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Potentials for and benefits from irrigated fodder: highlights from the ILSSI research

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OBJECTIVE

- Explore irrigated fodder cultivation as entry point to diversification, intensification and sustainability
- Improve on-farm milk and meat production through filling feed quality gaps in dry season
- Evaluate forage production as cash crop, livelihood, and employment strategy
- Capacitate value chain actors



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APPROACHES: R4D

- Community engagements
- Prioritize areas for action research
- **Participatory** on-farm trials and demos
 - Forage varieties
 - Water lifting technologies
 - Utilization practices (dairy; fattening)
- Socio-economic assessments



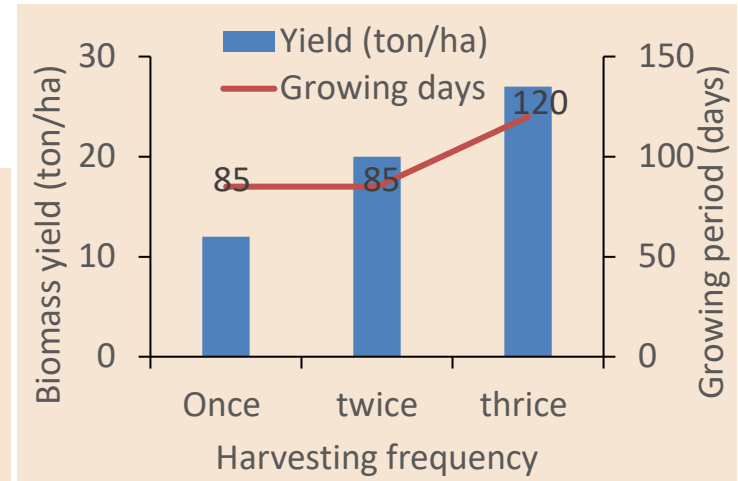
EVIDENCE FROM ON-FARM TRIALS

Irrigated fodder agronomic trials



Annual grass-legume mixes
Oats-vetch

➤ Multi-cut approaches for oat-vetch under irrigation, doubling yield



➤ Perennial forages under irrigation proving green feed year-round, with soil fertility and fodder quality benefits



Napier-Desmodium



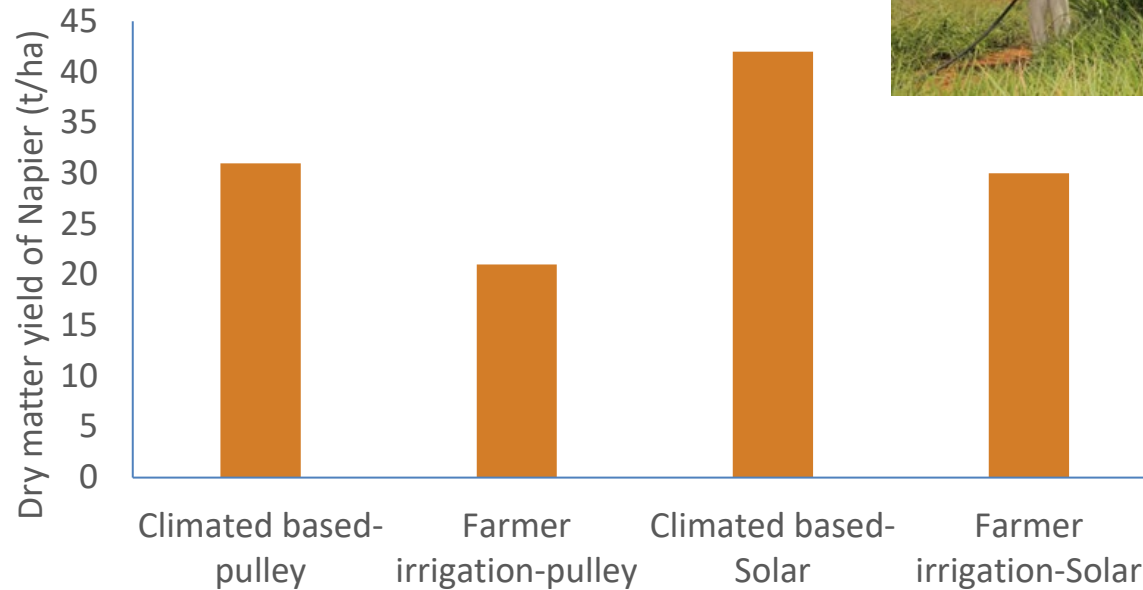
Napier-pigeon pea

Perennial grass-legume mixes



EVIDENCE FROM ON-FARM TRIALS

Water lifting technologies and irrigation practices

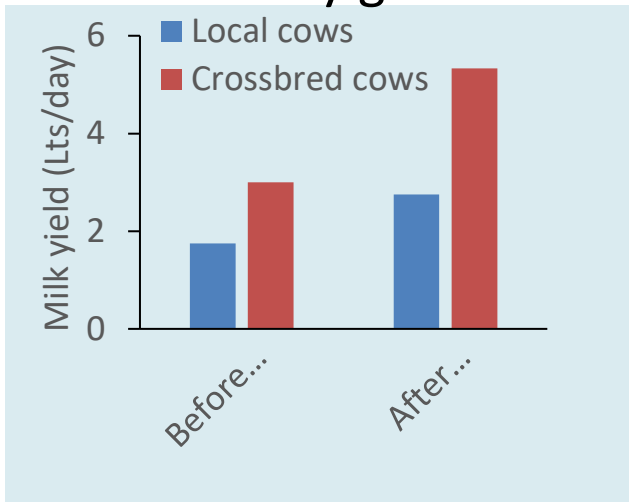


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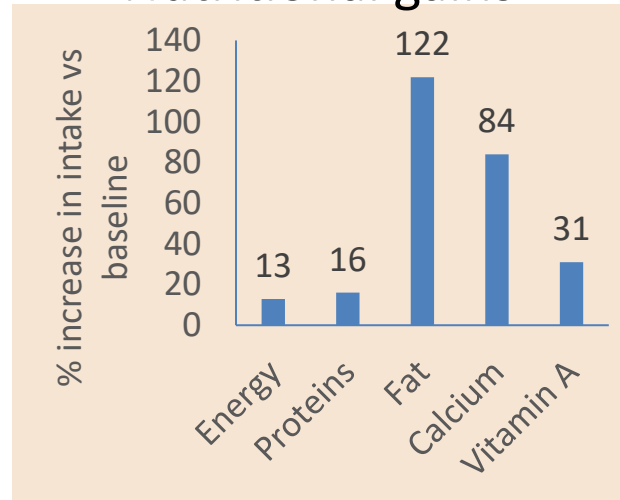


EVIDENCE FROM ON-FARM TRIALS

Productivity gains



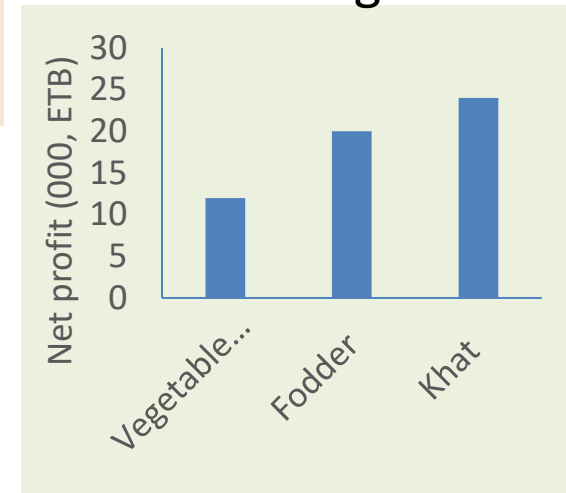
Nutritional gains



Improved fodder as a substitute to commercial conc.

Type of supplement	Sheep Weight gain (g/day)	Net income/head
100% concentration mix	130	329
67% Conc.+33% Oat-vetch mix	110	418
33% Conc.+67% Oat-vetch mix	109	379
100% Oat-vetch mix	86	328

Income gains





CONTEXT ON THE USE OF IRRIGATED FODDER

- On-farm use vs as cash crop
 - Profits maximized with improved cows for dairying
 - Fodder markets offer opportunities to increase income



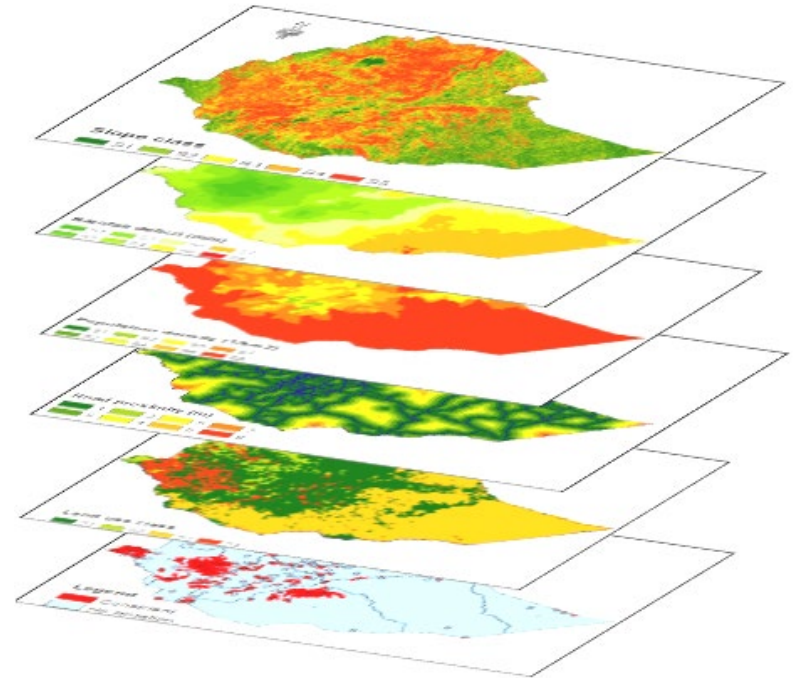


SUITABLE LAND FOR IRRIGATED FODDER PRODUCTION

Bio-physical data used

- Soil properties,
- Rainfall,
- Potential evapo-transpiration,
- Road networks,
- Livestock densities,
- Land use,
- Ground water depth,
- Potential borehole yield,
- Fodder characteristics

➤ Factors reclassified, weighted and overlaid



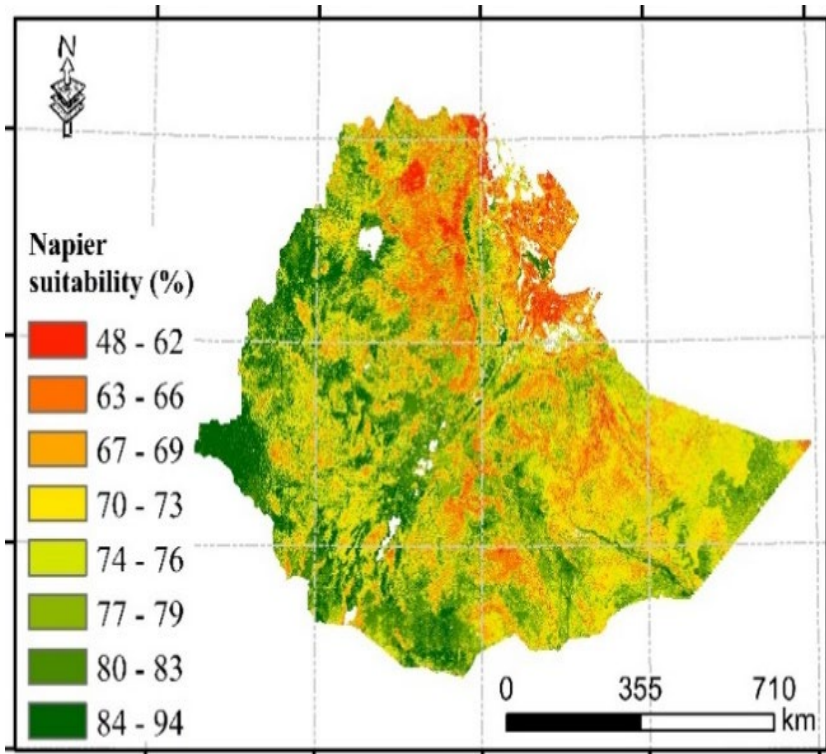


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SUITABLE LAND FOR IRRIGATED FODDER PRODUCTION

➤ Nearly 20% of the land is suitable for irrigated fodder production (80% threshold)



River basin	Basin area (km ²)	Potential suitable area (km ²)
Abbay	198,891	60,700
Awash	110,439	29,300
Baro-Akobo	76,203	35,500
Genale-Dawa	172,133	77,400
Ogaden	80,009	21,800
Omo-Ghibe	78,189	26,000
Rift Valley	51,989	26,100
Tekeze	86,455	19,800
Wabi-Shebelle	202,219	49,800



CONCLUSION

- Evidences clearly indicate that irrigated fodder can considerably contribute to diversification and intensification
- Awareness and interest created among farmers in project sites further demonstrates its potential
- The practice can support climate change adaptation and mitigation efforts



WHERE TO GO FROM HERE

- Build on national strategic plans to move forward scaling the good practices
- Enabling environments and incentives for private sector investment in commercial production and marketing
- Explore options to use irrigated fodder to build national fodder banks in strategic areas:
 - Enhance drought preparedness and mitigation



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Thank you!

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