Variety Selection

Rice Science for a Better World

rice fact sheets

Selecting Varieties

Why use locally adapted varieties?

Use locally adapted varieties to ensure good crop establishment and high yield with acceptable grain quality for market.

Variety considerations	A variety should have:
	• Suitable grain quality (especially cooking characteristics, color, shape, taste and aroma, headrice recovery) and be acceptable to farmers and the local market at a price that is acceptable to farmers.
	• Adequate yield potential and stability over seasons.
	• Resistance or tolerance to the major diseases, insects and/or abiotic stresses (e.g., drought, flood) of the area.
	  ○ The right duration of growth to match the season. Avoid varieties that need to be planted or harvested early or late relative to other rice fields in the surrounding area to avoid:
	  ○ Increased attack from pests (e.g., birds during maturation), or
	  ○ growth problems during times of adverse environmental conditions (e.g., late maturing varieties running out of water)
	• Adequate tillering capacity to shade out weeds and produce a sufficient number of tillers for optimum yields
	• Resistance to lodging under normal farmer management

Management considerations	• Ensure variety is suited to the method of crop establishment and farmer management practices – e.g., some varieties are more suited to direct seeding than others. • Use "good" seed to maximize yields • Ensure seed is available in sufficient amounts to meet local demand. • Plant variety mixes in regions to maintain biodiversity and slow the spread of pests and the breakdown of varietal resistance.
Evaluating new varieties	• A variety should be tested over at least 3 seasons in farmers' fields to ensure suitability in terms of stability of yield and resistance to local pests and adaptation to local conditions. • Evaluate new varieties using crop management that is similar to farmers' practice. For example, if farmers apply very little fertilizer, new varieties should not be evaluated under very high levels of fertilization. If farmers direct-seed, evaluation should not be done under transplanted conditions. • Consult farmers to ensure variety suitability before releasing a new variety. • Grain quality, market demand and price need to be acceptable. • Farmers should lower risk of new varieties by testing in just part of their fields

For more information:

Send an email to: irri-training@cgiar.org.

For information on the seed management, visit http://www.knowledgebank.irri.org/seedMgmt.

For an overall view of crop management practices, visit TropRice at http://www.knowledgebank.irri.org/troprice.

To diagnose problems in the field, visit RiceDoctor at http://www.knowledgebank.irri.org/ricedoctor.

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