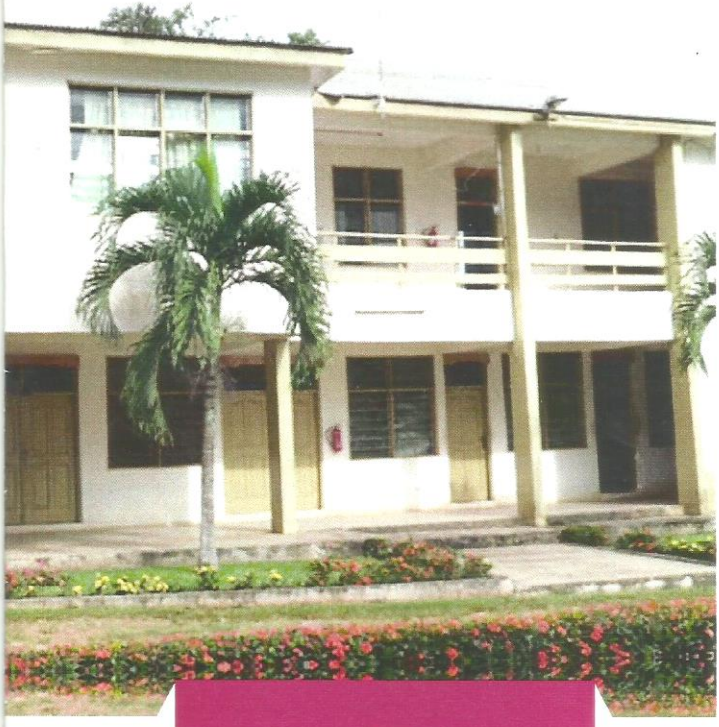

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CSIR- PLANT GENETIC RESOURCES RESEARCH INSTITUTE

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ABOUT CSIR-PGRRI

The Plant Genetic Resources Research Institute (PGRRI) is one of the 13 research institutes under the Council for Scientific and Industrial Research (CSIR). The CSIR-PGRRI has the mandate to collect, characterize, evaluate, document, conserve, distribute and utilize plant genetic resources (PGR) from Ghana and abroad.

STRUCTURE

The activities at the CSIR-PGRRI are administered by the Director assisted by six divisional heads. The divisions are: Plant Genetic Conservation (Field Conservation, In-vitro Conservation, Seed store, Cold storage), Plant Genetic Diversity (Molecular Biology and Agro morphological), Plant Protection (Plant pathology, Entomology and Virology), Commercialization (production and marketing of planting materials, consultancy services and Training) Finance and Administration (Personnel, estate, transport, security).

WHY PLANT GENETIC RESOURCES?

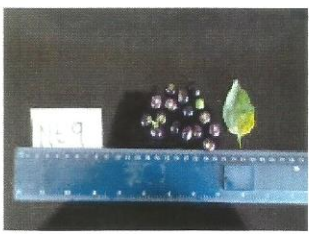
Plant genetic resources are fundamental to plant improvement but are threatened through the activities of man and natural hazards.

Goal of CSIR-PGRRI

To ensure the effective conservation and use of PGR for food security and sustainable agricultural development.

Objectives of CSIR-PGRRI

- To develop technologies for the efficient conservation and utilization of orthodox and recalcitrant PGR materials.
- To strengthen human resource capacity and capability.
- To identify, establish and strengthen inter-institutional collaboration and linkages.
- To identify and access external donor funding and commercialize research results.
- To gather, process and disseminate information relevant to PGR management in Ghana.



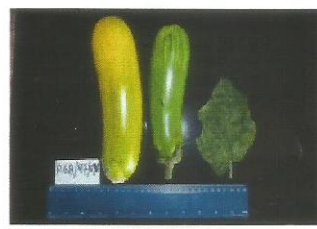


Figure 1: Sample of eggplant germplasm characterized and evaluated

CSIR-PGRRI Research Programmes

This involves surveys, collecting, characterization, evaluation, documentation, conservation, regeneration, distribution and utilization of legumes, cereals, vegetables, root and tubers, medicinal plants, fruit trees, spices and forest plant species. Research at the CSIR-Plant Genetic Resources Research Institute is focused on providing quality data to enhance the utilization of the genebank's collection. Research priorities include;

- Characterizing and evaluating germplasm for morphological and key agronomic/horticultural traits such as salt tolerance, disease/pest resistance.
- Expanding the genetic diversity in the collection through germplasm collections and acquisition.
- Developing and applying new molecular technologies for crop genetic structure and diversity analysis of priority crops.
- Distribution of germplasm to stakeholders to support educational, research, and breeding objectives.

Three key approaches to plant genetic resources conservation are shown in figures 2 to 4 below

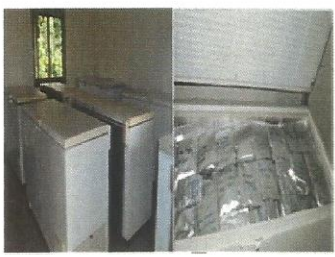


Figure 2: Seed genebank

Figure 3: *In-vitro* genebank

Figure 4: Field genebank

CSIR-PGRRI Flagship Projects

Modernisation of Agriculture in Ghana (MAG)-(Global Affairs Canada)

Project objectives:

- Increase breeders and farmers' access to cereal, legume and root and tuber crop germplasm.
- Enhance farmers' access to high quality planting material of released taro and sweet potato varieties.

Key project achievements include;

- Accessions of cassava, maize, rice and soya bean conserved at the genebank regenerated / multiplied, characterized and distributed to stakeholders. Over 150,000 planting material of taro leaf blight diseases tolerant germplasm distributed to farmers in the Eastern Region.
- Over 30,000 vines of improved sweet potato varieties distributed to farmers in the Eastern Region.

Seeds for Resilience (Crop Trust)

The project is aimed at strengthening the link between the Ghana National genebank (the CSIR-PGRRI) scientists and farmers to conserve and share their seed collections to improve food security.

Key project benefits include;

- Empower scientists and farmers through collaboration with the National genebank to select accessions of key crops such as cowpea, bambara ground nut and indigenous leafy vegetables (ILVs) with traits that farmers use to build resilience to climate change and other challenges.
- Create an enabling environment for farmers and scientists to conserve any unique crop germplasm they may have with the National genebank for future utilization.

Commercialization

We provide consultancy services and also produce planting materials/ fruits for sale to the public

Figure 5: Market women patronizing CSIR-PGRRI's rambutan fruits

Consultancy

- Agroforestry and Biodiversity issues
- Development of ecoparks and arboretum
- Conservation, propagation and utilization of various crops such as nutmeg (*Myristica fragrans hout*), Prekese (*Tetrapleura tetraptera*), Sweetberry (*Synsepalum dulcificum*), Cinnamon (*Cinnamomum zeylanicum*), Rambutan (*Nephelium lappaceum*), Grain of paradise (*Aframomum melegueta*), black pepper (*Piper nigrum*) etc.

Available planting materials / fruits for sale

Aframomum melegueta (Ɛfɔmwisa)
African Star Apple
Avocado
Black pepper (Ɛsorowisa)
Bread fruit
Bread nut
Butter fruit
Carambola / star fruit
Cashew
Cinnamon
Citrus
Coconut
Garcinia / bitter kola
Grape vine
Guava
Irvingia gabonensis (bush mango)
Jaboticaba
Jack fruit
Malay apple
Mango
Monodora myristica
Noni
Nutmeg
Oil palm
Pachira nut
Passion fruit
Pawpaw
Pomegranate
Prekese
Rambutan
Soursop
Sweetberry (Asoa)
Sweetsop / Custard apple
Velvet tamarind
White pepper
Xylopia aethiopica (hwentia)

CSIR-PGRRI Partners

The institute has linkages with international research community in PGR conservation, CSIR institutes, the local universities, government agencies (e.g.MOFA), Non-governmental organizations / Farmer Based organizations, the media etc.

For more information about CSIR-PGRRI, please contact

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