

**Know Millets
Webinars
May 2020**

Session #09



Quality assessment & consumer price concerns

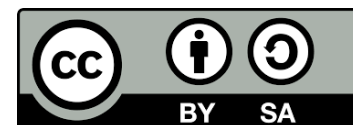
For staple forms of millets

Dwiji Guru

28th May 2020

<http://themillet.org/kmw2020>

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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

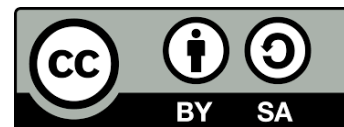
Sustainable food systems perspective



Please note slide number
for easy reference during Q&A



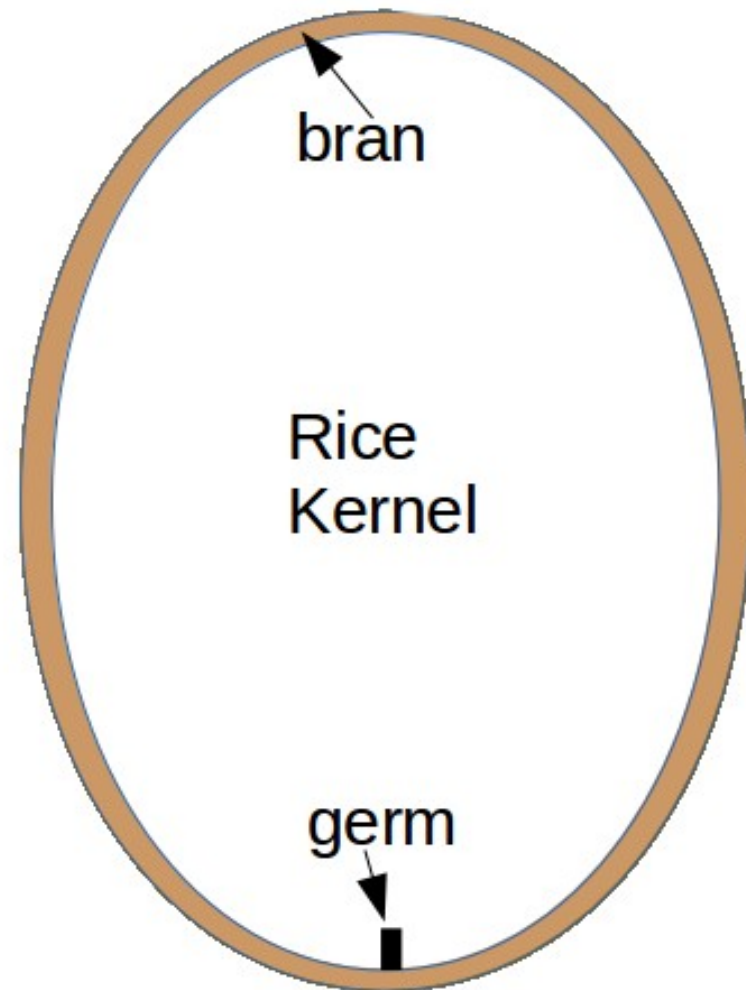
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In this presentation

- ▲ Quality Parameters
- ▲ Assessing quality
 - ✦ MOTG
 - ✦ Pests
 - ✦ Bran
 - ★ Retention
 - ★ Damage
- ▲ Price Concerns
- ▲ Summary



Desired Qualities in Millet Rice

▲ No MOTG (Clean rice)

(Material Other Than Grains)

✦ No stones & pebbles

✦ No straws & sticks

✦ No weed seeds & other objects

▲ Minimum unhulled grains

▲ No pest infestation

▲ Uniform sized rice kernels

▲ Minimum broken / shattered rice kernels

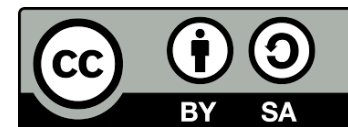
▲ (some) Bran retained

▲ Minimum bran damage



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Checking for MOTG

▲ Observe visually

- ✦ Spread a thin layer over a surface
- ✦ Use a magnifying glass

▲ Use a winnowing pan

- ✦ Toss up the material
- ✦ Straw, light sticks, dust, husk, etc. separate out

▲ Add to a bowl of water

- ✦ Lighter objects and grains float up
- ✦ Heavier objects and grains settle down

▲ Agitate and pour into another bowl/vessel

- ✦ Pebbles, sand settle at the bottom



Checking for Pest infestation

▲ Observe visually

- ✦ Creepy crawlies !
- ✦ Nests & clumps
- ✦ Dust

▲ Use a winnowing pan

- ✦ Hollowed out grains
- ✦ Nests and clumps

▲ Add to a bowl of water

- ✦ Worms and hollowed out rice grains float up

▲ In a packet

- ✦ Air sucked out
- ✦ Cob web like inside the packet
- ✦ Dust / sediment



Checking for Bran retention

▲ Observe visually

- ✦ Colour not white
- ✦ Dull not bright

▲ By touch

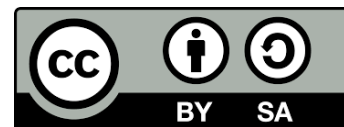
- ✦ Hold a fistful & drop it after 10 to 15 seconds
- ✦ Feel the contrast in oiliness

▲ Wash in a bowl of water

- ✦ The bran sediments

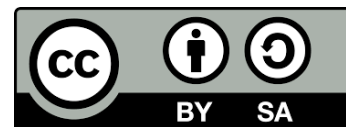
▲ While cooking

- ✦ Oil film on the top
- ✦ Residue on the inside of the lid cooker / utensil



Checking for Bran damage

- ▲ Observe visually using a magnifying glass
 - ✦ Minimum scratches on the rice kernel surface
 - ✦ Residual dust on surfaces the material has come in contact with
- ▲ Change in the odour as the bran on the millet rice kernel goes rancid
- ▲ Need to come up with ways to objectively quantify extent of bran damage



Recommendation

▲ Cook a sample

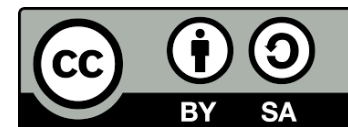
- ★ Check for bran content

- ★ Check for cooking quality

✓ Satisfied? Great !

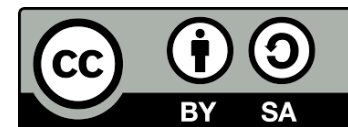
Let the vendor know

✗ Not happy? Try a different source



Consumer Price Concerns

- ▲ If its a hardier crop and grows without input why is it more expensive?
- ▲ Polishing involves additional steps in processing, even after that why are polished millets cheaper?
- ▲ We agree millets are healthy and good for the environment, but its too expensive!!



Hardier crop, yet more expensive?

- ▲ Millet supply chain is much weaker
 - ✦ Gaps lead to buffering and an increase in cost
 - ✦ Inefficiencies
- ▲ Millet rice are good food for pests too
 - ✦ Protection from pests is a challenge
 - ✦ Especially when not using chemical agents



Why are *polished* millets cheaper?

- ✦ Bleaching (a.k.a. *polishing*)
 - ✦ reduces the grains to their lowest common factor
 - ✦ Allows for larger scale processing
- ✦ A brazen display of market inclination for
 - ✦ short term individual financial benefit
 - ✦ over a long term societal benefit



Are millet rice are too expensive?

▲ Per kg cost (Approximately)

- ★ Natural (some bran retained) millet rice ... Rs. 100/kg
- ★ Bleached (aka polished) paddy rice ... Rs. 40/kg

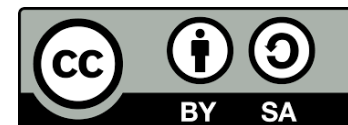
▲ Quantity required per meal cooked per person

- ★ 300 to 400 gms of cooked natural millet rice / meal
- ★ 600 gms of cooked bleached paddy rice / meal



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Are millet rice are too expensive?

★ Qty used for cooking a meal

- ★ Natural millet rice typical takes 1:3 water

- ★ For 400 gms cooked natural millet rice, need 100 gms of dry rice

- ★ Bleached paddy rice typical takes 1:2 water

- ★ For 600 gms cooked bleached paddy rice, need 200 gms of dry rice

★ Cost per meal

- ★ $(Rs. 100 \times 100 / 1000) = Rs 10 /$ meal for natural millet rice

- ★ $(Rs. 40 \times 200 / 1000) = Rs. 8 /$ meal for bleached paddy rice



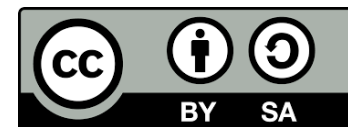
Are millet rice are too expensive?

▲ Per day cost

- ★ One feels full longer after a natural millet rice meal
- ★ Expenses on snacks goes down

▲ This does not take into account

- ★ Health benefits
- ★ Better Comfort between meals
- ★ Improved Efficiency, productivity, etc.



Summary

- ▲ **Quality Checks:** very very important
 - ✦ Cannot sell philosophy, product has to talk
- ▲ **Need to address consumer concerns**
 - ✦ Price
 - ✦ Authenticity
 - ✦ Reliable supply



**Consumer engagement
is the crux**



Thank you !

For more info ...

<http://themillet.org>

<http://millets.wordpress.org>

<http://rainfedindia.org>



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