SRI –GPM ROTATION MODEL:
AGROECOSYSTEM ORIENTED APPROACH AND ADAPTION TO CLIMATE CHANGE

Assoc.Prof. HOANG VAN PHU
MSc. NGUYEN TRONG HUNG
INTERNATIONAL COOPERATION CENTER – THAI NGUYEN UNIVERSITY,
Email: phuhv@tnu.edu.vn
Tel: +84 912141837

WHAT IS SRI?

1) Transplan -ting young rice

5) Interleaved wet - dry irrigation

5
PRINCIPLES

2) Low density

4) Minimize inorganic fertilizer, encourage the use of organic fertilizer

3)) Do not use herbicides, encourage muddy grass raking

What is GPM

- Growing potatoes by the minimum tillage
- Use straw to cover when planting potatoes
- Benefits:
  - Saving labor for land preparation and harvesting
  - Do not burn but use straw, create humus, moisturize.
  - Farmers can grow potatoes in wet soil.
  - Increasing productivity, product quality and economic efficiency
  - Increasing soil nutrition, reducing the cost of the next crop

BENEFITS OF SRI –GPM ROTATION MODEL

- **Economic efficiency :**

- Increase crops and land use efficiency

  - Reduce input (varieties, chemical fertilizers, pesticides, water pumping materials ...)

  - Increase output (productivity, high quality, high price)

- **Eco-friendly cultivation:**

- Reduce chemical fertilizers, pesticides ...

  - Managing straw

  - Soil environment (increasing organic, biodiversity)

- Climate change: reducing GHG, increasing the ability to cope with cold weather, drought, lodging, or flood.

BENEFITS OF SRI –GPM ROTATION MODEL

- **Society:**

+ Improve the capacity of farmers (rice physiology, environment, climate change adaption)

- Promote the power of women
- Create team working
- Increase community structure
- Increase partnership

SRI – Climate change adaption

- **Drought resistant ability:**

- Story of summer rice Xuan Phuong, Phu Binh, Thai Nguyen in 2010
- Story of summer rice in Dien Chau, Nghe An, 2016

Summer rice in Xuan Phuong, Phu Binh, Thai Nguyen, 2010

Summer rice in Dien Chau, Nghe An, 2016

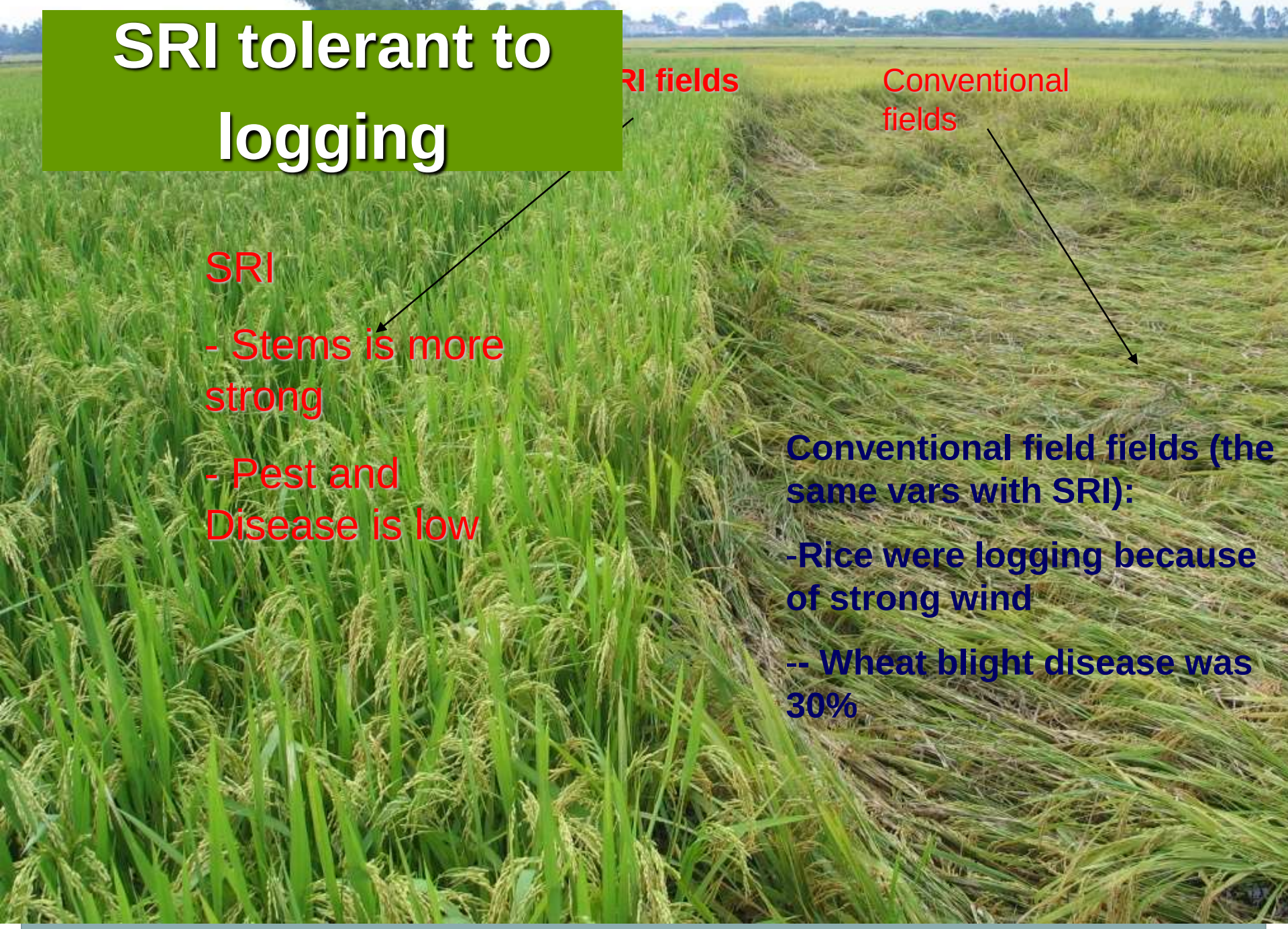
SRI – Climate change adaption

- **Ability against falling:**

- Story in Đại Nghĩa, Chương Mỹ, Hà nội, 2005
- Story in Xuân Phương, Season Crop 2010

Story in Xuân Phương, summer rice in 2010

SRI tolerant to logging



SRI – Climate change adaption

- **Ability against cold weather:**

+ Story in Xuân Phương, Spring crop 2011

+ Story in Phú Thượng, Võ Nhai, Spring crop 2013

Story in Xuân Phương, Spring rice 2011

SRI – Climate change adaption

- **Ability to cope with Flood**

+ Story about Season Crop 2017 in Dai Tu, Thai Nguyen

Flooding at the later stages of transplanting (Cù Vân)

Flooding at the boosting stage (Phục Linh)

GPM

- Burn straw

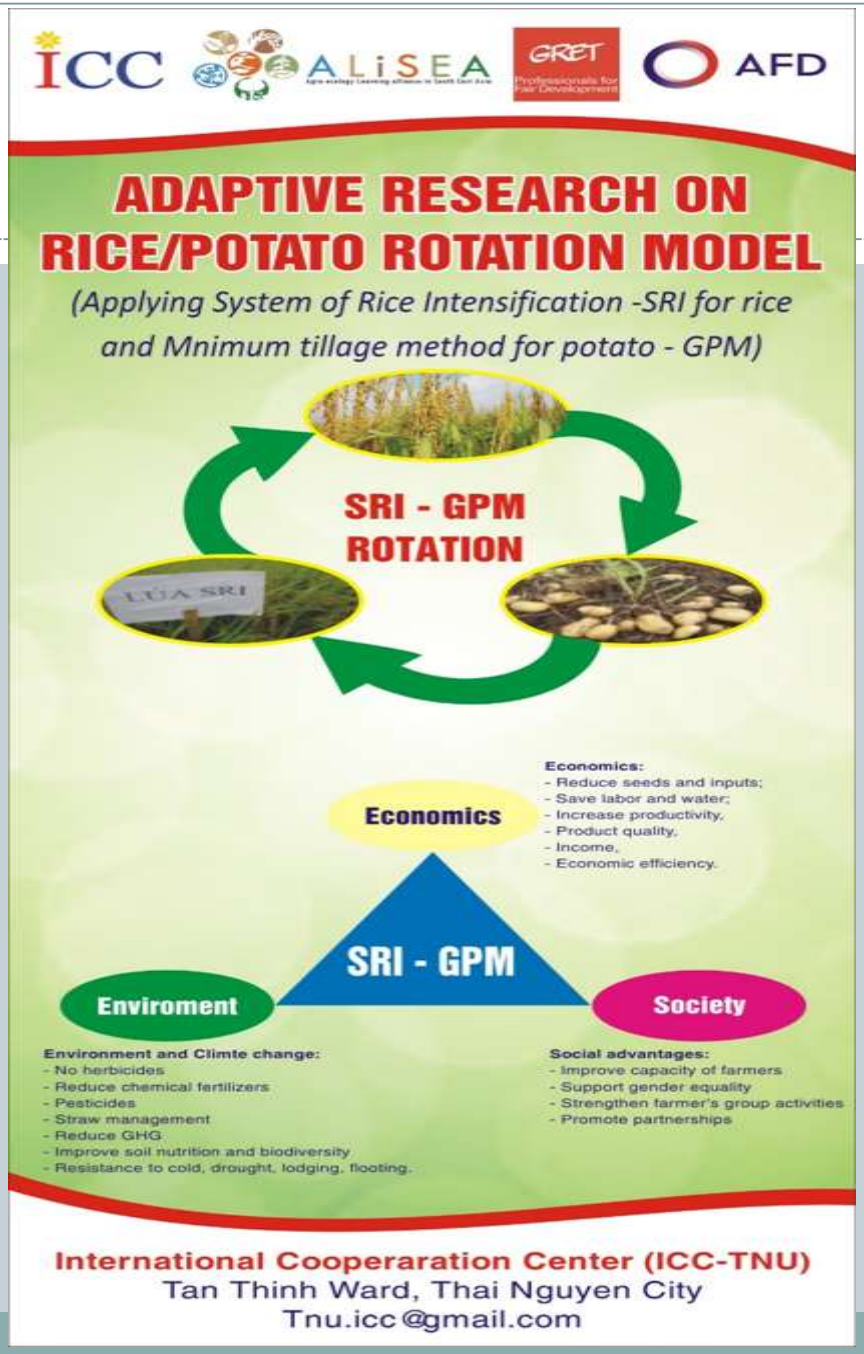
GPM

PROBLEMS EXIST

- Recognized as update technical advances :
  - SRI (2007)
  - GPM (2012)

- Both SRI and GPM are in the direction of ecological agriculture
- SRI and GPM are still implemented separately
- Lack of connection

SRI-GPM MODEL



RESEARCH APPROACH

- Conduct research on the field and farmers conduct research with support from the ICC.
- FFS is used in the implementation process
- Holistic approach (rotation and nutrition cycle, analysis aspects: society, environment, society, gender, value chain and participation of all parties)
- Promote partnership

DEPLOYED ACTIVITIES

- Organizing meetings with the people and local authorities on the implementation of this research
- Summer rice 2017: Training SRI

DEPLOYED ACTIVITIES

FFS Classes:

Sowing seeds, transplanting, weeding, fertilizing…

Field workshop

DEPLOYED ACTIVITIES

- Farmer investigation and evaluation after the end of Season crop
- Collect data and write the Report

Winter Potatoes Crop 2017 (GPM)

- Conduct techniques training on potato cultivation using the minimum tillage method– GPM
- FSS classes for the Potatoes – GPM model

RESULTS ACHIEVED

1) Meeting SRI-GPM model with people and partners
2) Traning courses about FSS; SRI for farmers
3) SRI rice model (2 ha) with 30 households in Vien village
4) Organize meetings for farmers to self-evaluate: monitoring book form, questionnaire after the end of Summer rice crop

RESULTS ACHIEVED

1) Organizing 01 Field Workshop to assess the results of SRI
2) Summary Report on study results for the 1st Crop
3) Training course on GPM for the 2nd Crop.
4) Build the model applying GPM

DIFFICULTIES

- The size of the area and number of households involved is less than the plan
- Some households do not pay much attention to rice cultivation. Despite their attending the training, they have no application, or partial application.
- Difficulties in promoting cooperation between enterprises and farmers
  - Farmers get used to working traditionally and individually
  - Farmers do not believe in the enterprise
  - Enterprises pay more attention to profits,
  - Enterprises' support for farmers is limited

SOLUTIONS

- Closely cooperate with local authorities in promoting people's participation
- Regularly check and assist people in taking care of the crop
  - ✓ Promote commitment value
  - ✓ Organize production in small groups of 3-5 households
  - ✓ Do not support for individual, but focus on group support; and based on the results of participation and outputs
  - ✓ Select the key farmers to build a small model and commit to cooperate with enterprises
  - ✓ Provide enterprises with CSR knowledge
  - ✓ Call for encouragement policies to support the link chain

Thank you for your attention.