REALIGNING AGRICULTURE TO IMPROVE NUTRITION

RAIN EVALUATION RESULTS

NAZ Nutrition Symposium
Lusaka, May 26-27 2016
RAIN aims and objectives

To develop a sustainable model that integrates and realigns agricultural and health interventions to effectively prevent child and maternal undernutrition among poor rural communities.

To reduce the prevalence of stunting among young children and improve the nutritional status of pregnant/lactating women in Mumbwa District through targeted interventions during the critical period from conception to 23 months of age.
RAIN PROJECT COMPONENTS

RAIN Project

Agriculture
Home gardens, small animals

Coordination & Alignment

Nutrition and Health
Behaviour Change Communication

Gender
Empowerment,

Monitoring, Learning & Evaluation

HIV & AIDS
Mainstreaming
Coordination within District
Via District, Field & Community Level Agriculture and Nutrition Coordination Committees

CEO/ LA

Technical staff at MACO, MOLF and MOH and Partner NGOs

EHT/ nurse

Training

Women Groups

Training, inputs

Small-holder Model Farm (SMF)

Market & Micro-finance linkages

Community and individual household

BCC

CHW, CHP, tTBA, PMTCT-LC
Intervention areas - Randomization

- Agriculture only
- Agriculture and nutrition
Rain evaluation design

Mumbwa District: 6 wards

4 intervention wards
26 clusters (n=1000 HHs)
Agriculture Only

2 comparison wards
15 clusters (n=1000 HHs)
Agriculture + Health

Cross-sectional baseline survey (2011)

13 clusters (n=1000 HHs)
Agriculture Only

Cross-sectional impact evaluation survey (2015)

13 clusters (n=1250 HHs)
Agriculture Only

Process evaluation (2012 – 2014)

13 clusters (n=1250 HHs)
Agriculture + Health

15 clusters (n=1000 HHs)
Comparison
Program exposure

**Agriculture group (n= 1,244)**

<table>
<thead>
<tr>
<th>Non participation N=859 (69.1%)</th>
<th>Participation in Ag (%) N=385 (30.9%)</th>
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<tbody>
<tr>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Delivery in Ag (%)</td>
<td>No (score 0)</td>
</tr>
<tr>
<td>Medium</td>
<td>12.7</td>
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<tr>
<td>High</td>
<td>6.0</td>
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**Agriculture and Nutrition group (n=1,212)**

<table>
<thead>
<tr>
<th>Non participation N=797 (65.8%)</th>
<th>Participation in Ag-Nutrition N= 415 (34.2%)</th>
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</thead>
<tbody>
<tr>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Delivery in Ag-Nutr</td>
<td>No (score 0)</td>
</tr>
<tr>
<td>Medium</td>
<td>9.2</td>
</tr>
<tr>
<td>High</td>
<td>16.1</td>
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**Exposure** to the intervention = **Participation** (whether and how much a household member was participating) + **Delivery** (implementation being received as planned)
Nutrition impacts

Prevalence of stunting, underweight and wasting among children 24-59.9 months by program group and survey round
Infant and young child feeding

WHO recommended IYCF indicators (core), by program group and survey round
Health and nutrition knowledge

Knowledge scores, by program group and survey round
Women’s empowerment

Empowerment domain scores, by program group and survey round
Agricultural production outcomes, by program group and survey round
Household food security

Household perceptions of food insecurity, and household dietary diversity score, by program group and survey round
Drivers of change

Stunting
- SES
- Household dietary diversity
- No of children <5
- Number of food crops, vegetables and fruits cultivated
- Number of agricultural activities
- Maternal occupation as farmer
- BMI
- Women’s empowerment (0/10)
- Received nutrition counselling during pregnancy
- Child gender
- Child age
- ARI
- Diarrhea
- Unexplained (%)

Wasting
- SES
- Moderate or severe HH hunger
- Economic shock
- No of children <5
- Number of food crops, vegetables and fruits cultivated
- Maternal CF knowledge
- BMI
- Women empowerment (0/10)
- >4 prenatal visits
- Received nutrition counselling during pregnancy
- Diarrhea
- Unexplained (%)

ARI: Acute Respiratory Infection
CF: Child Feeding
Summary: Mixed impacts of RAIN

✓ Consistently positive impacts on agricultural production
✓ Impacts on household food security as measured by household dietary diversity
✓ Impacts on women’s social and economic empowerment, as well as women’s empowerment in agriculture
✓ A potential protective effect on child wasting

✗ No impact on stunting
✗ No consistent impacts on IYCF practices
✗ No consistent impact on knowledge
Infant and Young Child Feeding

- Dietary diversity score – animal sourced foods
Women’s Empowerment

- Ministry of gender **not** present at district level
- Trainings delivered by **paid** project staff
- Sustainability - gender incorporated in SUN work plan

Photo credits: Gareth Bentley, 2014
Agriculture Production

• Increasing production diversity increases dietary diversity
• Required quantity of agriculture produce?
• Required project duration?

Photo credit: Gareth Bentley, 2014
RAIN +

- Markets
- Male involvement
- Robust M&E system on exposure to full package of interventions

Photo credits: Gareth Bentley, 2014
Thank you!
Changes in Stunting