

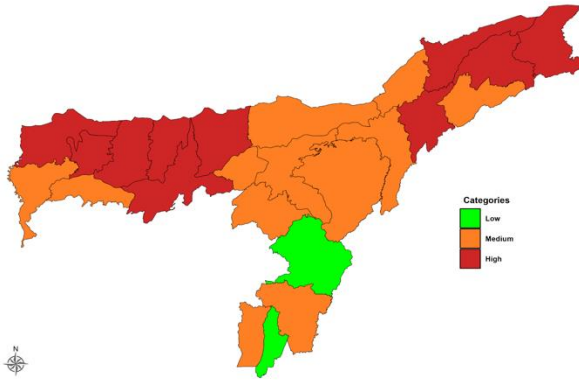
Addressing Nutrition and Climate Risk Challenges through Assam Millet Mission

Need to connect dots between
policy and outcomes

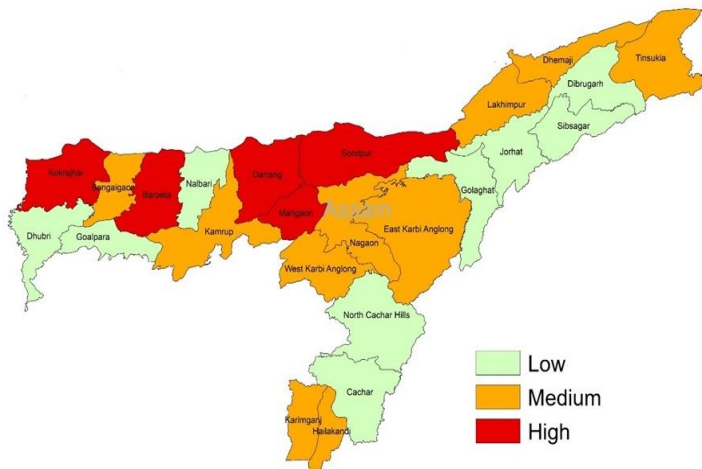
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Vulnerability of current agriculture production and malnutrition challenges in Assam: Need for alternative pathways



Extent of climate variability



Drought proneness

Stunting:

- Stunted children > national average of 35.5%.

Wasting:

- Wasted children > national average of 19.3%.

Underweight:

- Underweight children > national average of 32.1%.

Govt's one of the strategies to address both climate risk and malnutrition



Assam Millet Mission (AMM)

1. FINGER MILLET (Maruadhan)
2. FOXTAIL MILLET (Kaunidhan)
3. PROSO MILLET (Cheena Bajra)

Implementation: Assam State Govt

Millets are nutrition dense and climate resilient

Assam Millet Mission components and study objectives

AMM key Interventions

- Promotion of finger millet, foxtail millet and proso millet production in 15 districts (seed, training, FPOs, etc)
- Technical backstopping by Assam Agri Uniu and ICRISAT
- Large scale awareness programs including schools
- New recipe development and training
- Supporting FPOs/WSHG for participation in relevant exhibitions
- Inclusion of millets in Anganwadi meals for children
- Policy plan for introducing millets in PM Poshan schools (>4 million children)

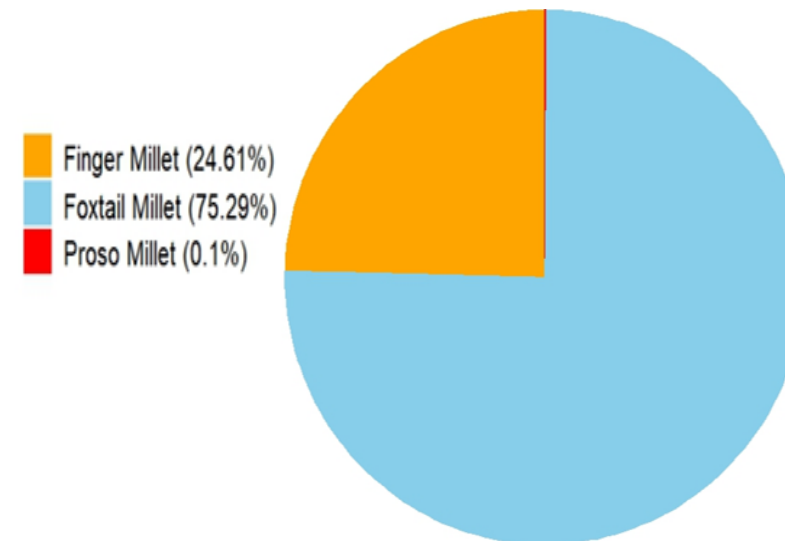
Study Objective

Assessment of millet production system and value chain (production to consumption continuum) to identify challenges and opportunities and possible policy interventions to harness millets potential for sustainable food system in Assam state

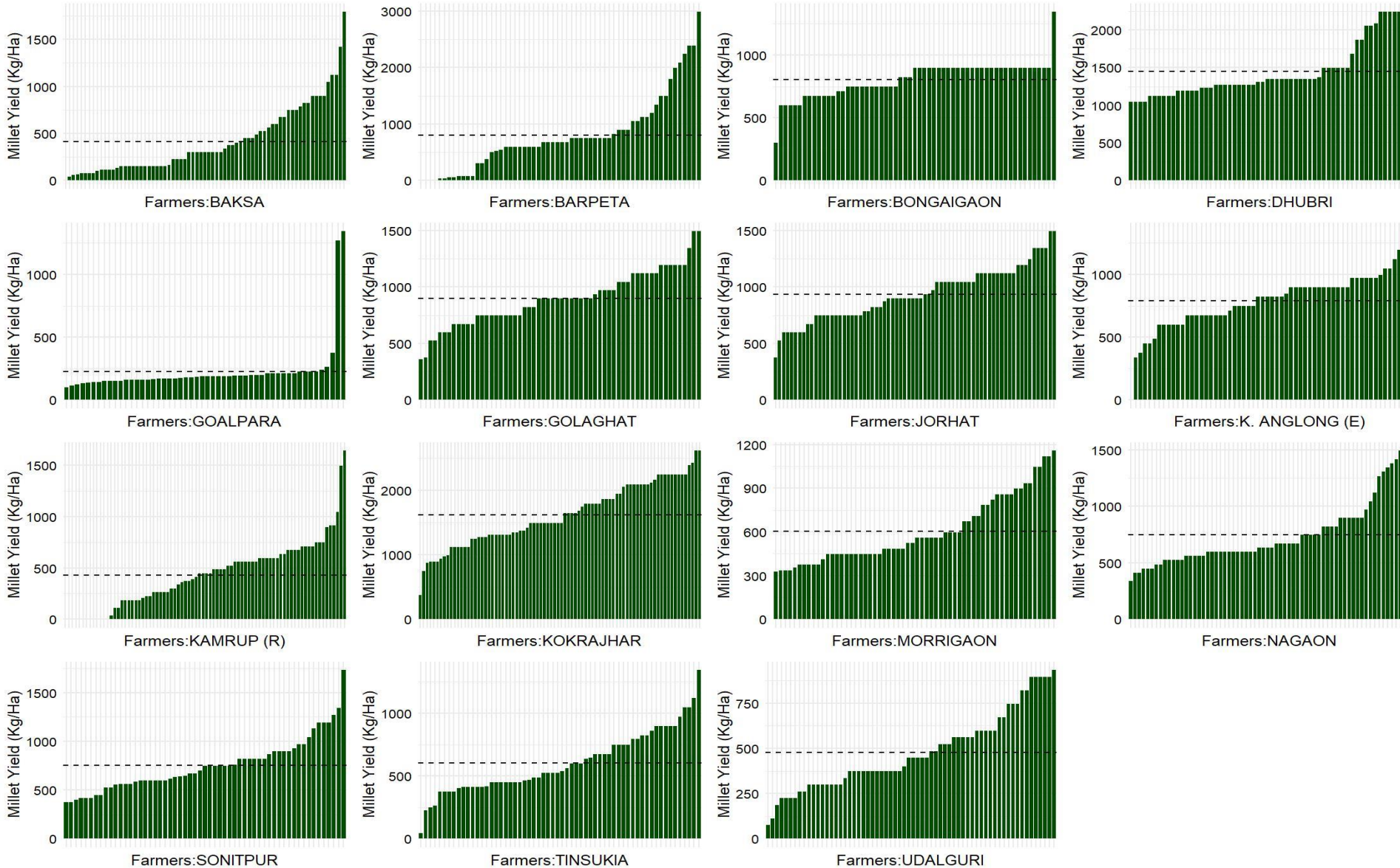
Data and methods

Data source/ node of the value chain	No respondents
• Farm household survey in 15 districts	963
• Rural and urban consumer survey in 15 districts	773
• Trader/Processor	36
• Retailers	32
• Women survey focused on recipe and consumption choice	208
• Focus Group Discussion with multiple stakeholders	35
• Key informant interview with govt officers, policymakers, industry	10

- Value chain and stakeholders mapping
- Estimation of costs and returns from millets production
- Scope of millets expansion
- Price trends
- Farmers market access and selling behavior
- Qualitative assessments on constraints and opportunities



Results Millet Yield (Kg/ha) across farm households and districts, Assam



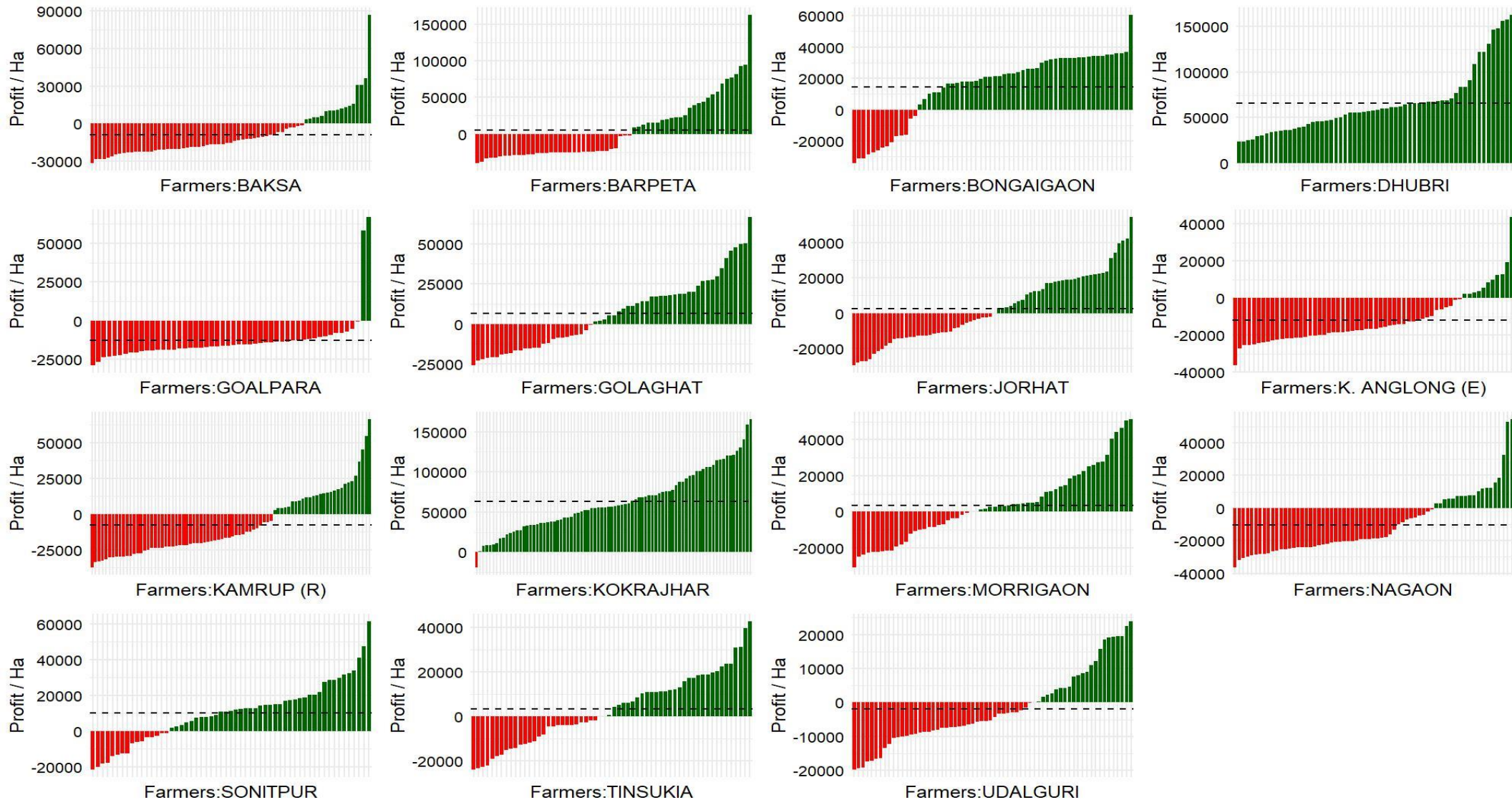
Total millet production in Assam

About 6000 tones

Average yield:

200- 1700 kg/ ha

Net-returns from millet farming (INR/ha) across farm households and districts, Assam



About 50% of the farmers were in loss, only a few gets good income

Despite huge efforts under AMM most farmers didn't want to cultivate the crop again

Though they value the value millets as crop, but

Reasons for loss in millet production and limitation in consumption

High yield gaps:

Average yield vary 200 to 1700 kg/ ha

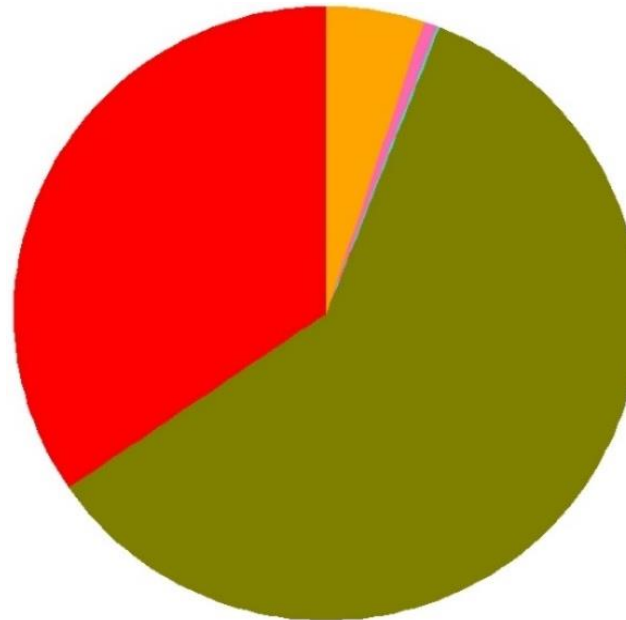
High variability and low price realized across farm HHs:

Finger Millet	INR 20-100/ kg
Foxtail Millet	INR1400-12000/ kg

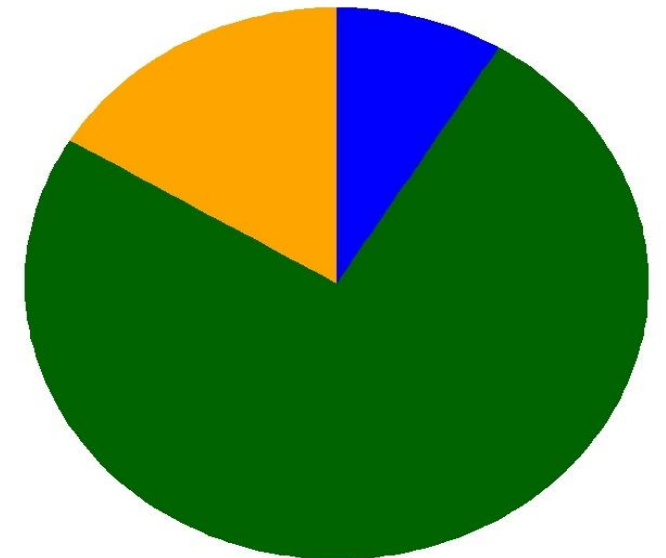
High price for consumers:

Finger Millet	INR 101/ kg
Foxtail Millet	INR 160/ kg

Access to market (% farmers who were able to sale)



Reasons for farmers not able to sale



- Not Able to Sell Marketable Millet Surplus (34.6%)
- Sell >90% of their Marketable Millet Surplus (59.49%)
- Sell between 0% - 49% of their Marketable Millet Surplus (0.14%)
- Sell between 50% - 74% of their Marketable Millet Surplus (0.7%)
- Sell between 75% - 90% of their Marketable Millet Surplus (5.06%)
- Lack of Primary Processing Equipment (16.32%)
- No Market (75%)
- No Proper Price (8.68%)

Dichotomy of policy aspirations and outcomes

- **Anganwadi has introduced millets once in a week need thousands of tones millets in a year**
 - **Foxtail/finger millets are relatively costly but total cost per child allowed INR 8**
 - **Buying P millet from Rajasthan (~ 600 MT/Month) >7000 MT/year**
- **PM Poshan schools are demanding millets from relevant agencies to introduce it at least in selected schools**
 - **Couldn't start yet due to non availability of millets**
- **High cost of millets is discouraging consumers to integrate into their diet**
- **>40% farmers are not able to sell their millets and results in net economic loss**
- **Total production of millets in the state is about 6000 tones but its actual demand is far more than production**
- **But disconnect between demand and supply**
- **Very small-scale scattered production**
- **Majority foxtail farmers do not have access to de-husking machine, without de-husking hardly any demand**
- **Low yields due to multiple factors**

Policy Recommendations -Supply Side

- Excellent scope to expand millets area in the rice fallows in Summer (Feb - May)- about 50% area remain fallow (15000 ha),
- Location specific **millets expansion plans needs to** be developed- **identifying suitable upland areas**
- Another good scope of expansion is large **pre-monsoon fallow area in riverbeds: > 10,000ha**
- Enhanced Access to Machinery: De-husking and Threshing Machine (Farmers/FPO-led **custom hiring centres/ movable facilities**)
- FPO-level seed production to enhance access to **quality seed** at an affordable price
- Hands-on training/workshop for the farmers production and post harvest handling
- Training of extension staff on good millet practices
- Incentive for millet farmers for millet production similar to Odisha Govt.

Policy Recommendations -Demand Side

- Decentralized public procurement of millets will be critical to be used for public feeding programs like Anganwadi (pre-school), PM Poshan schools, and PDS (at present millets are coming from Rajasthan ~ 600 MT/Month) – Policy interventions needed to enable the purchase of local millets
- **Policy adjustments** to allow higher cost of millets into public feeding programs
- An online platform can be created wherein both farmers (suppliers) and buyers can register to indicate the quantity and quality of millets (FPOs/FPCs can facilitate this)
- **Minimum support price for foxtail** millets needs to be decided- based on cost of production (equal to MSP of Finger millet)
- Initial markets for value-added products by FPCs created through public canteens/hostels, etc
- Awareness campaign to generate rural and urban demand for millets
- Coordinated efforts are needed from Agriculture, PDS, Child and women development, and education departments



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Thank YOU
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