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
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

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Compiled from a study published by National Institute for Nutrition, Hyderabad and other sources for Quinoa and Brown top millet.
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