TARP & MegaBAG non-chemical Treatment & Storage

agenda

INSECT DAMAGE

CHEMICAL TREATMENT

CONTROLLED ATMOSPHERE

koMot TARP

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Insects damage

- Weight loss up to 2% monthly
- Quality degraded

stored their maize with husk either in sack or without sack in the house. Also [35] reported that 0.2%–11.8% weight loss due to insect infestation in maize after 6 months of storage in traditional granaries in Togo and 3.2, 4.8, 6.8, 7.2 and 8.2% for PICS bag, barns, polypropylene bag and jute sack. Likewise

Assessing storage insect pests and post-harvest loss of maize in major producing areas of Ethiopia

Negasa Fufa*, Tekalign Zeleke, Dawit Melese and Teshale Daba

Insects damage

- Germination reduced up to 3% monthly
- Mold & fungi increased

from Hawas areas (Figure 5). This due to the grains were infested by *S. cereallela* species which infest the grains embryo and made ungerminated [41] reports showed germination of stored maize in the uncontrolled warehouse was declined from 87–99% to 50–80% after eight months of storage in South

Assessing storage insect pests and post-harvest loss of maize in major producing areas of Ethiopia

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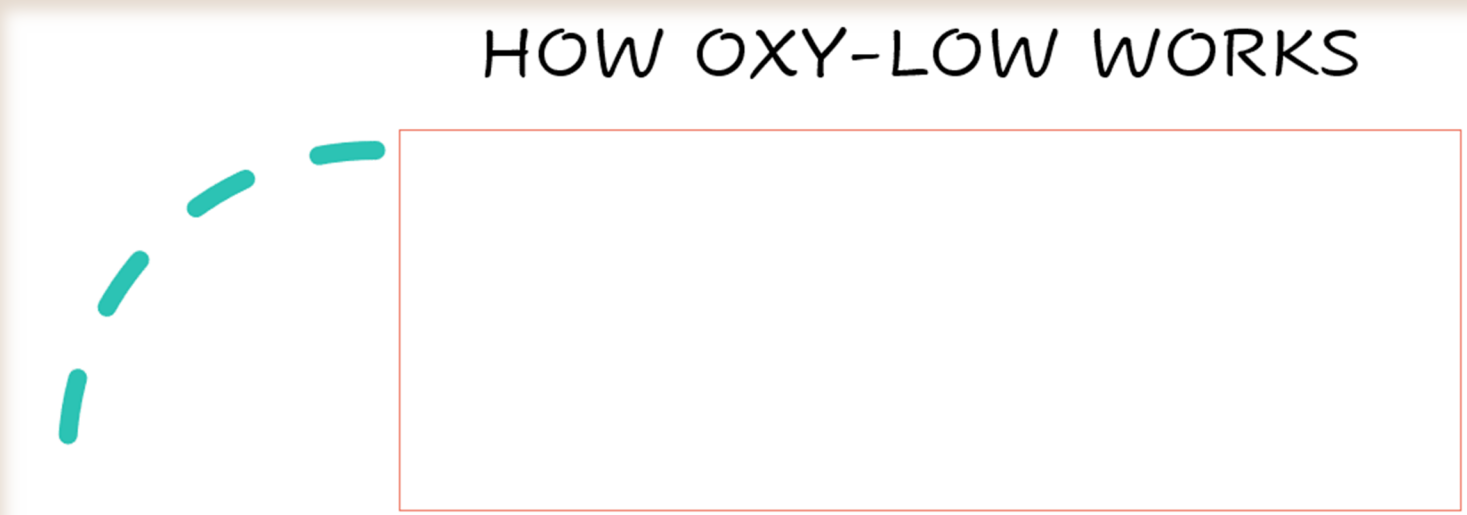
Chemical fumigation

- ESG MATTERS (WORKERS, ENVIRONMENT)
- NOT 100% EFFECTIVE (RESISTANCE)
- RE-FUMIGATE REGULARLY
- HIGH HANDLING COST
- CHEMICAL & FIRE RISK
- QUALITY DEGRADED

Controlled Atmosphere (Low Oxygen)

By removing most of the oxygen and controlling temperature and humidity, it can kill all insects at every stage of their life cycle: eggs, larvae, pupae, and adults.



Controlled Atmosphere (Low Oxygen)

OXYLOW
COMMODITY PROTECTION

OXY-LOW CONTAINER

OXY-LOW ROOM

SILO

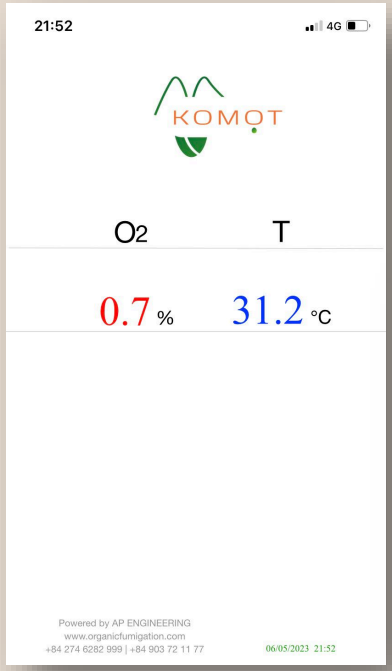
koMot TARP

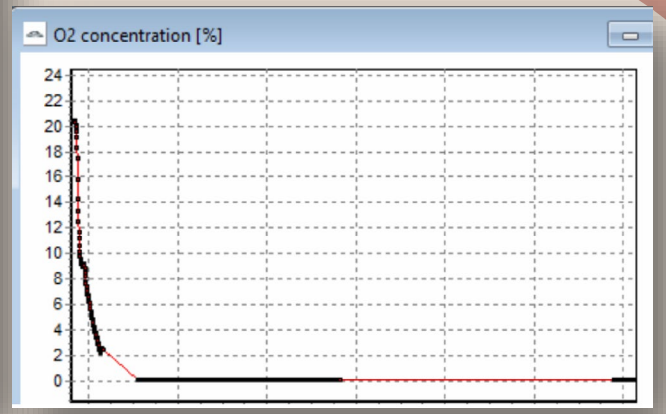
Mass volume care in a peace of mind

Building on the principles of Controlled Atmosphere, we have developed an advanced technique called KOMOT, which utilizes ***dynamic pressure and volume control*** to quickly reduce Oxygen level to below 1%.

koMot TARP

- 100% effective against all insect stages
- Unlimited treatment volume
- Very low energy consumption
- Easy stacking, no size limit
- Online monitoring & control





SINGLE Tarp operation

Energy consumption overview

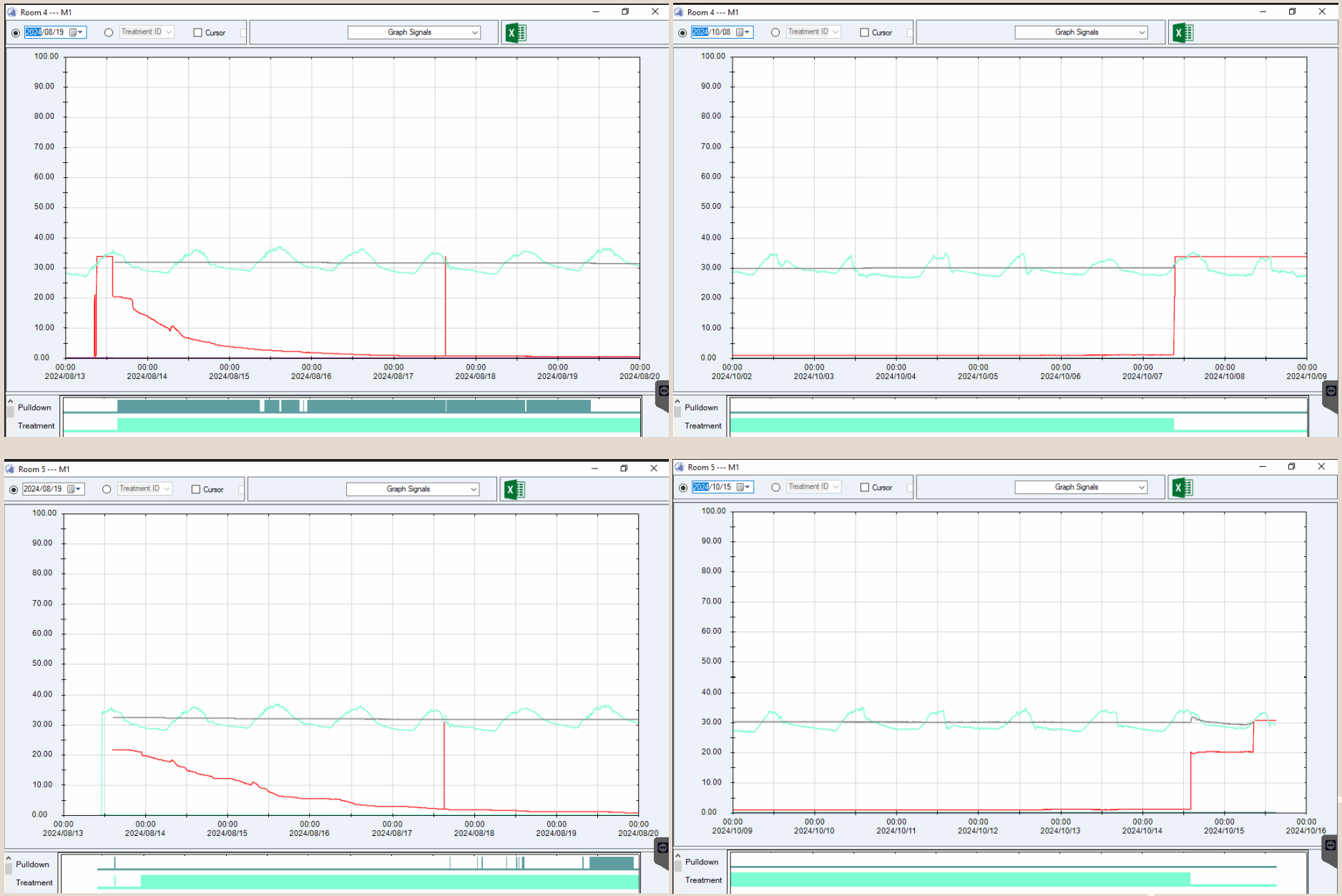
- 352 jumbos x 1.2 ton/jumbo = 422.4 ton of rice
- Energy consumption = 140hrs x 11KW x 0.8 = 1,232 KWh (*)
- 3.50 KWh per jumbo
- 2.91 KWh per ton consumption (*)

(*) This varies depends on commodity bulk density

DOUBLE Tarp operation

Energy consumption overview

Recycle low-oxygen from one tarp to the other(s)



DOUBLE Tarp operation

Energy consumption overview

TARP 04:

- 352 jumbos x 1.2 ton/jumbo = 422.4 ton of rice
- Energy consumption = 140hrs x 11KW x 0.8 = 1,232 KWh (*)

TARP 05:

- 308 jumbos x 1.2 ton/jumbo = 369.6 ton of rice
- Energy consumption = 16hrs x 11KW x 0.8 = 140 KWh (*)

AVERAGE:

- (1,232 + 140) / (352 + 308) = **2.08 KWh** per jumbo consumption
- **1.73 KWh** per ton consumption (*)

(*) This varies depends on commodity bulk density

MegaBAG®

Ideally for seeds long term storage

- Super airtight
- 20 – 400-ton capacity
- **Very quick O2 depleting (less than 24hrs)**
- Ultra low energy consumption
- Humidity control

MegaBAG®

ContLINER®

Moving without oxygen

- Pest treatment on transport
- Easy implementing with smart frame
- Very quick O2 depleting (less than 12hrs)
- Protect product from **oxidation** and humidity
- Strong for reusable and recyclable

ContLINER®

Moving without oxygen

Impact

OUR MISSION IS TO DRIVE MEANINGFUL CHANGE BY REDUCING CHEMICAL USE IN POSTHARVEST PEST CONTROL AND STORAGE, PROMOTING SUSTAINABLE AGRICULTURE, AND MINIMIZING GLOBAL FOOD LOSS.

thank you

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