Pearl millet research in Burkina Faso

West Africa Regional Pearl Millet Convening
September 4-6, 2018
CERAAS

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INERA is one of the four research institutes of the National Center of Scientific and technological research (CNRST)

INERA is specialized in Environmental and agricultural research in Burkina Faso

INERA's role is to generate knowledge and technological innovations in order to:

- improve plant, animal, forest, wildlife and fisheries production;
- promote the protection, safeguarding and rational management of natural resources and rural areas.
INERA is organized in 18 research programs around 5 research departments:

- Department of Crops Productions (DPV)
- Department of Environment and Forests (DEF)
- Department of Animal Productions (DPA)
- Department of Natural Resources Management and Production System (GRN / SP)
- National Center of Specialization in Fruits and Vegetables (CNS-FL)

Central laboratories support activities assigned to the scientific departments
INERA operates through 5 Regional Directions

- DRREA DU SAHEL
  - Katchari

- DRREA DU NORD-OUEST
  - Di

- DRREA DU CENTRE
  - Kamboinsé
  - Saria
  - Kouaré

- DRREA DE L’OUEST
  - Farako-bâ
  - Niangoloko

- DRREA de l’Ouest/Farako-Bâ (Bobo-Dioulasso)
- DRREA du Centre/Saria (Koudougou),
- DRREA de l’Est/Kouaré (Fada-N’gourma)
- DRREA du Nord-Ouest/Di (Tougan),
- DRREA du Sahel/Katchari (Dori)
- CREAF/Kamboinsé
Pearl Millet research is conducted in the program of traditional cereals (PCT/DPV)

General objective of the pearl millet research unit at INERA is to improve pearl millet production and use: It includes varietal improvement, combating the enemies of the crop, agronomic techniques and improving grain and fodder quality and suitability for semi-industrial food processing.
Current main activities of breeding program along the pearl millet value chain

- **Variety development**
  Variety development is done along 3 product concepts:
  - Development of OPV for Sahelian zone
  - Development of OPV for Soudanian zone
  - Development of hybrid varieties for Soudanian zone

- **Plant protection and agronomy**
Current main activities of breeding program along the pearl millet value chain

- **Breeder and foundation seed production**
  According to the seed law, INERA is in charge of breeder and foundation seed production including pearl millet. Pearl millet section ensure the production of breeder seed of elite varieties. Seed production unit in each regional Direction ensure the production of foundation seed. Foundation seed is also produced in partnership with seed producers under the supervision of INERA.

- **Participatory technology transfer**
  In the governance of INERA the national and regional technical committee (CTR) are the official way the technologies generated by research were transferred to users.

- **Capacity building**
  Capacity building is way also the way technologies are transferred to users.
Key Achievements/Outputs

- Pearl millet genetic resources conserved
- Elite varieties developed and used by farmers
- Hybrids and OPV varieties in pipeline
- Good agronomic and plant protection practices available for intensive production
- Efficient breeder and foundation seed production system in place
- Training tools for capacity building available
- Strong partnership built
### Adaptation area of released varieties

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<th>Variety</th>
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<th>North-Sahelian &lt;400 mm</th>
<th>South Sahelian 400-600 mm</th>
<th>North-Soudanian 600-800 mm</th>
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Future goals in PM research

- Efficient technology delivery system
- Improved productivity:
  - Hybrid
  - Dual purpose varieties (hybrids & OPV)
  - Nutrient and water use efficiency
  - Agronomy and plant protection
- Improved nutritional value of pearl millet for food and feed
Constraints/Needs to move forward

- **Key constraints in achieving future goals**
  - Low number of personnel working on pearl millet
  - Insufficient fund for research and results transfer
  - Insufficiency/Lack of adequate equipment and infrastructures
  - Pearl millet has low added value

- **Specific needs/priorities that would address these constraints**
  - Strengthen research team by recruitment of researchers and technicians
  - Acquire equipment and infrastructures that can boost breeding program efficiency
  - Sustainable funding
  - Develop product with good market value traits
Partnership/Acknowledgements

IRSAT/CNRST
Ministry in charge of Agriculture Burkina Faso
Farmer Organizations (AMSP, FEPAB, UGCPA, FNGN, Farmer associations,)
Seed companies (AGRISSEM, COPROSEL, FAGRI,)
ICRISAT
USAID
German Government
Bioversity International
FIDA
BMGF/AGRA
European Union
Swiss cooperation
CILSS
Etc.