

Cooking Characteristics & insights on millet dishes

Value addition for millet based products

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About the Know Millets Webinars

▲ Different aspects of millets

- ✦ Ecology
- ✦ Historical context
- ✦ Sustainable food systems
- ✦ Community centric
- ✦ Nutrition & Socio – economics
- ✦ Technology & Engineering

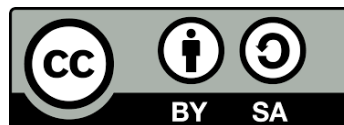


Sustainable food systems perspective

Please note slide number
for easy reference during Q&A



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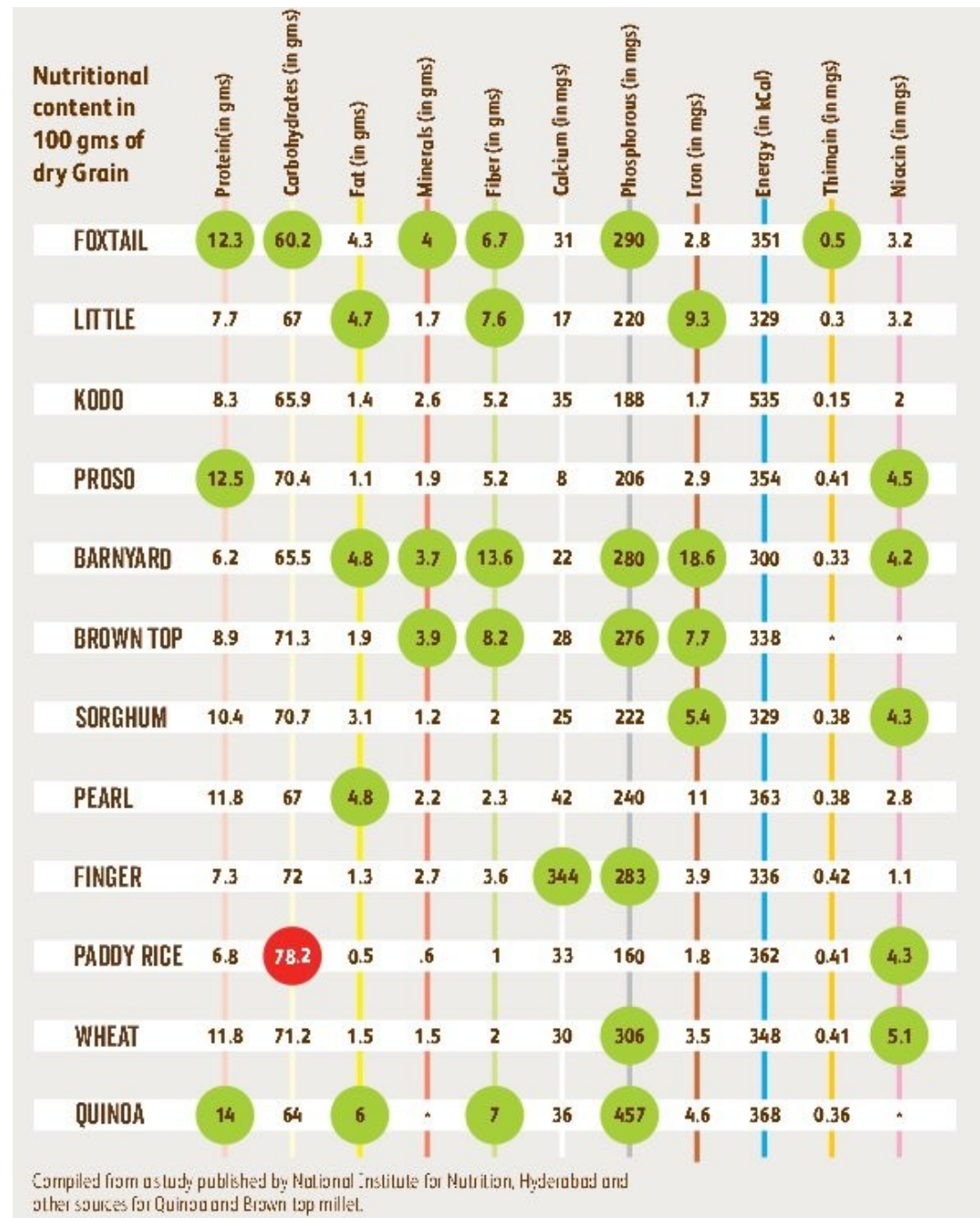
In this presentation

- ▲ Nutrition & Grain structure
- ▲ Millet based dishes
 - ✦ Rice & grits
 - ✦ Flours & fermentation
- ▲ Upstream processes
 - ✦ Cultivation & its effects
 - ✦ Processing & its effects
- ▲ Summary



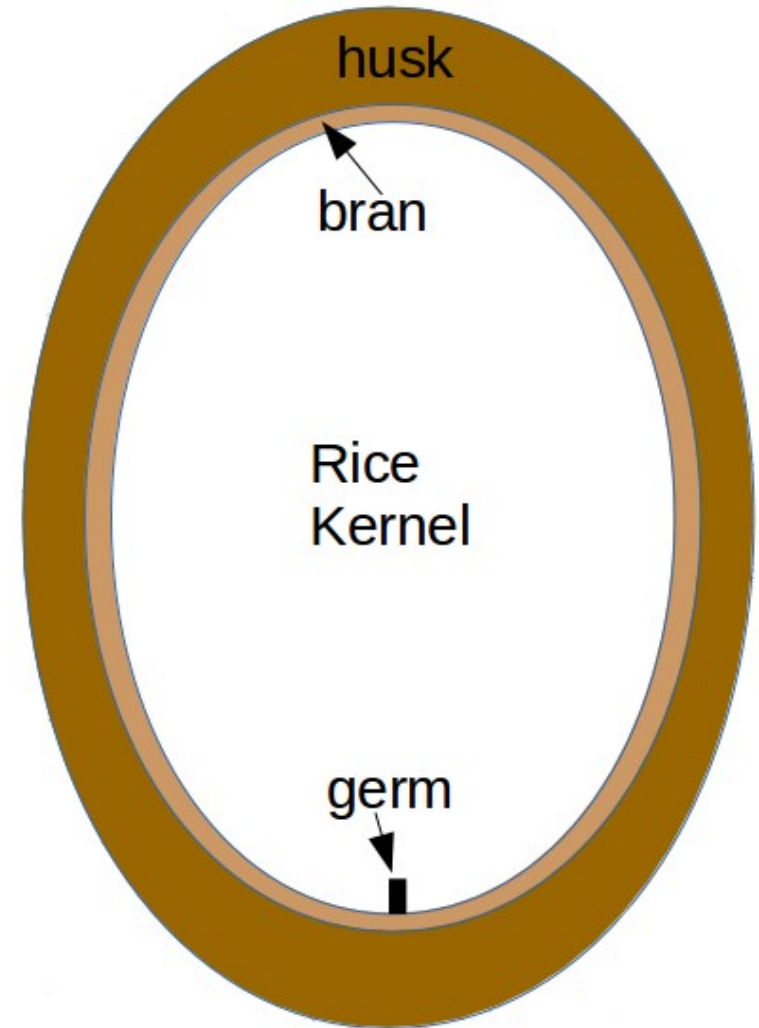
Nutrition

- ▲ Not just one super food
- ▲ Wide range of variability
 - ✦ Variety
 - ✦ Cultivation practices
 - ✦ Processing
- ▲ Nutrition on the chart is not always in the food



Grain structure & Nutrition

- ▲ Husk
 - ✦ Hard cellulosic, indigestible
- ▲ Bran
 - ✦ Extremely nutritious
- ▲ Germ
 - ✦ Protein rich
- ▲ Rice Kernel
 - ✦ Source of energy



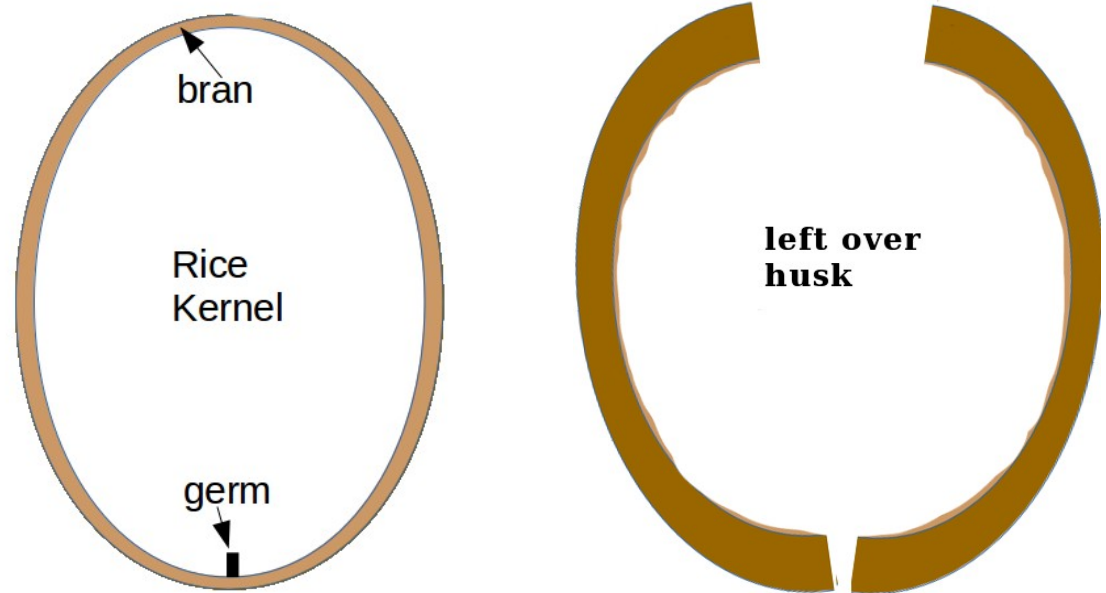
Characteristics of the Bran layer

▲ Composition

- ★ Fibers
- ★ Minerals
- ★ Fatty acids

▲ Structure

- ★ Thin
- ★ Fragile



Millet based dishes

▲ Impacts of class and caste on food history

- ✦ Almost no written records
- ✦ Many stories and songs
- ✦ Recipes were not important

▲ Water & millets

- ✦ Not much during cultivation
- ✦ Significantly higher quantity when cooking/being digested



Rice, grits, rava

▲ Recipes

- ✦ Similar to the ones that use paddy rice or wheat grits or rava
- ✦ Variability in water required
- ✦ Smaller size, more thirsty : lower pressure, lesser time,

▲ Combinations

- ✦ Kodo millet & green gram
- ✦ Little millet & bengal gram
- ✦ Foxtail millet & lemon/mango

Bran in rice, grits, rava

- ▲ The layer that floats on top when boiling the rice, grits or rava
- ▲ Significant effect
 - ✦ Cooking quality
 - ✦ Taste
 - ✦ Texture
- ▲ Conscious decision to be made when preparing recipes

Millet Flours

- ▲ Most prevalent form of using naked grains
 - ✦ Ragi
 - ✦ Jowar
 - ✦ Bajra
- ▲ Fatty acid profile & rancidity
 - ✦ Effect of stone ground
- ▲ Seasonal food ?



Millets & fermentation

- ▲ Sour Porridge
- ▲ Pace of souring
 - ✦ Slow initially
 - ✦ Burst of activity
 - ✦ Sharp decline
- ▲ Delicate but amazing sourdough breads



Cultivation practices & its effects

▲ Rainfed multi-cropping

- ✦ Agro-bio diversity
- ✦ Reduced Risk
- ✦ Community centric



▲ Irrigated mono-cropping

- ✦ Higher grain yield
- ✦ Higher risk & dependency
- ✦ Market centric

Processing & its effect on cooking

- ▲ Rainfed farming products
 - ✦ Variations in growing conditions
 - ✦ Cultural practices
- ▲ Processing for rice
 - ✦ Removal of immature grains
 - ✦ Bran retention & extent of damage
- ▲ Flour / Milling temperature



Summary

- ▲ Historical context
- ▲ Awareness & skill required at each step of the supply chain
- ▲ Important to understand the recipe
- ▲ Experiment !





Thank you !

For more info ...

<http://themillet.org>

<http://millets.wordpress.org>



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