West Africa Regional Program

Mamourou Diourté
IER-Mali

Ababacar N'Doye
ITA-Senegal

Hamidou Traore
INERA-Burkina Faso

Bruce Hamaker
Purdue University

Bonnie Pendleton
West Texas A&M University

See next page for additional authors

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WEST AFRICA REGIONAL PROGRAM

Regional Coordinators:
Mamourou Diourte, IER-Mali
Ababacar N’Doye, ITA-Senegal
Hamidou Traore, INERA-Burkina Faso

U.S. Coordinators:
Bruce Hamaker, Purdue
Bonnie Pendleton, WTAMU
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

Niamoye Yaro (IER) et Bonnie Pendleton (West Texas A&M University)

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 Niatichichama

Badly stored grain subject to contamination by fungi leading to poor grain germination
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