

Mainstreaming millets into Nutritional Programmes

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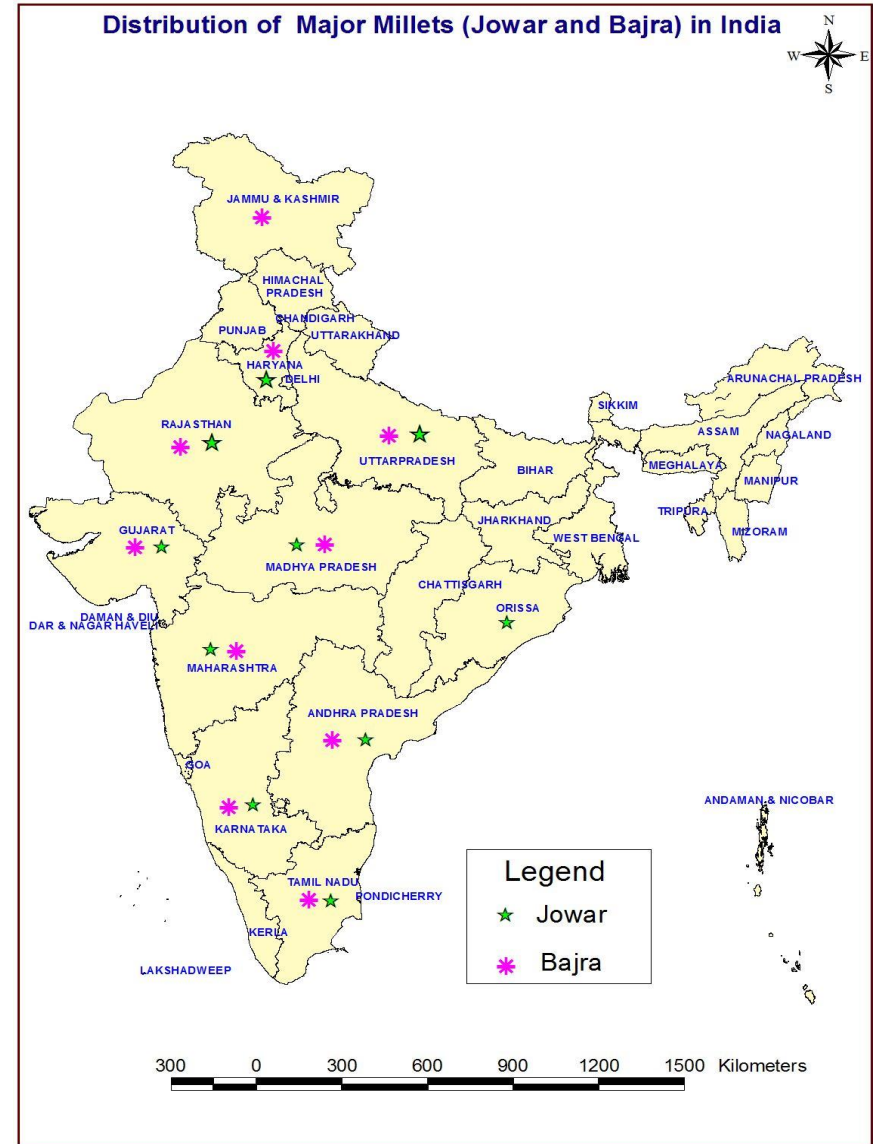
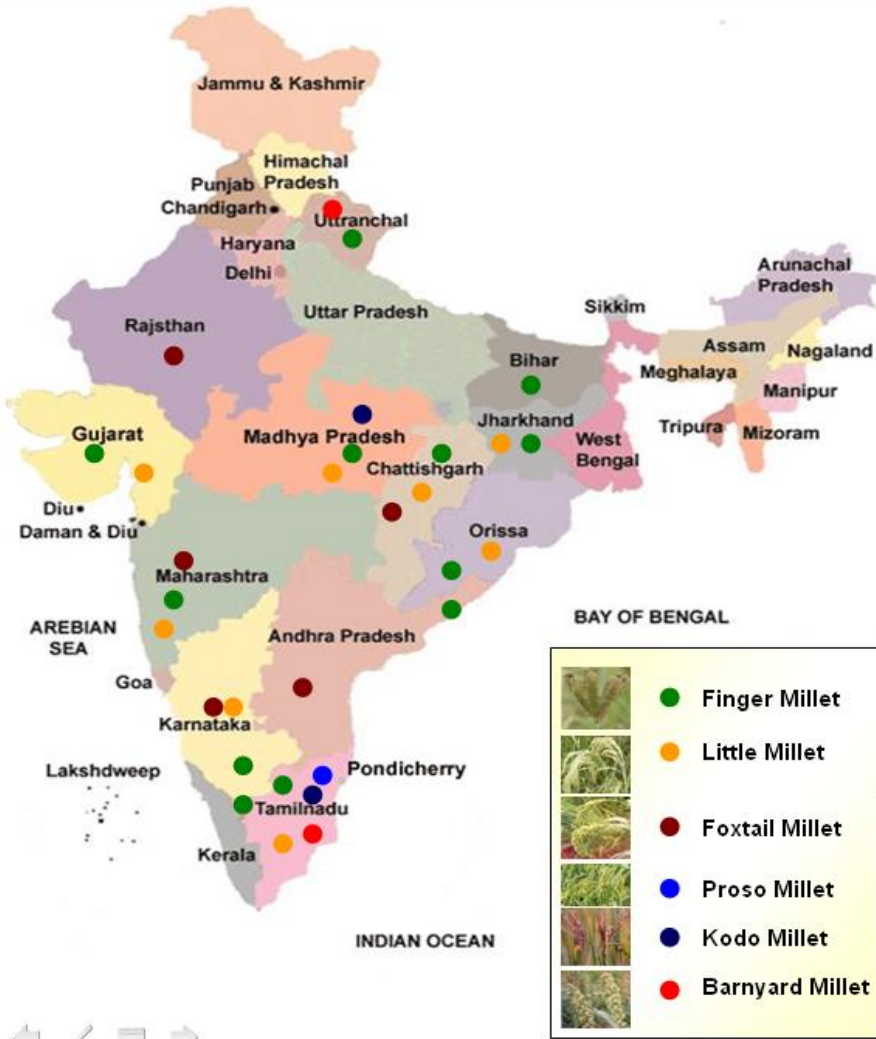


Foreign Affairs, Trade and
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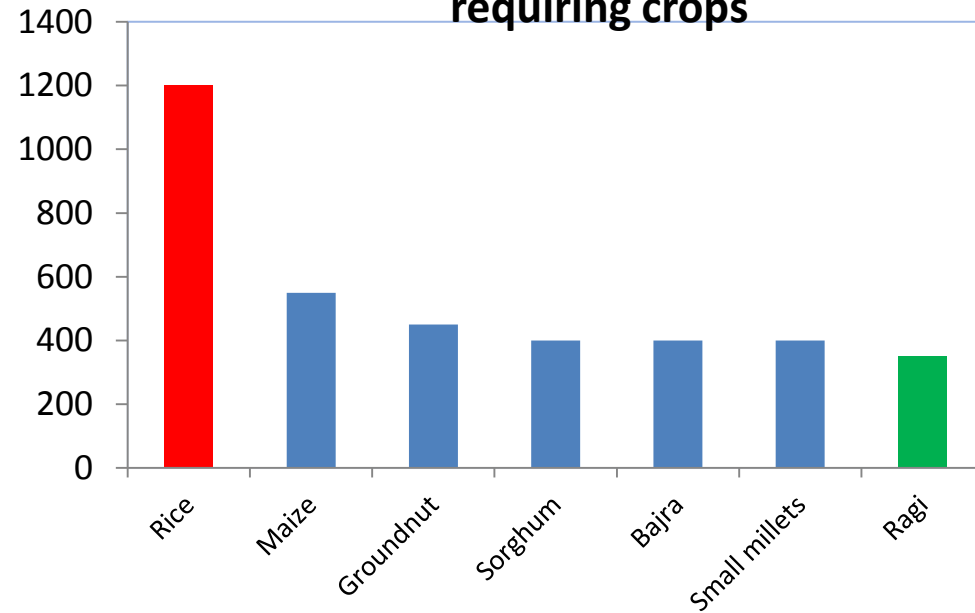
Quick over view of Millet growing areas

Distribution of Small Millets in India



Some agronomic & dietary benefits of millets

**Millets are low water
requiring crops**



- **Can be produced and procured from rainfed locations,**
- **Climate resilient crops**
- **Savings on water & power consumption in agriculture**

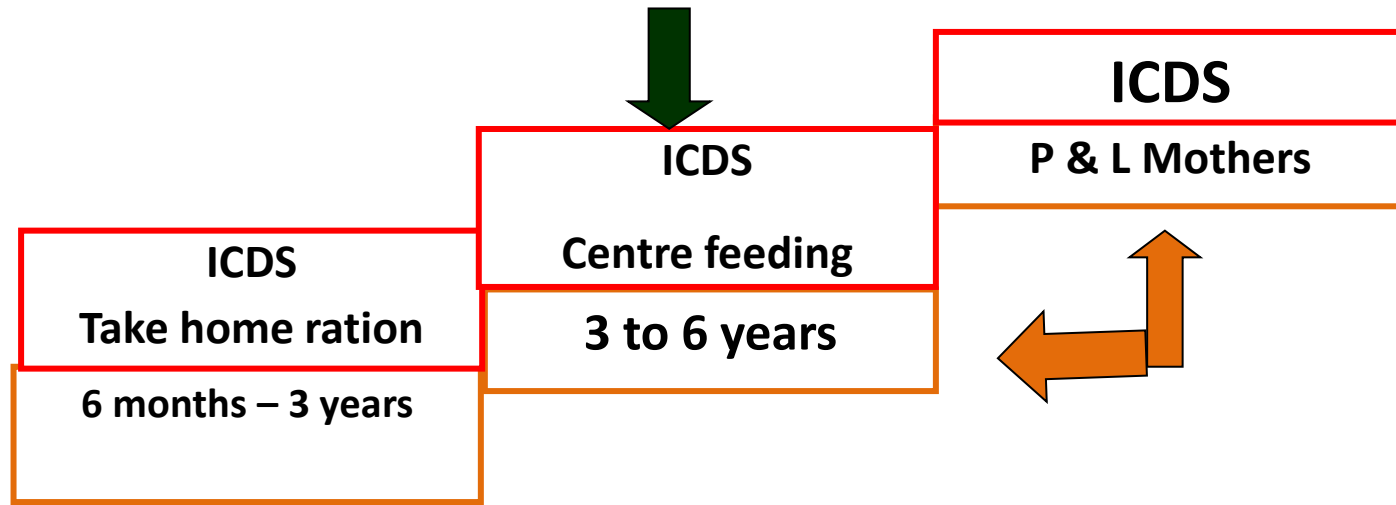
- **Millets are nutritionally superior over rice**
- **Low Glycemic index, fibre rich foods**
- **Contains high doses of nutrients as well as micronutrients**

Some of the Supplementary Nutrition Programmes (SNP):

| S no | Target group | Existing SNP |
|------|------------------------------|--|
| 1 | Children 0 to 6 Years | Integrated Child Development Services (ICDS), National Rural Health Mission (MRHM) |
| 2 | Children 6 to 14 Years | Mid Day Meals (MDM), Sarva Shiksha Abhiyan (SSA), |
| 3 | Adolescent Girls (11 to 18) | Kishori Shakti Yojana (KSY) |
| 4 | Pregnant & Lactating mothers | Integrated Child Development Services (ICDS), National Rural Health Mission (MRHM) |

Integrated Child Development Services (ICDS)

Initiated in 1975



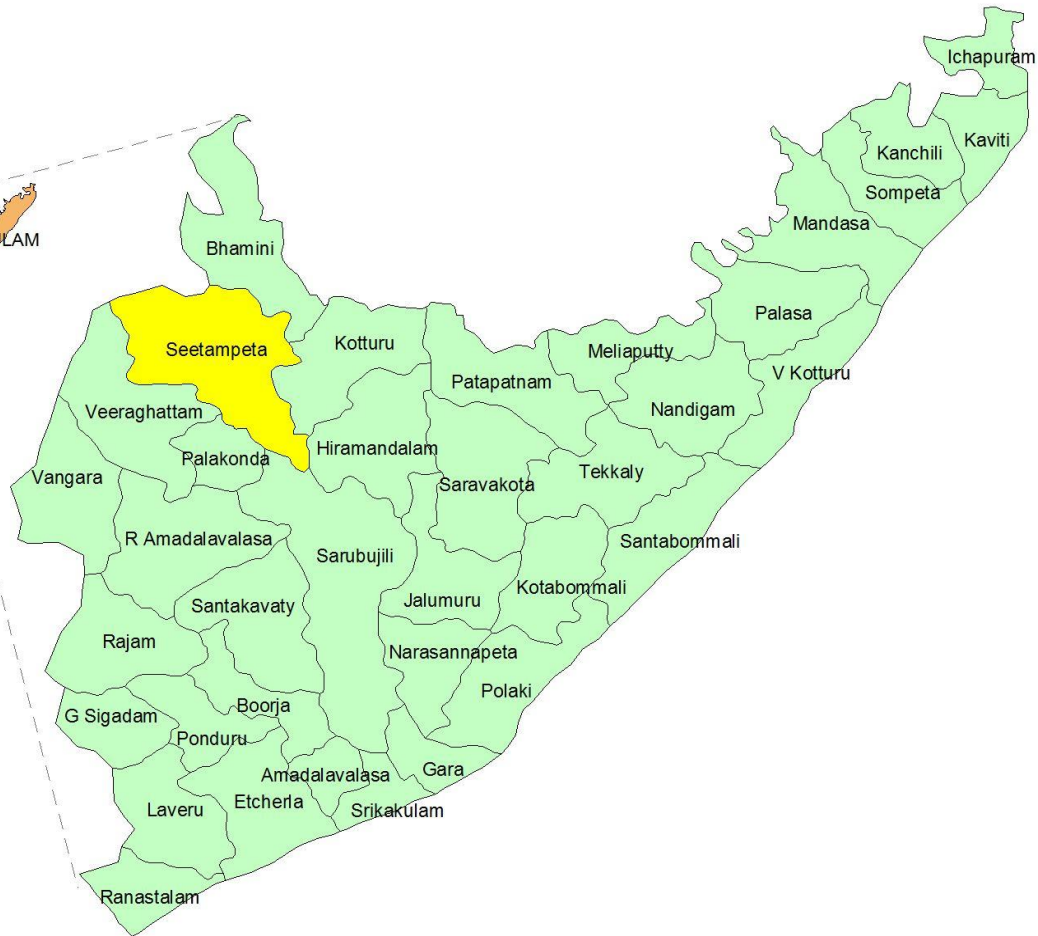
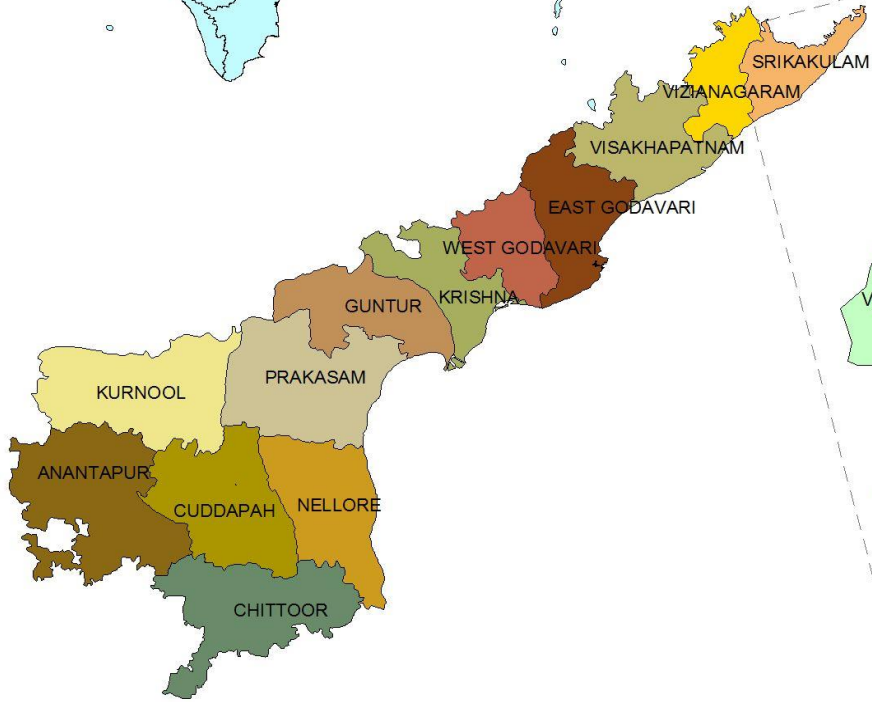
Despite this initiative,

- **almost 48% of children are malnourished and**
- **about 50 percent of all childhood deaths are attributable to malnutrition**

Location of the Pilot



Andhra Pradesh



Why this Pilot with millets?

- To **broad base** food basket through millets
- Ensure supply of **more nutritious local food**
- Develop a **decentralized food model** by including millets in PDS
- Need to reorient our focus from Food Security
→ **Nutritional food Security**

Integrating key components.....

Institutionalizing millets into SNPs & PDS



Processing hubs



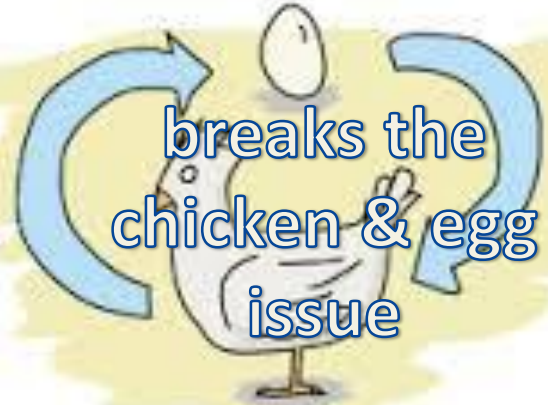
Improved agronomic practices



Reviving millet food cultures & Value addition



Reviving seed systems



breaks the chicken & egg issue

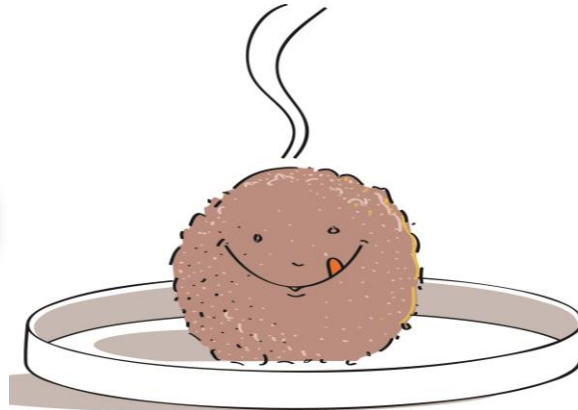
Tasty recipes made of millets



Finger millet Dosa



Foxtail millet kichidi



Foxtail millet payasam

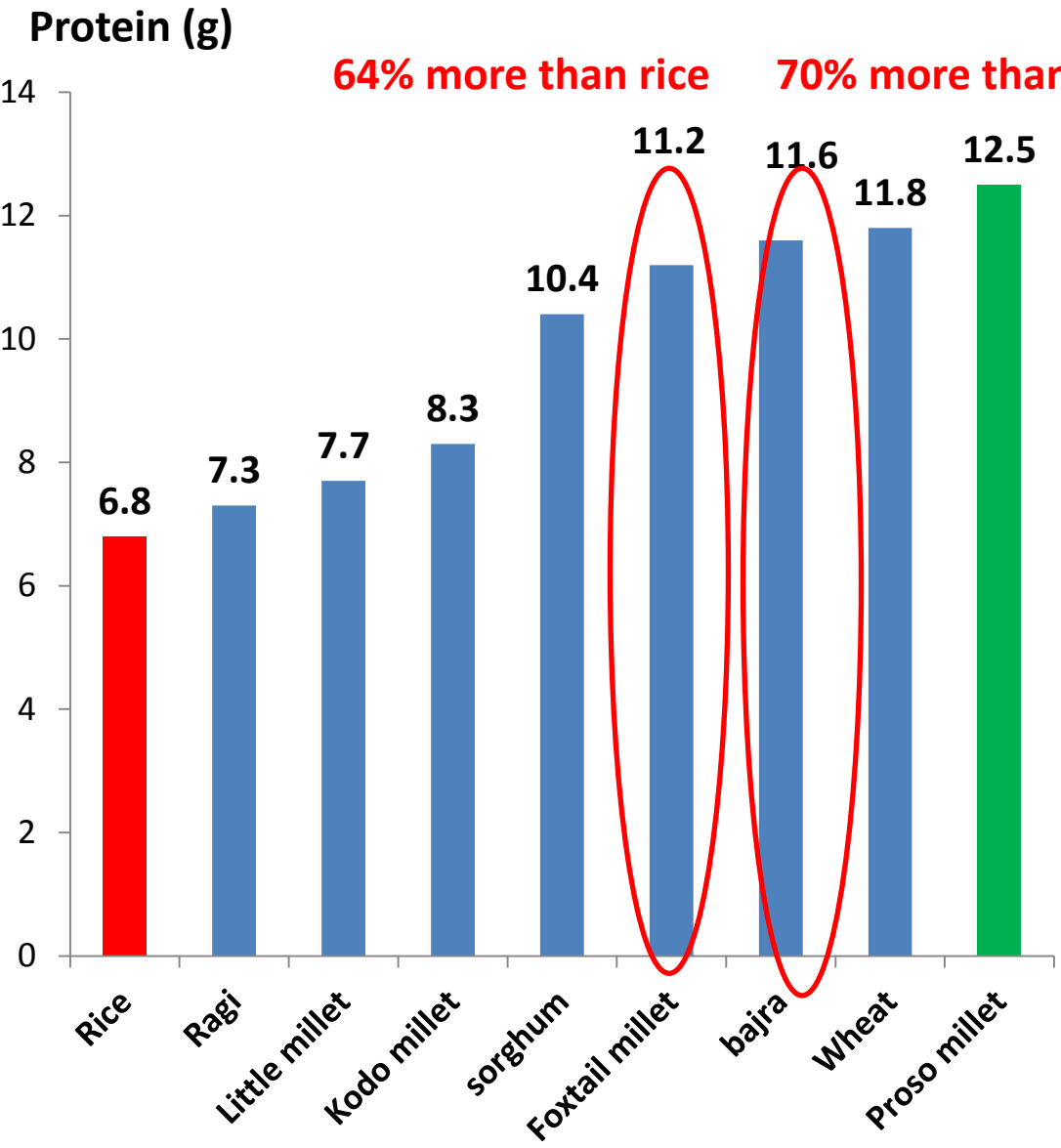
Recipe trainings helped us to gain confidence that children relish millet based menu- contrary to the popular notion that **“they do not prefer millets”**

Modalities of Pilot

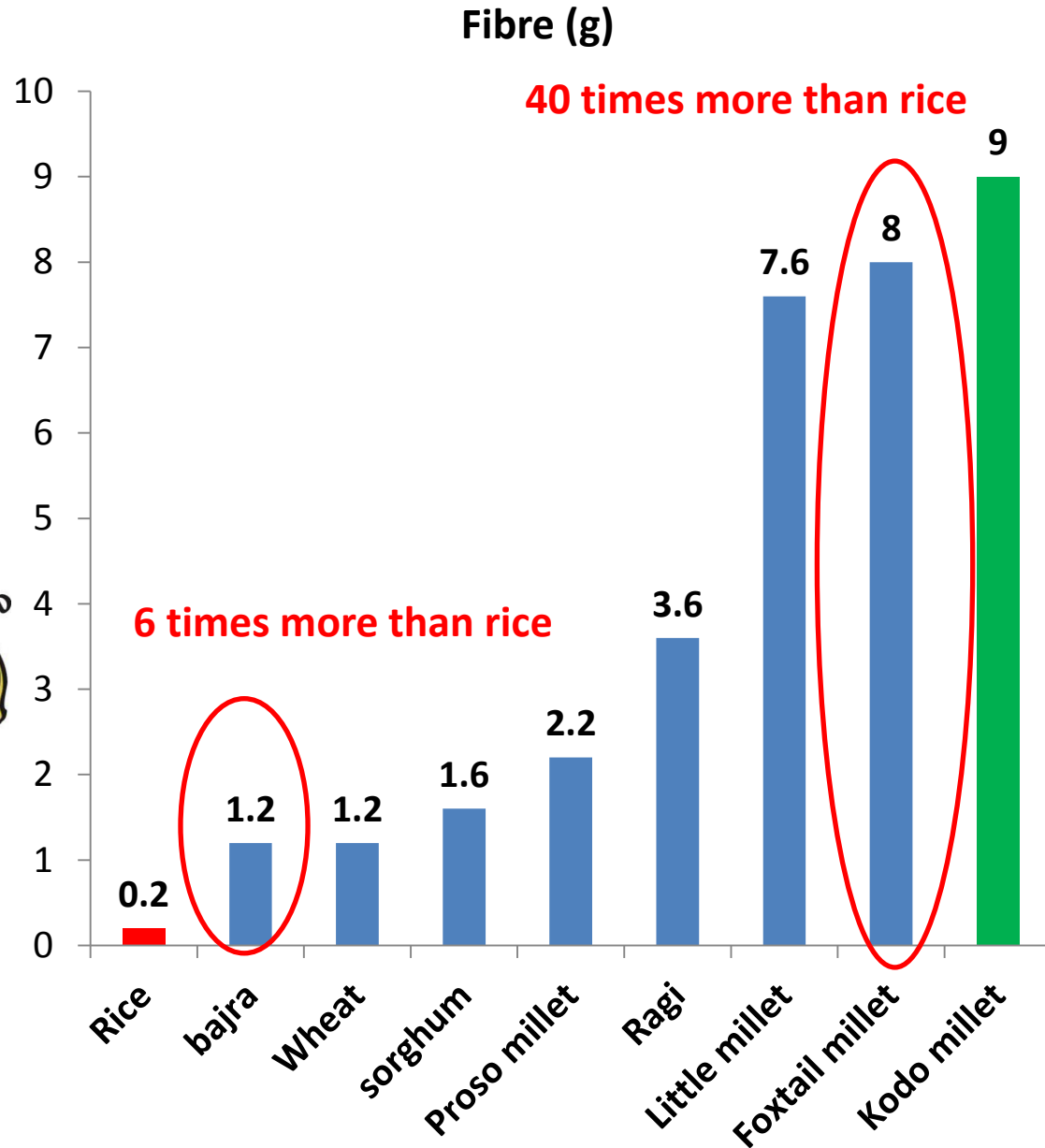


- Nutritional campaigns to sensitize school children, women, mothers committee members on the nutritional benefits of millet consumption
- Pilot with 160 children from 12 centres and a control group of same size with mothers' consent
- Existing model provides paddy rice based menu for 25 days in a month
- Pilot provides 8 days of Bajra menu, 8 days Foxtail rice menu & remaining 9 days Rice menu
- Cost sharing (millets menu provided by CIFSRF project & Rice menu provided by Government of Andhra Pradesh, India) in 80:20 ratio
- Recipes were standardised based on local knowledge & acceptance
- Established Millet processing unit under INSIMP

Proteins are required for maintenance in adults, for growth in infants, for foetal development in pregnancy and milk output in lactation.

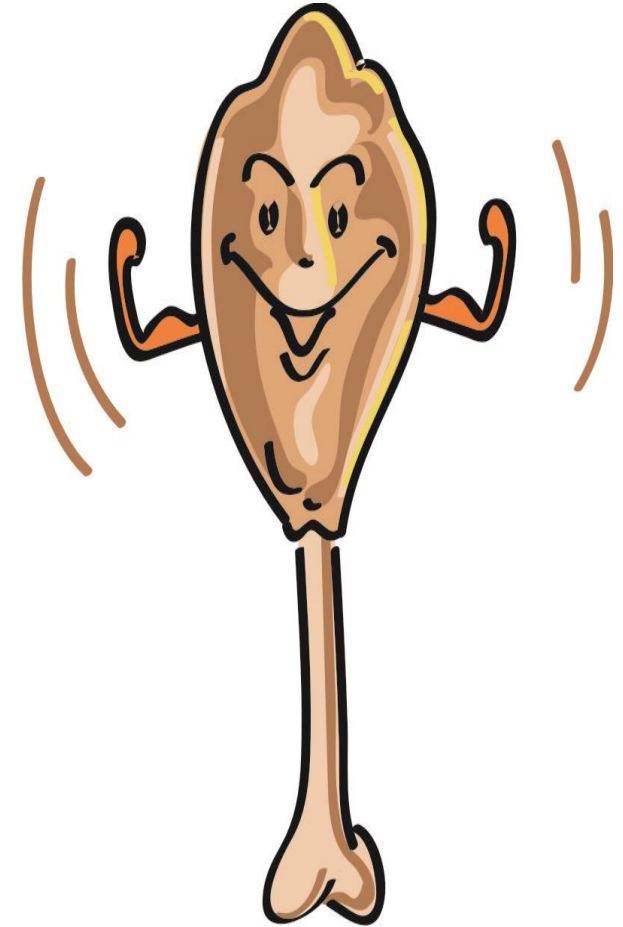
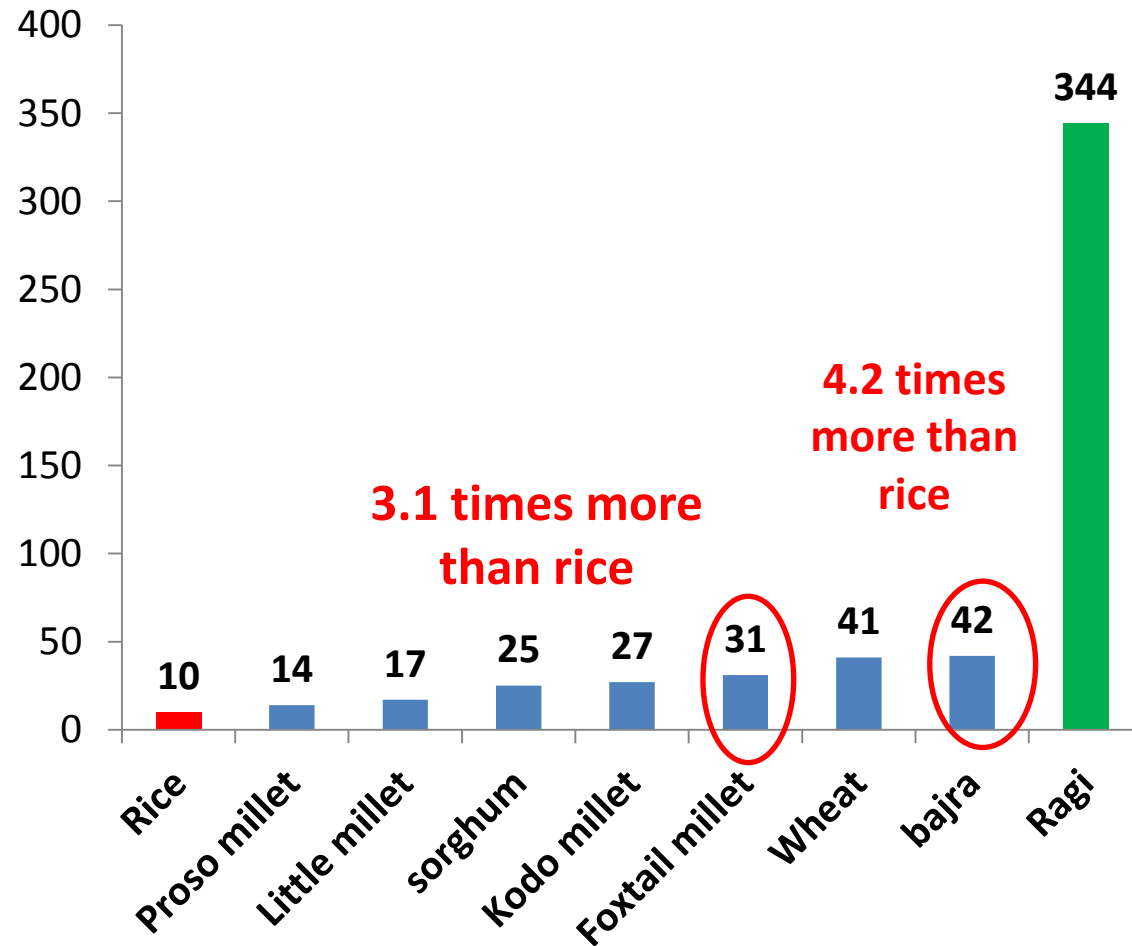


Fibre : Higher the fibre in food, slower the digestion time, thus we have a feeling of fullness. Fibre in foods reduces the constipation.

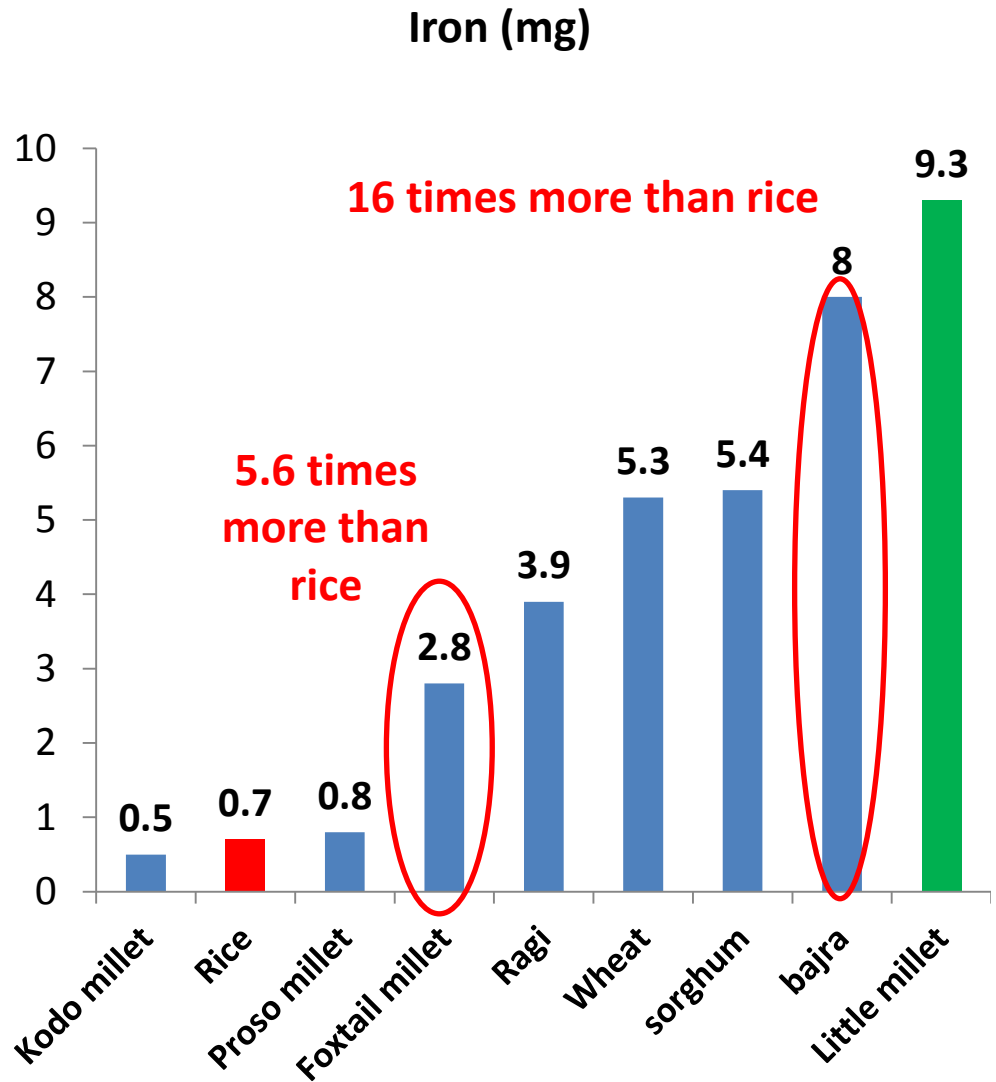


Calcium: Is required for formation and maintenance of skeleton and teeth. **Children need relatively more calcium than adults to meet requirement of growing bones.** It is also required in higher quantities during pregnancy to meet growing needs of foetus and during lactation.

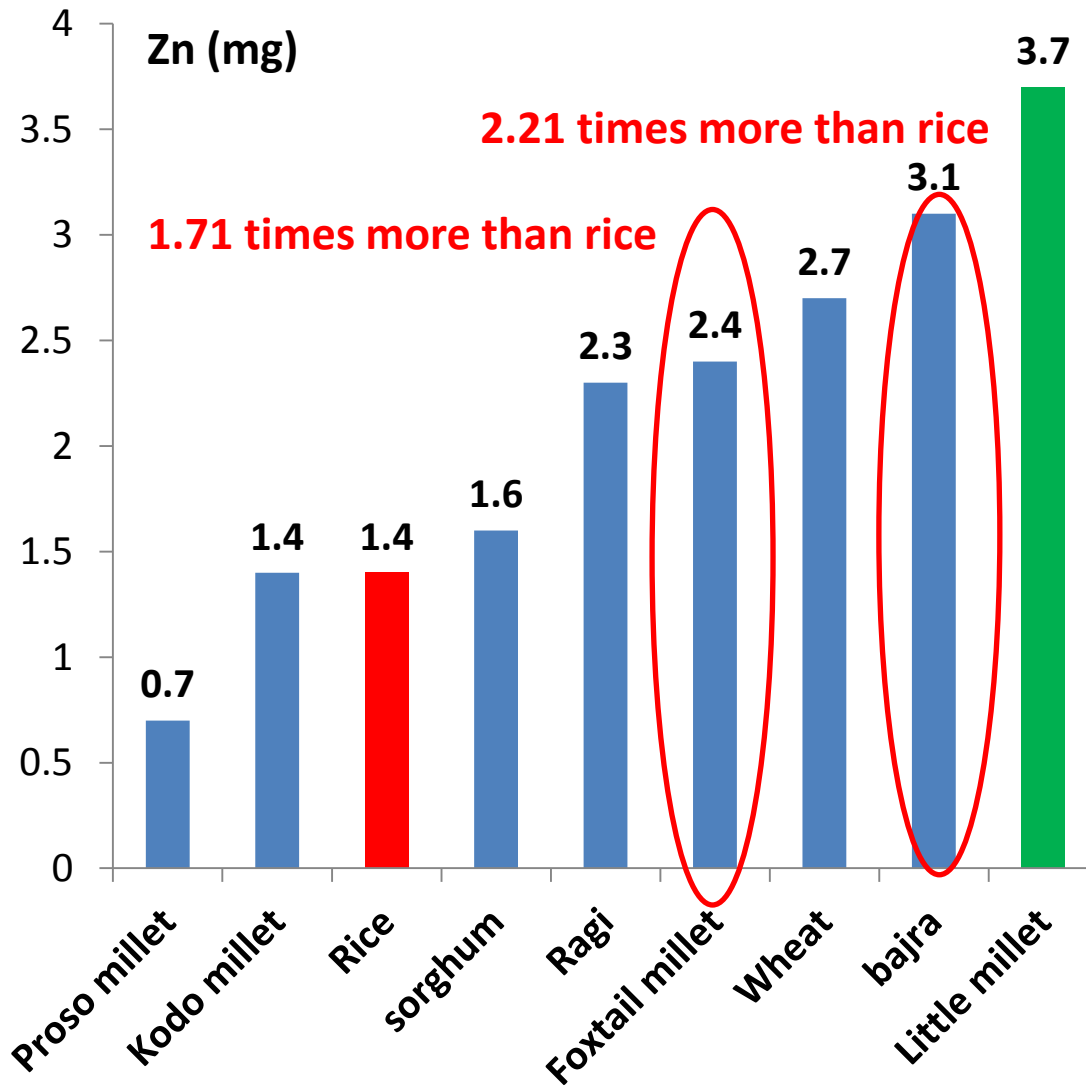
Calcium (mg)



Women often suffer from anaemia due to iron deficiency more so in tribal areas. Millets being rich source of Iron, can help address this issue at low cost



Zinc helps in healthy development of foetus, healthy skin and for quick healing of wounds,



Source: Nutritive value of Indian Foods, NIN Hyderabad

Key lessons learnt

- **Knowledge disconnect** between earlier generations and current generation parents on nutritional benefits
- **Convenience takes precedence** over the quality – processing of millets is a drudgery
- **Taste matters**- New recipes / trainings required
- **Promotion is the Key** / Nutritional education
- **Local procurement backed by price** – farmers willing to grow millets
- Children's **acceptability of millet based recipes** is impressive

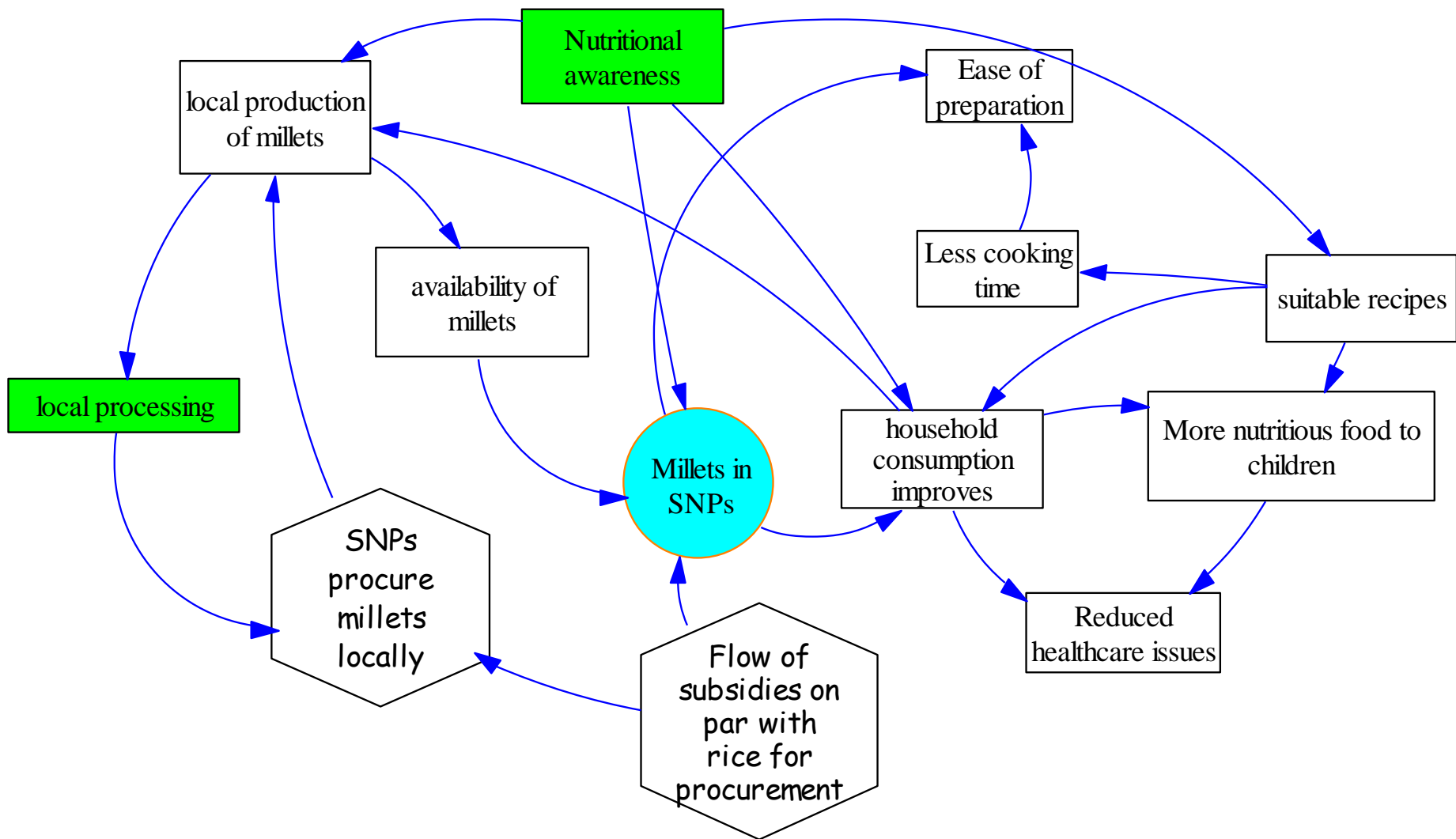
Economics.... matter.....

| Existing model | Cost/child/day | Pilot | Cost/child/day | Implications |
|----------------------|---|------------------------|--|---|
| Rice based meal | ₹ 2.63 | Millet based meal | ₹ 5.6 | <ul style="list-style-type: none"> Additional cost of ₹2.97 per child/ day |
| Cost of 1 Kg of rice | ₹ 4 / (on subsidy, however the market price is > ₹ 40) | Cost of 1 Kg of millet | ₹ 40 / (Local market price). No subsidy for millets | <ul style="list-style-type: none"> Level playing field for millets – brings down cost to ₹2.9 / serve <p>So the Net increase would be just 27 paise</p> |

Proposed decentralized finger millet production & procurement plan to State Civil Supplies Corporation

| Details | With Existing productivity | With Good productivity | With Best productivity |
|---|----------------------------|------------------------|------------------------|
| Total households | 25000 | 25000 | 25000 |
| Qty / hh/ month (kg) | 5 | 5 | 5 |
| Total requirement (tonnes) / month | 125 | 125 | 125 |
| Total requirement (tonnes) / year | 1500 | 1500 | 1500 |
| Avg productivity / acre (Kg/acre) | 400 | 700 | 800 |
| Total land required to meet annual requirement (Ac) | 3750 | 2143 | 1875 |
| No of families supported by 1 acre with the respective productivities | 6.67 | 11.67 | 13.33 |
| 1 Acre can caters to ? Children in ICDS (to provide millet recipe for 10days/ month) | 40 | 70 | 80 |

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End result (Millets in SNPs) = f (policy + local) *triggers*

Thank You