

# **International Cooperation through Multidisciplinary R&D: IRRI Experience and links to the Philippines**

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# History of IRRI

- Created in 1960
- International non-profit organization based in the Philippines
- Mission:  
to reduce poverty and hunger, improve the health of rice farmers and consumers, and ensure environmental sustainability of rice farming.



# Goals

## Goals

- Reduce poverty through improved and diversified rice-based systems.
- Ensure that rice production is stable and sustainable, does minimal harm to the environment, and can cope with climate change.
- Improve the nutrition and health of poor rice consumers and farmers.
- Provide equitable access to information and knowledge on rice and help develop the next generation of rice scientists.
- Provide scientists and producers with the genetic information and material they need to develop improved technologies and enhance rice production.

# History of IRRI

- 1970s: “Green Revolution” doubling rice yields
  - IR8 developed by rice scientists working at IRRI in the early 1960s
- saved many regions of Asia from famine after it was released in November 1966.
- Doubled the yield
  - 2.5 t/ha -> 5 t/ha (now up to 10 t/ha in some places...)
- first introduced in the Philippines and India based on research conducted by IRRI scientists.

# History of IRRI

- Capacity building function allied with research
  - 15,000 people trained through IRRI
- Part of CGIAR (explain)
  - global research partnership for a food-secure future.
  - dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resources and ecosystem services.
  - research is carried out by 15 CGIAR centers.

# IRRI's current roles

- Research not only yield but also
  - *Nutrition, climate resilience, alternate photosynthesis mechanisms*
  - *Plant breeding conventional and molecular*
  - *Best farming practice (including mechanization)*
  - *Social issues e.g. gender, youth*
- 17 countries, 1300 people
- Education change; not just donor funded but a broad prospectus driven by rice/agriculture need
- Scholars' Program



# IRRI's links to the Philippines

- University of the Philippines Los Banos (UPLB)
- Department of Agriculture (DA)
  - *Philippine Rice Research Institute (PhilRice)*
  - *Bureau of Agriculture Research*
  - *Bureau of Plant Industry*
  - *Agricultural Training Institute, and*
  - *Bureau of Soils and Water Management*
- Los Banos Science Community Foundation Inc.
- Local government units
- Other national agencies
- Universities; and
- With various experts within the country

# IRRI's links to the Philippines

- IRRI sets aside two ex officio positions for Filipinos:
  1. Secretary of Agriculture
  2. President of the University of the Philippines

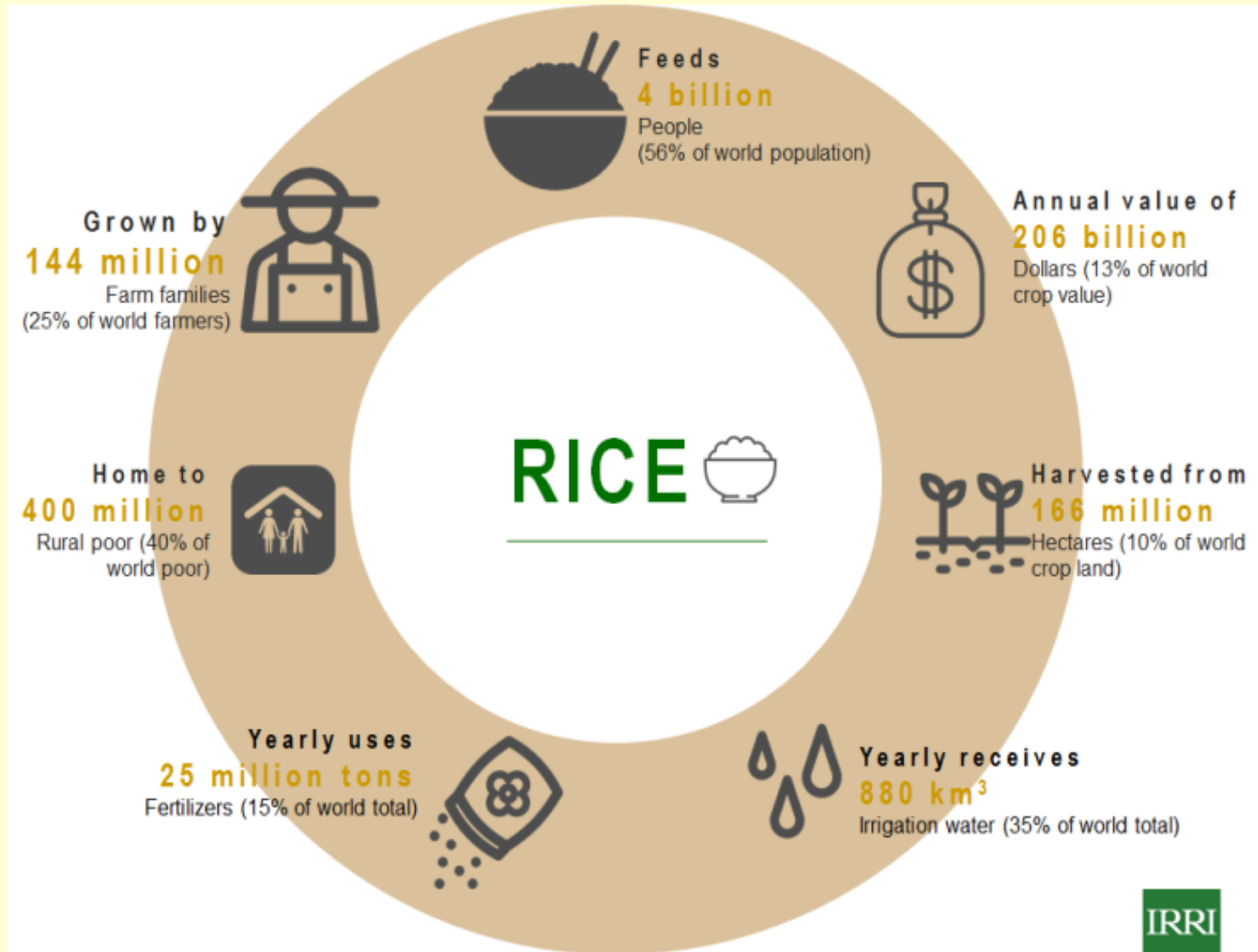




# Current research and development initiatives with the Philippines

- Supporting the country's rice program
- Breeding better varieties
- Sharing premium seed
- Developing healthier rice
- Protecting rice farmers
- Transferring technology with ICT; and
- Engaging farmers in research

# IRRI and Multidisciplinary



# IRRI and Multidisciplinary

- Hence “making a change” includes multiple disciplines
  - Social Sciences division from the beginning
- In Science, conventional plant breeding and molecular are integrated
  - Phenotyping
  - Genotyping

# IRRI and Multidisciplinary

- IRRI's internal organization:
  - Much of IRRI's work---done by projects which include multiple disciplines

IRRI's main research divisions include:

- Plant Breeding
- Genetics and Biotechnology
- Crop and Environmental Sciences
- Social Science
- Impact Acceleration

# IRRI and International

## RESEARCH

- Modern world: most science not done by individuals but by teams
- With today's technologies, teams span institutions, countries and continents
- Most our major projects include multiple international partners
- International partners include developing countries where the question to be addressed is pressing and developed countries where there are strong bodies of knowledge

# IRRI and International

- EDUCATION
  - Scholars from multiple institutions and countries
  - Value in education of not just knowledge but also life-long networks
- OVERALL
  - IRRI's roles in S-S and S-N linkages
  - IRRI as a “node”

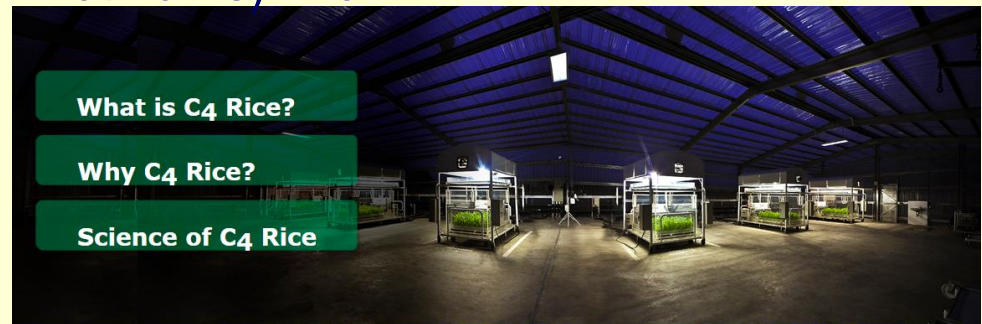


# Examples

IRRI collaborates with various stakeholders and is involved in a wide range of networks that caters to stakeholders in various ecosystems

These includes:

- More than 900 partners
- About 20 major programmes/networks (<http://irri.org/our-work/our-research-networks>) like:
- GRISP/RICE
- STRASA
- CURE
- CORIGAP
- C4 Rice project , etc.



# Capacity development

- IRRI hosts many students undertaking research in cooperation with IRRI scientists
  - Sandwich programs with parent universities
  - 2016: Over 300 PhD/MS scholars at IRRI
- Strong linkages with ASEAN and non-ASEAN universities
  - 25 ASEAN and 110 non-ASEAN universities
  - Fostering S-S and S-N interactions

# Capacity development

## 2016 In-country training statistics

Total number of participants	<b>33293</b>
Total number of countries	11
Total number of sites	69

## 2016 Scholars and short term training participants

Category	Female	Male	Grand Total
BS	44	26	70
MS	36	24	60
PhD	51	41	92
Intern	18	28	46
Fellow	1		1
On-the-Job Trainee	16	17	33
Visiting Scholar		1	1
Short course participants	139	216	355
<b>Grand Total</b>	<b>305</b>	<b>353</b>	<b>658</b>

# Capacity development

- IRRI Education is “taking a step up” with broader offerings  
(full prospectus: science, technology transfer, leadership)
- We are looking to partner with major entities (Departments of Agriculture, NARES, private sector companies) to together create focused training programmes
- In particular: emerging scientists (the next wave), Train-the-Trainer, policy developers

# Close

- Essence of IRRI's work is multidisciplinary and International
  - Multidisciplinary not only because
    - most science questions have multidisciplinary solutions (PB,GB,CES)
- but also
- because our mission is about helping people (SS)

# Close

- International because not only are broader teams better but because IRRI
  - Looks for commonality across nations both in terms of problems and also for best practice and insights into solutions from that same international rice community.
  - Part of our role is to be an integrator
- We link to the Philippines in a variety of ways
- Our Philippines networks are really valuable and useful to us; we hope we are equally useful to the Philippines partners



Thank you!