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# The Royal Botanic Gardens, Kew, is a global resource for plant and fungal knowledge.

One of the largest and most diverse collections of plant and fungal specimens (living and preserved) in the world, e.g.

- >7 million herbarium vouchers,
- 35,000 species conserved *ex situ* as seeds,
- >30,000 *taxa* in the living collection,
- Library, art, archive.

Unique combination of collections, databases, scientific expertise and **global partnerships** gives Kew a leading role in facilitating access to fundamental plant and fungal information.





#### Background

Partnerships with 1,000 collaborators in > 100 countries provides the focus for developing plant-based solutions to global challenges such as biodiversity loss, food and water security, poverty, disease and climate change.



Kew scientists are active in over 113 countries worldwide; new

agreements in 2014 with India and China (  $\bullet$  ).



### Kew's Science Strategy (2015-2020)

#### **Strategic priorities**

1. To document and conduct research into global plant and fungal diversity and its uses for humanity.

2. To curate and provide data-rich evidence from Kew's unrivalled collections as a global asset for scientific research.

3. To disseminate our scientific knowledge of plants and fungi, maximising its impact in science, education, conservation policy and management.





The **Millennium Seed Bank Partnership** (MSBP) in West Africa seeks to collect, conserve and sustainably use seeds of wild species, focusing on endangered, endemic and economically important plants.





#### Main partners and collaborators

Burkina Faso

- The Centre National de Semences Forestières (CNSF)
- University of Ouagadougou

Ghana

- The Forest Research Institute Ghana (FORIG)
- Community groups from the East, West and Kumasi regions Mali
- Institut d'Economie Rurale (IER) Regional Centre in Sikasso
- Cantonnement Forestier de Sikasso
- Communities of Sikasso region

Niger

- Centre National de Semences Forestières (CNSF)
- Communities of Tillabery Region



#### **Main Projects**

1. The Millennium Seed Bank Project (MSBP) in West Africa (2006-2011): Mali and Burkina Faso

 Useful Plants Project (Botswana, Kenya, Mali, Mexico and South Africa) - Phase 1 (June 2007-May 2011) Phase 2 (June 2011-May 2016) -MGU + Wiet Pot Foundation

3. The Great Green Wall project in **Burkina Faso**, **Mali** and **Niger**, Sackler Foundation (FAO and Kew)





#### **Main Projects**

- 1. Pesticide Plants for Organic Cotton in Mali, Darwin Initiative
- 2. Cotton project in Mali, TRAID foundation
- 3. Conservation research, storage and restoration of Sahelian community species (PhD thesis)





*Carapa procera* (African crabwood) fruit, known to be able to protect against pests.



#### **Kew's proposed contribution**

Proposed Research activities

- Resolving the Taxonomy of Digitaria (Poaceae)– Revision of the genus and species varieties
- Seed production and germination of Digitatia - Seed Quality and Ecophysiology of Digitaria
- Actual and potential distribution of Digitaria – Drought tolerance and impact of climate change





### **Kew's proposed contribution**

Training & Dissemination

- Poaceae species identification training from local botanists and building up local herbarium collections
- Training on seed research laboratory approaches
- Training on farm conservation of *Digitaria*
- Six peer review papers and a series of leaflets on seed handling, species identification, etc.





#### **Kew's proposed contribution**

Conservation activities

- Seed conservation of Digitaria and building up local seed collections
- On farm Conservation *of Digitaria*



