



Sharing of Key Updates/Priorities for Indonesia Rice Sector Development

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National Rice and Challenges Ahead

- Indonesia's population continues to grow over time withy growth rate of 1.38%/year
- Land conversion (\pm 110,000 ha of rice land per year)
- Facing climate change (unpredictable rainfall)
- Labor shortages particularly on the outer island of Java and close to urban areas
- Inadequate number of highly qualified and educated extension workers: number of village 72,143 while number of extension worker 58,123 (80%)



Rice Research and Development Priorities (2017-2019)

• Priorities at National Level

- 1) **Improvement of rice productivity and crop management in tidal and freshwater (lebak) swamp areas**
 - New rice varieties for tidal and freshwater swamp areas (Sumatra, Kalimantan, Papua)
 - Increase rice productivity and cropping index in the swamp / wetlands areas
 - Hydrological characterization of tidal and freshwater swamp areas for cropping systems
 - Characterization of profile of tidal and non-tidal rice areas
 - Introduce mechanization suitable for inland freshwater (lebak) and tidal swamp areas
- 2) **New rice varieties for upland high elevation**



Rice Research and Development Priorities (2017-2019)

• Priorities at National Level

- 3) Improvement of rice-based farming systems production technologies, particularly in unfavorable rice ecosystems, including water management and farm machinery development**
- 4) Pilot testing of rice agro-advisory service / LKP**
- 5) Crop monitoring and planning support using remote sensing**
- 6) Capacity building: develop the next generation of rice scientists through sandwich type post-graduate degree training, short-course training at IRRI, and in-country training**
- 7) Joint publication at international journal**

Rice Research and Development Priorities (2017-2019)

• Priorities at Farm Level

- a) Increasing farmers' incomes through farming system approach
- b) Promoting ICT/LKP based advisory services to farmers
- c) Provided support for farmers in term of better quality seeds to help farmers improving crop performance
- d) Improving irrigation for rainfed rice areas through long storage, small canal, water pumps, and water reservoir to increase planting index



Rice Research and Development Challenges

- a. Lack of man-power to conduct high tech research: bio science (biotechnology and bioengineering), genome research, nanotechnology, and IT application
- b. High gap between senior and young researchers
- c. Inadequate number of highly qualified extension workers
- d. Limited availability of suitable varieties and insufficient supply of quality seeds of new HYV - A seed system and marketing needs to be developed



Priorities for Collaboration with IRRI and/or other partners

- 1) Develop/introduce new elite inbred breeding lines with higher yields, good quality, high nutritional value and tolerance to biotic and abiotic stresses for various rice ecosystems**
- 2) Develop hybrid rice with pest and disease tolerance**
- 3) Development of Golden Rice**
- 4) Develop and improved crop management technologies to reduce yield gaps and improve yield stability**
- 5) Farm mechanization research and development and the reduction of post production losses**
- 6) Studies and analyses to support policy development in the rice sector**
- 7) Training MS and Ph.D. students in rice research and development**



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