

# Food Security and Genetic Resources : Bangladesh Perspective

**Md. Shahidur Rashid Bhuiyan, Ph.D**

Professor of Genetics and Plant Breeding

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Pro Vice-Chancellor

Sher-e-Bangla Agricultural University

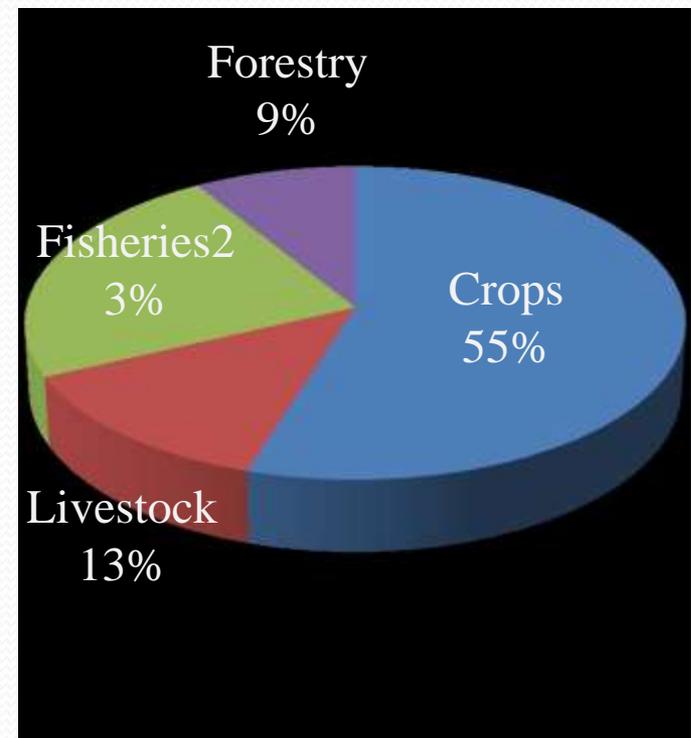
Bangladesh

# What is in the Talk

- **Situation of Agriculture in Bangladesh**
- **Basic facts**
- **National Seed Policy**
- **Availability of Food**
- **Access**
- **Utilization**
- **Opportunities**
- **Challenges**

# Agriculture in Bangladesh

Agriculture plays an important role in Bangladesh economy contributing about 19% of the GDP



## Basic facts

- Bangladesh is the most densely populated countries in the world. Population density is over 1100 people per km<sup>2</sup>.
- Change in per capita availability (1990-92 to 2010-12)
  - Energy- 2155 to 2413 Kcal/person/day
  - Protein- 40 to 65 gm/person/day
  - Fat- 20 to 28 gm/person/day
- Change in nutrition indicators (1990-92 to 2010-12)
  - Undernourished declined- 35% to 17%
  - Underweight (age 5 or less) declined- 64% to 36%
  - Stunting declined- 77% to 41%

# National Food Policy

- **The NFP approved on 14 August 2006.**
- **The goal of the food policy is to ensure a dependable Food Security system for all people of the country all times.**
- **The three objectives of NFP are**

**Objective 1: Adequate and stable supply of safe and nutritious food**

**Objective 2: Increased purchasing power and access to food of the people**

**Objective 3: Adequate nutrition for all individuals, especially women and children**

# Availability of Food

- **Attained self sufficiency in rice production**
  - **Release and use of modern rice varieties**
- **Increase of production of potato, wheat and maize**
  - **Release and cultivation of the new varieties**
- **Increased fruit production**
  - **Release of fruit varieties through selection from local and introduced germplasm**

- **Milk, meat and egg production increased by 46%, 55% and 42% respectively by 2012/13**
  - **Rearing of introduced breeds of cows and chickens**
  - **Reduction in poultry death**
- **Fish production continued growing at a significant rate of 4% during the last 5 years**
  - **Release and use of new fish varieties utilizing local fishes for culture**
  - **Capturing more marine fishes**

## Access

- **The daily rice wage increased by 5.8% in 2012/13, higher than the target of 5.1%**
  - **Increased access to diversified foods produced utilizing diversified varieties of crops**
- **Better access to fishes obtained through use of new fish varieties**
- **Differences between farm gate and retail get narrow**
  - **Good earning thus better access to nutritious food obtained from diversified crops**

# Utilization

- **Increasing trend of taking nutritious food**
  - **Obtained through growing of diversified fruit cultivars**
  - **Cultivation of diversified vegetable varieties (both local and introduced)**
  - **Increase in culture of different types of fishes**

- **Slight increase in dietary situation in the rural areas through 'One House, One Farm' national initiative**
  - **Raising home gardening and backyard poultry (Maintaining and Utilizing Genetic Resources)**
  - **Growing different types of vegetables**
- **Increase in protein though low in quality**
  - **Increase in rice cultivation by the use of newly released varieties**



**● Nutrient inadequacy in household diet per capita dietary intake of Folic acid, Vitamin A, Iron and Calcium is food to be no more than 60% of RNI**

**- Lack of awareness of the importance of diversified food**

# Opportunities

- We have diversified genetic resources of rice, fruits, vegetables and other crops which are not being utilized

**Table 1: List of accessions conserved by different organizations of Bangladesh (upto 2011)**

Organization	Crops	Accessions
BARI	Cereals other than rice, vegetables, fruits spices, pulses, oilseeds etc.	9491
BRRI	Rice	7979
BSRI	Sugarcane	3297
BAU (In situ)	Fruits	10256
BTRI	Tea (Cultivated and wild)	475
BSMRAU	Various crops	764
SAU	Rapeseed/Mustard and Rice	171
Laltee Seed Company Ltd.	Vegetables	6443

- **Screening and developing crop varieties tolerant to adverse climatic conditions by utilizing existing stress tolerant PGR**
  - **Saline tolerant rice and other crops**
  - **Submergence tolerant rice**
  - **Drought tolerant crops**
- **Promoting agricultural research for nutritional development**
  - **Bio-fortification through Zn & Fe enrichment in rice & other crops by utilizing valuable land races**
    - Zn rich BRRI Dhan 62 & BRRI Dhan 64**
  - **Yellow sweet potato, coloured potato etc.**

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- **Strengthening fruit varietal improvement program through utilization of local and introduced PGR**
  - **Strengthening fish conservation and variety development program**
  - **Improving livestock breed through cross breeding and selection**
    - **Conservation and utilization of local and introduced livestock breeds and types**

- **Promoting sustainability of coastal fishery by banning use of fine meshed nets**
  - allow marine bio-diversity for future use
- **Promotion of local goat breed rearing (Black Bengal Goat)**



# Challenges

- **Need a National genetic resources authority**
  - **Proposal placed to the Ministry of Agriculture to setup a National Plant Genetic Resources Institute**
- **Giving priority to genetic resources in the NFP, NFP PoA and CIP**
- **Strengthening information- sharing mechanism for GPA implementation**

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- **Need to make policy makers get informed and involved for the enhancement of Genetic Resources activities**
  - **Proper evaluation and characterization are not done that limit application of PGR**
    - **Low or no budgetary provisions**
    - **Lack of trained manpower in Gene Banks**



- **Conservation and utilization of fruit and forest Genetic Resources**

- **Land scarcity**

- **Lack of interest in fruit varietal improvement research**

- **Very little attempt to utilize local breeds/types for developing livestock breeds**

- **Lack of scientists/experts**



Thanks