



# Connecting the Dots Between Agriculture, Nutrition, and Health to Improve Nutrition-Sensitive Agriculture: A Government-Led Randomized Controlled Trial in Rural Bangladesh

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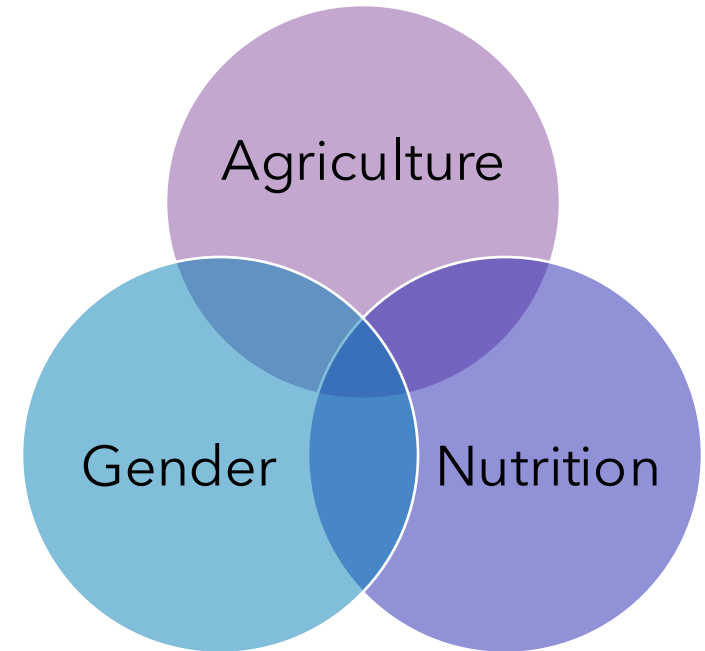
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## What were ANGeL's objectives?

- Analyzing data from IFPRI's 2011/2012 Bangladesh Integrated Household Survey (BIHS), IFPRI research found synergies between agricultural diversity, dietary diversity, and women's empowerment.
- IFPRI designed the Agriculture, Nutrition, and Gender Linkages (ANGeL) project, implemented by the Ministry of Agriculture, to identify actions and investments in agriculture that would simultaneously lead to agricultural development, improved nutrition, and women's empowerment"



**ANGeL aimed to strengthen the agriculture-nutrition-gender nexus**

# How was ANGeL designed?

IFPRI assessed ANGeL's impacts via a cluster randomized controlled trial (RCT), testing 4 interventions aimed at promoting nutrition- and gender-sensitive agriculture. Both men (husbands) and women (wives) from 3,125 farm households were trained together.



**T-N**-Nutrition behavior change communication (BCC)-



**T-A** -Agricultural Production



**T-AN**-Agricultural Production + Nutrition BCC



**T-ANG**-Agricultural Production + Nutrition BCC + Gender Sensitization

# How was ANGeL implemented? (1 of 2)

## ■ What were the key training interventions?

🌱 **Agriculture:** Year-round production, soil health, pest control, quality inputs, postharvest management, marketing.

🍌 **Nutrition:** Food and nutrition education, micronutrients, breastfeeding, complementary feeding, women's care, hygiene practices.

👨👩 **Gender Sensitization:** Building trust, communication, gender norms, intra-household food distribution, power relations, joint decision-making.



# How was ANGeL implemented? (2 of 2)

## Training Deployment

- Conducted across 16 rural districts in Bangladesh at the farm household level.
- 17-month training period (1x/month training per intervention)
- Agricultural production and nutrition BCC training were delivered by sub-assistant agricultural officers.
- Gender sensitization sessions were conducted by Helen Keller International using Nurturing Connections Curriculum

## Trainers and Oversight

- Trainers primarily from Dept. of Agricultural Extension (DAE)
- DAE's Upazila-level officials monitored the SAAOSs, and APSU, IFPRI, HKI, who conducted visits to ensuring quality and accountability

## Barriers

- Participant absenteeism, particularly among men during harvest season
- Varying trainer quality

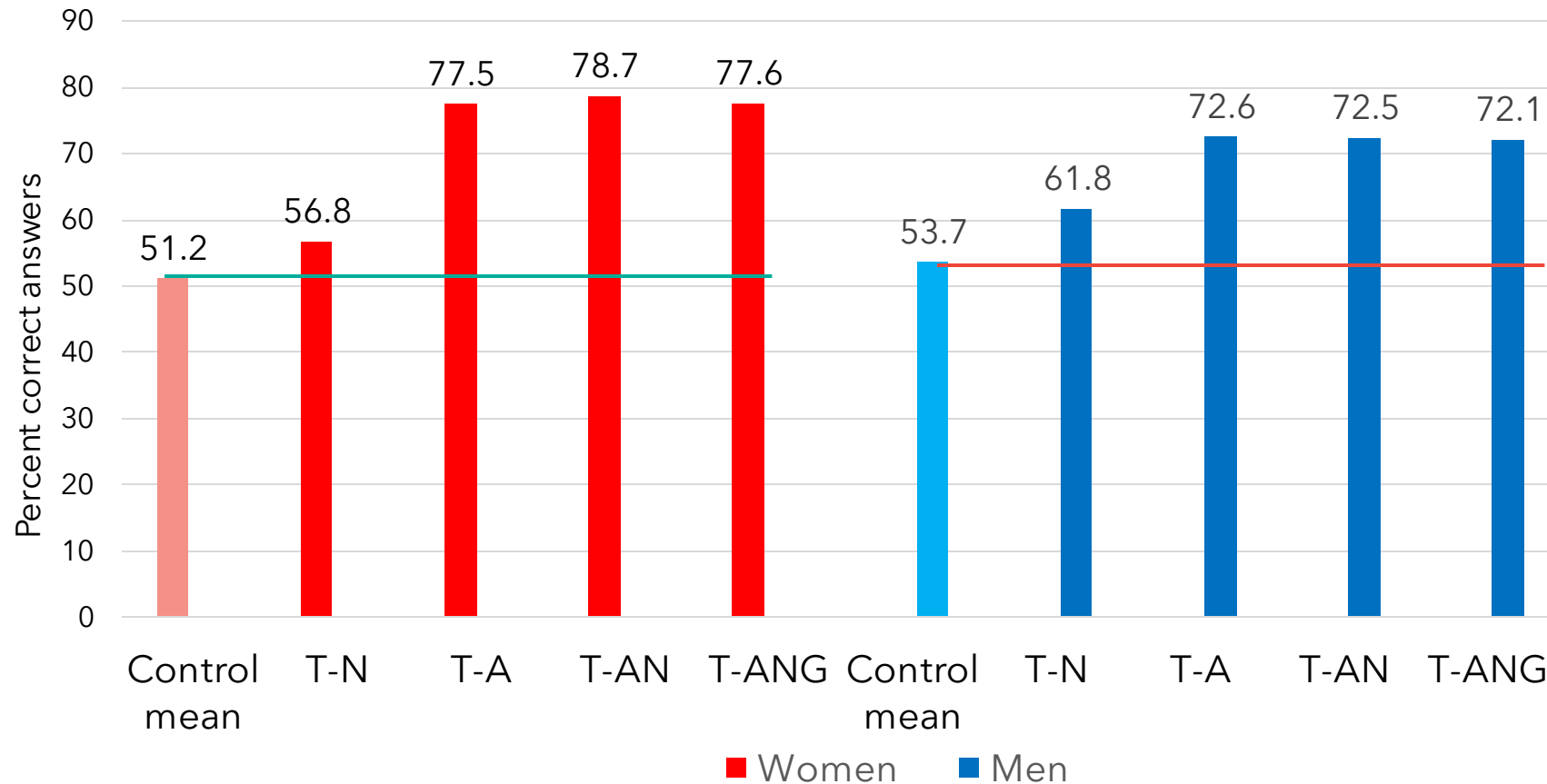
## Facilitators

- Comprehensive training on agriculture, nutrition, and gender
- High level of implementation fidelity due to continuous oversight
- 'Whole of household' approach

# What were ANGeL's key results?

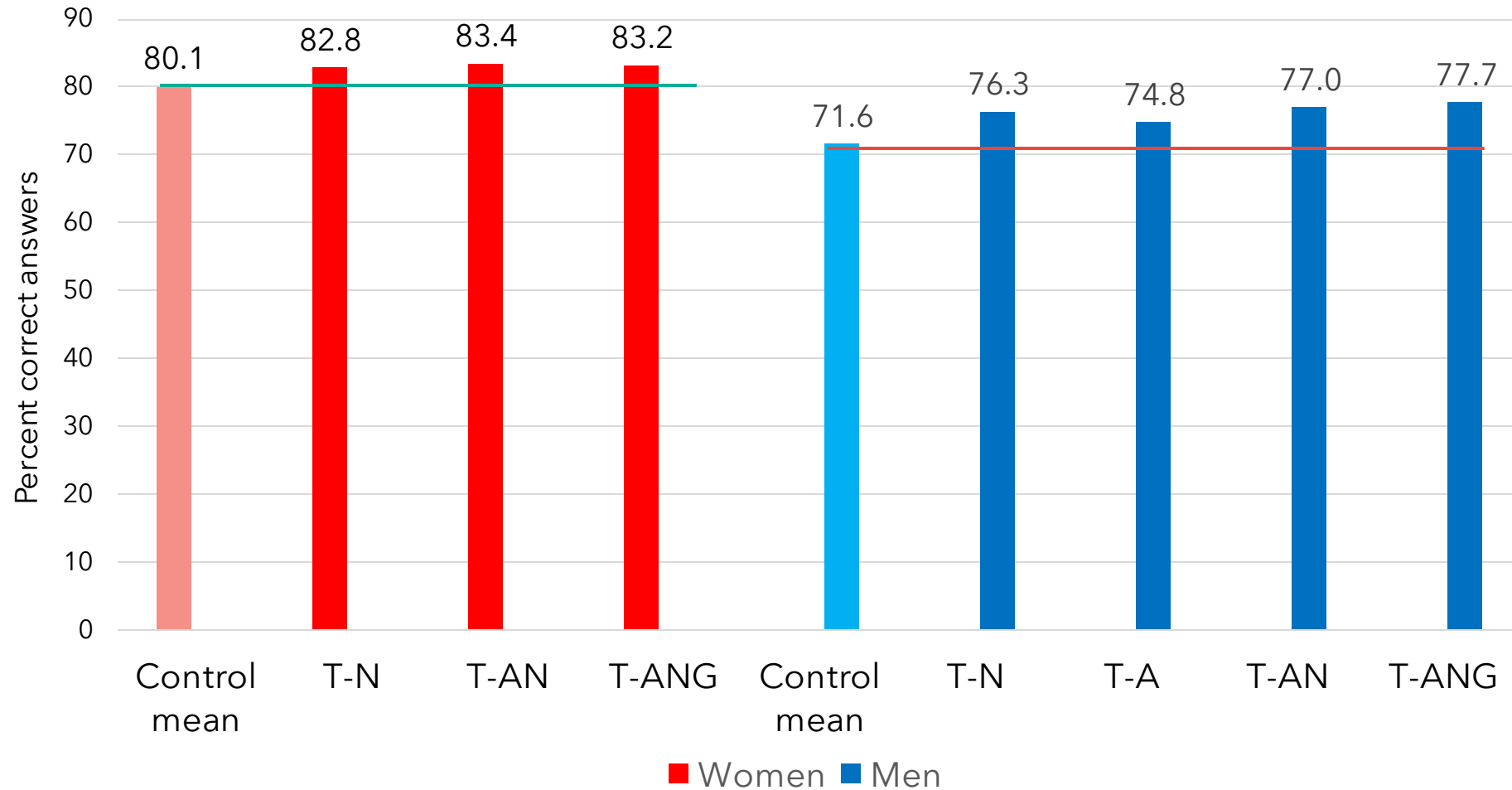
# Agricultural production knowledge improved

Test score: Percent correct answers



T-N: Nutrition; T-AN: Ag + Nutrition; T-ANG: Ag, Nutrition, + Gender

## Nutrition knowledge improved (Test score: Percent correct answers)

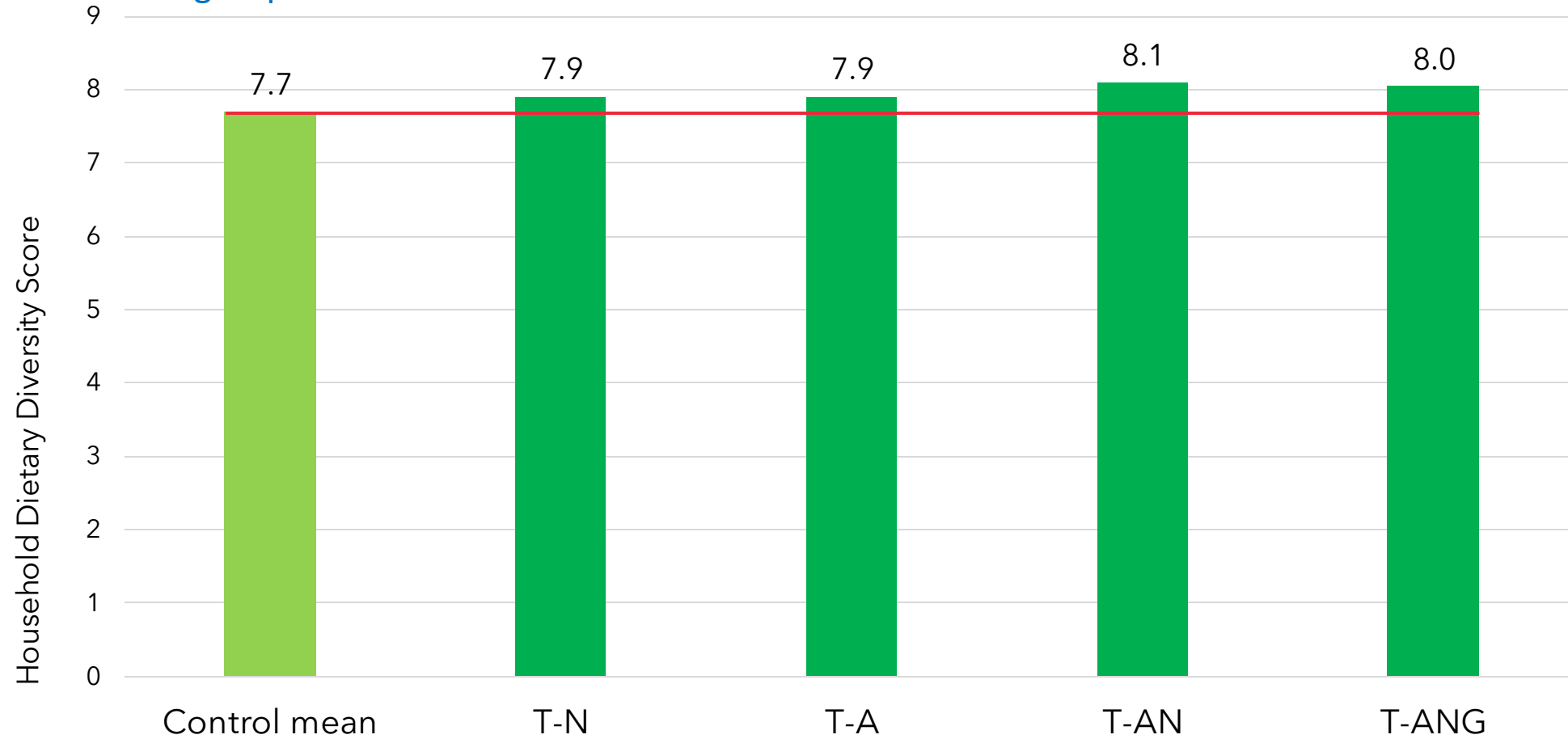


T-N: Nutrition; T-AN: Ag + Nutrition; T-ANG: Ag, Nutrition, + Gender



## Dietary diversity in households increased

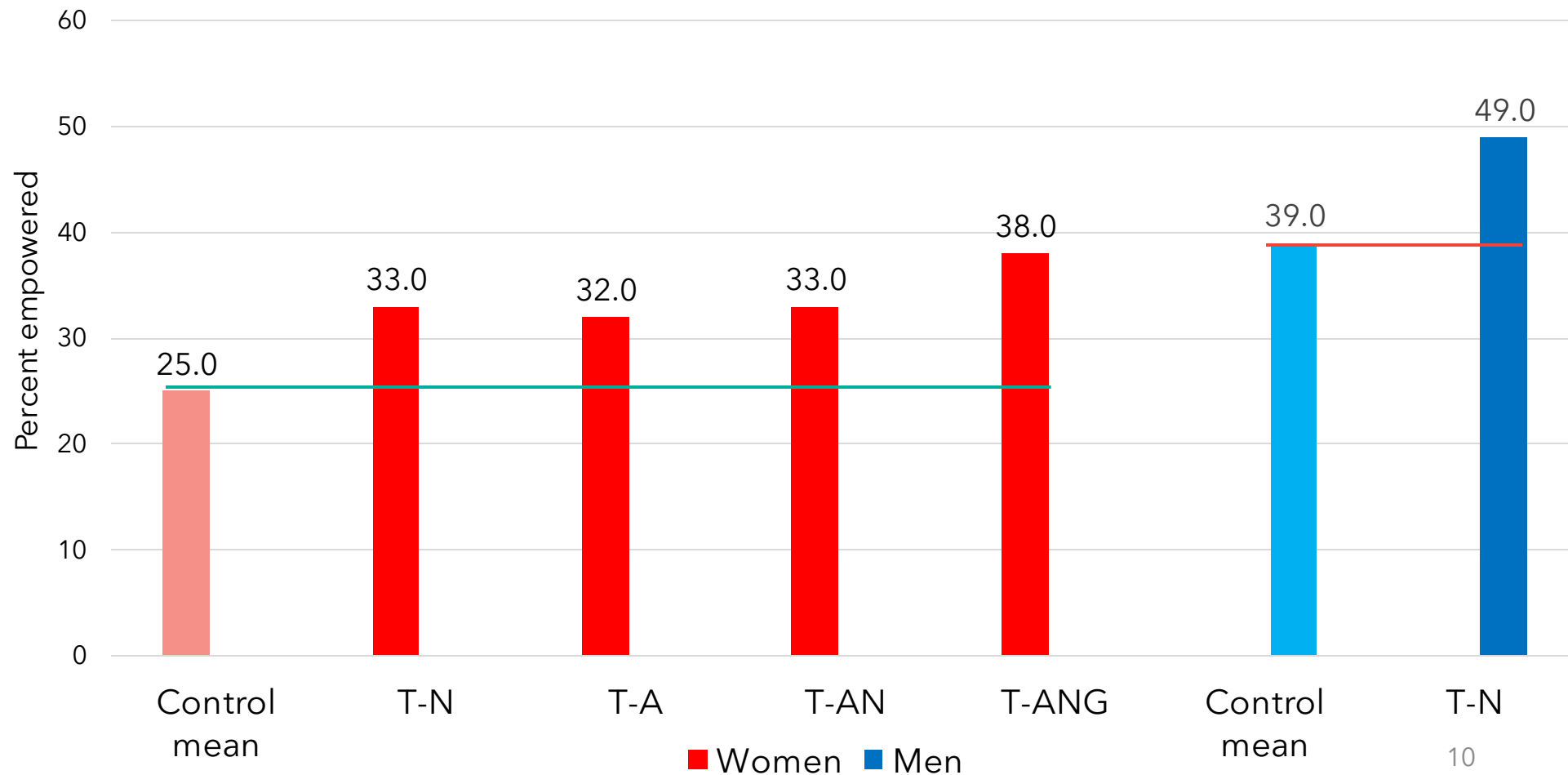
Household Dietary Diversity Score: Household members consumed different food groups in previous 24 hours, with a range from 0-12 food groups



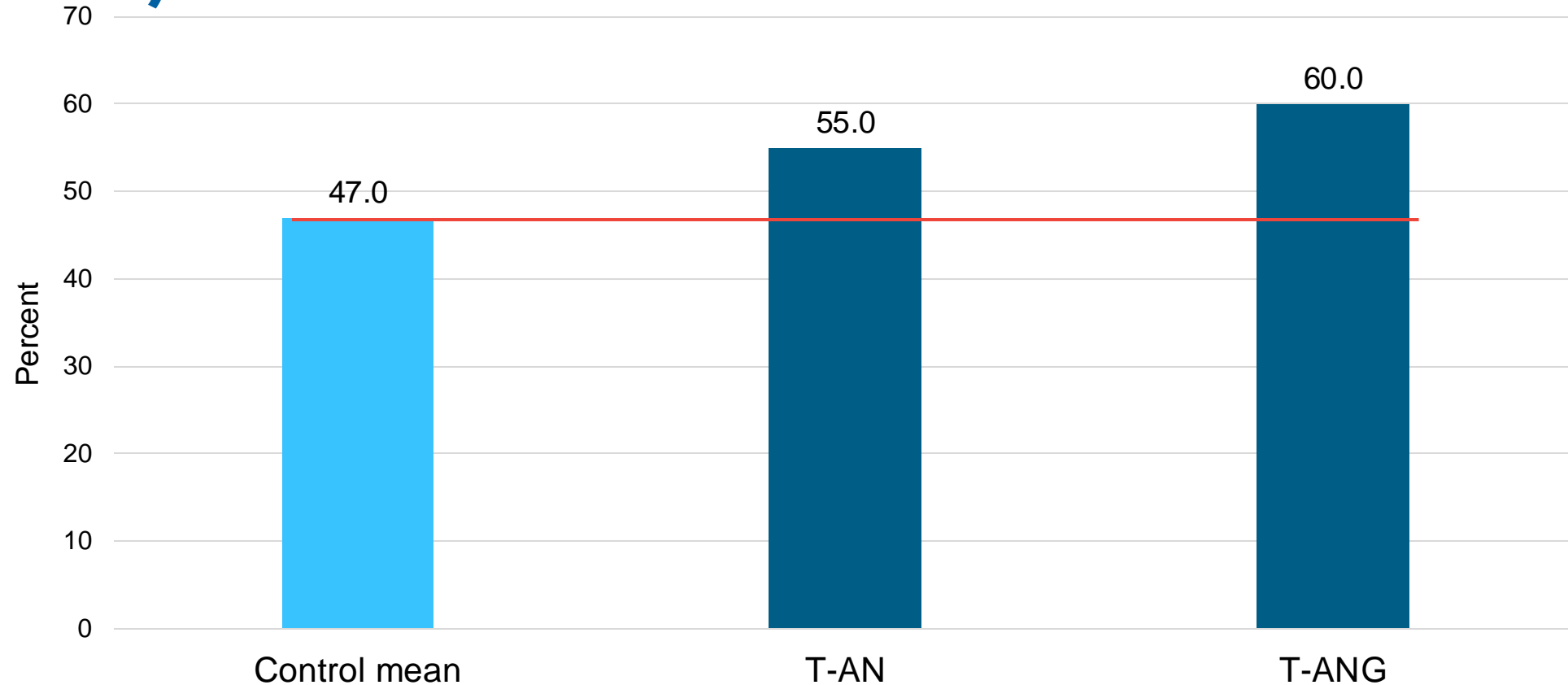
T-N: Nutrition; T-AN: Ag + Nutrition; T-ANG: Ag, Nutrition, + Gender

# All treatments arms significantly increased women's empowerment; only T-N significant for men (option 2)

Empowerment is measured using project-level Women's Empowerment in Agriculture Index (pro-WEAI)



# Gender parity achieved when trainings are combined (option 1)



T-AN: Ag + Nutrition; T-ANG: Ag, Nutrition, + Gender

## Policy implications

- Government's commitment to research-based evidence
- ANGeL provided the proof of concept for integrated approach.
- Boosting Agricultural Extension with nutrition Insights for Greater Impact
- GoB approved for national scale-up, discussions are ongoing with GoB and development partners to support expansion.

# Conclusions

- ANGeL led to:
  - ✓ Increased nutrition knowledge
  - ✓ Increased agricultural production knowledge
  - ✓ Increased production of selected non-rice crops
  - ✓ Increased consumption of foods with high nutrient values
  - ✓ Improved household dietary diversity
  - ✓ Increased empowerment of women and men
  - ✓ Improved gender parity between women and men in households
- Combining trainings on agriculture, nutrition, and gender sensitization had greater impacts on diet quality

**Thanks for your  
attention!!**

