

Why use locally adapted varieties?

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

A variety should have:

- Suitable grain quality (especially cooking characteristics, color, shape, taste and aroma, head rice 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
 - i. Increased attack from pests (e.g., birds during maturation), or
 - ii. Growth problems under adverse environmental conditions (e.g., late maturing varieties running out of water)

Varietal considerations

- Adequate tillering capacity to smother weeds and produce a sufficient number of tillers for optimum yields
- Resistance to lodging under normal farmer management

Management considerations

- Ensure that 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 that seed is available in sufficient amounts to meet local demand.
- Plant varieties are specific to regions to maintain biodiversity and some of the varieties are resistant to biotic and abiotic stresses, which can be used in varietal development programs for resistance breeding

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 use direct seeding, the 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 adequate and within acceptable limit.
- For risk aversion the varieties should be tested on the small piece of land at farmer's field, and for any yield penalty the farmers should be compensated