
- Loss of grain quality, taste, and color.
- Difficulty in preserving grains under hot and humid weather conditions.
- Common storage losses exceeding 25%.
- Inadequate safeguards in current storage techniques used by farmers, traders, and food manufacturers.

Solution

- Prevention of post-harvest losses due to improper storage techniques and pest infestation.
- Ability to store grains for up to two years while retaining quality.
- Preservation of grain quality, taste, and color.
- Prevention of damage by insects such as beetles, weevils, moths, mites, and borers.
- Inhibition of fungal growth and mycotoxin build-up.
- Reduction in cooking time compared to grains stored using traditional methods.
- Compatibility with the operations of both commercial and small-scale growers and processors.
- Low cost of storage bags and reusability.
- Suitability for regions with poor road networks and distant markets and processing industries.

Inclusion assessment 4

Climate impact 7

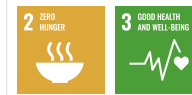
Technology from

ProPAS

Commodities

Wheat

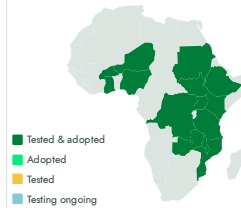
Sustainable Development Goals



Categories

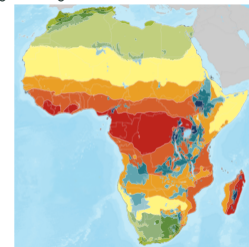
Postharvest, Equipment,
Post-harvest handling

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Farmers



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<https://taat.africa/hhw>

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