

## Postharvest and GRiSP

Postharvest research and development (R&D) is integral part of the Global Rice Science Partnership (GRiSP) and cuts across two themes: Theme 4: Extracting more value from rice harvests through improved quality, processing, market systems and new products and Theme 6: Supporting the growth of the global rice sector.

## Postharvest problems addressed

Postharvest losses in Southeast Asian countries are typically 15–25% in weight and, when quality is factored in, can result in an additional 10–20% loss of value in the market. Losses occur along the postharvest chain in harvesting, drying, storage and milling and are caused by delays in the chain, outdated equipment and practices and inappropriate storage facilities.

## Objectives

The goals of IRRI's postharvest work are to contribute to food security and poverty reduction by reducing postharvest losses and by enabling farmers to add value to their rice harvest. The objectives are:

- Improve farmer's income through better postharvest management to reduce losses and improve quality.
- Assist the industry to improve paddy quality and milling efficiencies.
- Assist Government with national standards, building capacity in postharvest, and assist in technology transfer from neighboring countries.

## Products Lines (PL) and Products

Within GRiSP, Postharvest is included in the following product lines:

### PL 4.1. Technologies and business models to improve rice postharvest practices, processing, and marketing

- 1. Improved postharvest technologies and management to increase postharvest yield** through adaptive research, local production of location-specific tools and setup of supply chains for centrally-produced equipment.
- 2. Business models for post-harvest technologies and improved rice market information systems** ensure that support services necessary for the economic usage of postharvest technologies are available to end users.
- 3. Post-harvest practices for reduced mycotoxin contamination of milled rice** (funding required).

### PL 4.2. Innovative uses of rice straw and rice husks

**2 Climate change mitigation through renewable, profitable, and sustainable energy production and carbon sequestration options based on rice residues** (funding required).

**3 Innovative, profitable, and sustainable processing options for rice husks and rice straw** (funding required).

### PL 6.1. Innovation in learning and communication tools and extension capacity development

**PL 6.2. Effective systems for large-scale adoption of rice technologies in South Asia.**

**PL 6.3. Effective systems for large-scale adoption of rice technologies in Southeast and East Asia.**

## For more information:

Contact Postharvest Unit: (IRRIPostHarvest@CGIAR.ORG); GRiSP document: CGIAR Thematic Area 3: Global Rice Science Partnership (GRiSP)

## Technology options



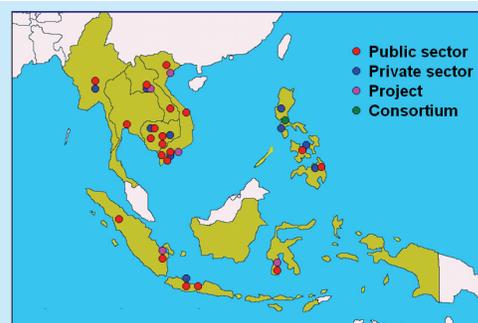
Understanding quality    Minimizing losses    Storing safely    Maximizing returns

During the past 15 years, IRRI and its partners have developed and evaluated numerous new harvest and postharvest technologies that are designed to reduce losses and improve grain and seed quality:

- **Mechanized harvesting** technologies
- **Hermetic grain storage** systems ranging from 50kg bags to Cocoons with several tons capacity
- Grain moisture meter and **quality assessment toolkit**
- Grain-drying systems with rice husk furnace to heat drying air
- Training modules for optimizing **rice mill performance**
- **Laser assisted land leveling**
- Market intelligence

## Postharvest partnerships in Southeast Asia, 2011

IRRI's postharvest network consists of public and private sector stakeholders in most countries of Southeast Asia and in India, Bangladesh, and Africa.



## Approaches and guiding principles

- Develop and support local production or distribution of appropriate postharvest **technologies and management options**.
- Support agricultural **extension and/or advisory services** for post-harvest technology and practices using multiple extension channels of public and private sectors.
- Develop **Business models** for improved postharvest technologies in a need-based value chain context.
- Facilitate **multi-stakeholder platforms** for national postharvest network (Learning alliances) to embrace public and private stakeholders.
- **Impact culture** with participatory impact pathway analysis (PIPA).
- Foster **cross country learning** and technology transfer.
- Strong **collaboration with NARES** centers of excellence.
- Building on and **adding value** to national initiatives.

## Funding of ongoing projects

- SDC: Postproduction Workgroup of the Irrigated Rice Research Consortium (IRRC): Southeast Asia – until December 2012.
- ADB: Addressing the Pre- and Postharvest Challenges of the Rice Supply Chain: CAM, VTN and PHI – until December 2012.

## Abbreviations

ADB	Asian Development Bank, Manila, Philippines
CAM	Cambodia
CGIAR	Consultative Group for International Agricultural Research
GRiSP	Global Rice Science Partnership
IRRI	International Rice Research Institute, Los Baños, Philippines
PHI	Philippines
R&D	Research and Development
SDC	Swiss Agency for Development and Cooperation
VTN	Vietnam