West Africa Regional Program

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WEST AFRICA REGIONAL PROGRAM

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Survey of Storage Facilities & Ways to Reduce Insects
320 Farmers in 2 Regions of Niger

Grain in barrels, burlap or plastic bags, & storage houses

Storage facilities used by farmers:
1. Cylindrical granary with *Andropogon gayanus* &/or stalks & covered with grass - Maradi
2. Conical granary with bricks, covered with grass - Tahoua

Insects of sorghum & millet: *Ephestia kuehniella*,
*Tribolium castaneum*, *T. confusum*,
*Trogoderma granarium*,
*Rhyzopertha dominica*, &
*Sitrotroga cereallella*

13 botanicals for control

Sand, ash, salt, mixture of salt & ash reduce damage
Les insectes nuisibles du stock

Les insectes peuvent occasionner 35-100 % de dégâts aux grains stockés. Ces dégâts sont dus soit aux attaques directes ou aux excréments et débris d'insectes, à l'odeur, les fils de tissage, la chaleur, ou la moisissure.

Les insectes nuisibles primaires qui s'attaquent aux grains entiers de sorgho stock

- Le capucin des grains – Rhyzopertha dominica
- Dermeste des grains – Trogoderma granarium
- Les charançons du riz et du maïs – Sitophilus granarius et Sitophilus zeamais
- Alucite des céréales – Sitotroga cerealella

Les arthropodes nuisibles secondaires qui attaquent les grains perforés ou la farine du sorgho stock

- Ver de la farine – Tribolium spp.
- Pyrale de la farine – Corcyra cephalonica
- La teigne du blé – Plodia interpunctella
- L'acarien de la farine – Acarus siro
Fungi from Stored Sorghum Grain in Mali

Aspergillus sp.
Colletotrichum sp.
Curvularia sp.
Fusarium sp.

All species of fungi isolated from Grinkan sorghum

Only Colletotrichum & Aspergillus isolated from Niatchichama

Badly stored grain subject to contamination by fungi leading to poor grain germination
W. AFRICA TECHNOLOGY TRANSFER PROJECTS

Identified technologies to transfer with impact

1. Dynamic farmers to grow improved varieties & sell to local & regional food & feed processors
   Farmer entrepreneurs trained for seed & grain production & linked to end-users (farmers & markets). Storage buildings by farmers & project. Farmers identify & manage storage pests.
   Mali, Niger, Nigeria, Burkina Faso

2. New processing technologies that include pre-gelatinized, instant flours, composite flour breads, & couscous from grits
   Train and incubate entrepreneurs.
   Senegal, Niger (Mali from Mali/USAID)

3. Farm adoption of *Striga*-resistant varieties for dolo
   Burkina Faso, E. Mali