Conflict of Interest Disclosure

I have no conflict of interest to report in relation to this presentation.
Promotion of local agrobiodiversity improves diets of women and children in North West Vietnam: a cluster RCT
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Why is agrobiodiversity important for diets?
7,000

Number of crops used for food by humans throughout history

3

Rice, maize and wheat currently provide >50% of the world’s calories from plants

12

12 crops that together with 5 animal species provide 75% of the world's food today

(Data source: Kew, 2016; FAO, 1997)
How to achieve a more diversified diet within a food system rich with biodiversity?
Study Details

- Site: Mai Son, Son La, NW Vietnam
- Design: Cluster Randomized Controlled Trial
- Sample size: 177 HHs
- Study population:
  - Thai women at reproductive age
  - And her child 12-24 months of age (at baseline)

Source: Bioversity International, 2014
**Situation Analysis**

**Participatory Identification of the Intervention**

**Cluster Randomised Control Trial**

- **Control**
  - 30 Village Clusters
  - N=90

- **Intervention**
  - 30 Village Clusters
  - N=87
Key results from Situation Analysis

- Women primary decision makers for **home gardens**
- **Dietary Gaps:**
  - Dark Green Leafy Vegetables
  - Legumes and pulses
  - Vitamin A Rich fruit and vegetables
- **Rich agrobiodiversity:**
  - 398 different edible species
- Nutrition education & attitudes was minimal, especially diet diversity
Participatory Identification of Intervention Approach
Delivery mechanism = Diversity Clubs

Community-based farmer field school-like model (clubs)

Empowering individuals with knowledge and awareness about agrobiodiversity

Directly linking Agriculture and Nutrition in capacity building

Dosage: 7 Club meetings (over 12 months)
RCT Results
# Homegarden Diversity Increased
(Average Species Richness in the homegarden)

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th>Endline</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
<td>Intervention</td>
<td>Control</td>
<td>Intervention</td>
</tr>
<tr>
<td>Pulses</td>
<td>0.2</td>
<td>0.3</td>
<td>0.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Dark green leafy vegetables</td>
<td>1.6</td>
<td>1.6</td>
<td>2.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Vitamin A-rich vegetables, roots and tubers</td>
<td>0.2</td>
<td>0.2</td>
<td>0.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Vitamin A-rich fruits</td>
<td>0.3</td>
<td>0.2</td>
<td>1.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Other vegetables</td>
<td>0.9</td>
<td>1.1</td>
<td>2.2</td>
<td>1.5</td>
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</tbody>
</table>
Dietary Species Richness increased
Change in the number of species consumed per day

- **Intervention**: By women ***
- **Control**: By children ***

No. of species

- **Intervention**: -2
- **Control**: -1
Dietary Diversity Increased
Minimum diet diversity Increased (p<.001)

Percent of population

Control    | Intervention
---        | ---
Met MDD-W W *** | Met MDD-C ***
Mean micronutrient intakes increased
Mean change in micronutrient intakes (Vit B2; Fe and Zn)

- Women
  - Control: 0
  - Intervention: 6

- Children
  - Control: 0
  - Intervention: 3

Legend:
- Vit B2 (mg) *
- Fe (mg) ***
- Zn (mg) **
Mean change Vitamin A intakes (RE µg)***

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<thead>
<tr>
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<th>Control</th>
<th>Intervention</th>
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</thead>
<tbody>
<tr>
<td>Women</td>
<td>200</td>
<td>1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children</td>
<td>0</td>
<td>1000</td>
<td></td>
<td>1000</td>
</tr>
</tbody>
</table>
Conclusions

1. Higher species diversity in the homegarden was associated with better diet diversity for children.

2. Promoting underutilised nutritious agrobiodiversity through community based clubs that integrate nutrition and agriculture capacity building can improve diet quality.

3. Further testing of the approach in areas with lower agrobiodiversity are required.
Thank you

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