

Rice quality

What is rice quality?

Rice quality is a combination of physical and chemical characteristics which are required for a specific use by a specific user. The quality of grain is best when it reaches physiological maturity. Management from that point forward will determine the rate of decline in quality but is unable to stop some decline in quality from occurring.

What determines grain quality?

Grain quality is determined by a combination of varietal properties and environmental conditions which occur during crop production, harvesting, processing and handling.

Varietal Properties

These include:

- chemical characteristics (gelatinization temperature, apparent amylase content, gel consistency, alkali spreading value and aroma),
- shape,
- size,
- color of grain,
- chalkiness,
- bulk density,
- thermal conductivity,
- equilibrium moisture content and
- flowability.



Environmental Properties

These are either additional to the normal varietal or are the consequence of certain varietal qualities lost or modified e.g. during milling. The important environmental properties are:

- moisture content,
- grain purity,
- physical and pest damage, cracked grains,
- presence of immature grains and
- milling-related characteristics (head rice recoveries, grain dimensions, whiteness, milling degree and chalkiness) will likewise be included.

Milling-related characteristics are relevant measures of value because these are the major concern of consumers.



qualities being

For more information:

For an overall view of crop management practices, visit www.knowledgebank.irri.org/tropRice
To diagnose problems in the field, visit www.knowledgebank.irri.org/ricedoctor

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