Maximizing Nutritional Benefits of Agricultural Interventions

Do good, but first of all do no harm

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Infant & Young Child Nutrition (IYCN) Project

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The Infant & Young Child Nutrition Project

- USAID’s flagship project on infant and young child nutrition.
- Aims to prevent malnutrition for mothers and children during the critical time from pregnancy until two years of age.
- Led by PATH in collaboration with CARE, The Manoff Group, and University Research Co., LLC.

Photo: PATH/Evelyn Hockstein
Why IYCN Project and Agriculture?

• Agriculture interventions often neglect—and sometimes harm—the nutritionally vulnerable targeted by community-based nutrition.

• How do we ensure that agriculture and community-based nutrition are not working at cross purposes?

• USAID suggested to build capacity among our staff to advise on agriculture and nutrition.
“Feed the Future”

- Goal: Sustainably reduce global hunger and poverty...
- Key objectives:
  - Accelerate inclusive agriculture sector growth.
  - Improve nutritional status—especially of women and children.
How will “Feed the Future” Improve Nutritional Status?

- Community-based programs.
- Improve diet quality/diversity by strengthening agriculture and nutrition linkages.

Photo: PATH/Evelyn Hockstein
“Feed the Future” and Nutrition

- Small-scale processing.
- Women’s access to income.
- Water and sanitation.
- Promotion of positive care and feeding practices.
- Community-based nutrition programs.

Photo: Aurelio Ayala III
But mainly…

“…global effort focused directly on agricultural production…can increase the incomes of at least 40 million people….”

“…this extra income would allow a typical household of 5 people to purchase…an additional 100 kg of rice…together with fish, poultry, fruit and vegetables sufficient to add 150 calories per person per day….”
Does Increased Agricultural Production Improve Nutrition?

• Misperception: as long as production rises consumption will sort itself out. (Pacey and Payne, 1985)

• New technology more accessible to those with more endowments. (Pacey and Payne, 1985)
Does Increased Income Improve Nutrition?

• Not everything necessary for adequate nutrition can be bought.
  – Health
  – Education
  – Clean water
  – Gender equality

• “Income is a rather dubious indicator of the opportunity of being well nourished….” (Drèze and Sen, 1989)
Problem

• “There are trade offs and complementarities between production/employment goals and meeting nutritional goals which should be taken into account...when making program decisions.” (USAID, 1982)

• How do we ensure that production/income interventions will not jeopardize the nutritionally vulnerable?
Solution?

• Orient data collection to identify the nutritionally vulnerable.
• Protect nutritional considerations in the design of production/income projects.

Photo: WFP/Mario DiBari
Orienting Data Collection to Focus on the Nutritionally Vulnerable

- The need is to identify more carefully *who* in the population is malnourished, and *why*. (Pacey and Payne, 1985)
- Relate to spatial, ecological, socioeconomic, and demographic characteristics of the population.
- Characterize food and fuel resources, weaning and feeding habits, food preparation and water supply—and seasonal changes in all of these.
Protecting Nutritional Considerations

• Nutritional Impact Assessment
• Similar to other assessments:
  – Environmental impact assessment.
  – Gender impact assessment.

Photo: Ram Shrestha
Review of Experience

• What are the characteristics of agriculture interventions that:
  – Improve food security?
  – Improve nutrition?
• What are the characteristics of interventions that have negative effects?
Negative Food Security Impact

- Increase un- or under-employment among population groups already un- or under-employed.
- Increase food prices when vulnerable households are net purchasers.
- Reduce food prices when vulnerable households are net sellers.
- Shift cultivation to cash crops when the shift decreases labor utilization.
Negative Food Security Impact

• Positive impacts are more likely when interventions support or promote:
  – Agricultural tasks normally performed by women.
  – Small-scale processing.
  – Food disproportionately consumed by food insecure households.

Photo: WFP/Mario DiBari
Positive Impacts on Nutrition

• More likely to occur if:
  – Vulnerable households regularly consume the food commodity being produced.
  – The intervention includes explicit nutrition counseling.
  – The intervention includes home gardens.
  – The project introduces micronutrient-rich crop varieties.
Positive Impacts on Nutrition

• More likely if designed to benefit or protect more nutritionally vulnerable populations at project inception.

Photo: PATH
## Steps

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Step 1: Define Population Groups Likely At-risk

- Functional groups likely to be at risk may include:
  - Small landowning households.
  - Households selling labor.
  - Female-headed households.
  - Socially-excluded households (ethnicity, caste, occupation).
  - Households with chronically ill head.
Step 2: Describe Nutrition Situation for At-risk Population Groups

- Obtain consistent (and disaggregated) data on any of the following for children under 2 (or under 5) and for reproductive-age girls and women.
  - Caloric intake (nutrient intake if possible).
  - Dietary diversity.
  - Nutritional status (anthropometric).
  - Vitamin A and iron status (or intake).
- Identify groups with highest risk.
Step 3: Create Implementation Alternatives

• Create at least two alternative implementation options for meeting the stated project objectives.
Step 4: Estimate Likely Outcomes for Groups At-risk According to Alternatives

• For the proposed project approach, the alternative approaches, and a “do nothing” alternative, estimate the impacts for each of the vulnerable population groups.
Step 4: Estimate Likely Outcomes (continued)

• Factors to consider when estimating impacts are those identified in the review of experience:
  – Do these groups consume promoted crops/commodities?
  – Are these groups net sellers or purchasers?
  – Are nutrition education efforts directed at these groups?
  – What will be the impact on women’s time within these groups?
Step 4: Estimate Likely Outcomes (continued)

Score each alternative:

1. Substantial positive impact
2. Moderate positive impact
3. Neutral impact
4. Moderate negative impact
5. Substantial negative impact
### Group Exercise

<table>
<thead>
<tr>
<th>At-risk group</th>
<th>Children $&lt; 2 &lt; 5$ (circle one)</th>
<th>Girls/women 15-44 years</th>
<th>Indicator</th>
<th>Expected change</th>
<th>Indicator</th>
<th>Expected change</th>
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</thead>
<tbody>
<tr>
<td>Female-headed households</td>
<td>Stunting</td>
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<td></td>
<td>Wasting</td>
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<td>Poor Food Consumption Pattern</td>
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<tr>
<td>Agriculture labor supplying households</td>
<td>Share of WAZ $&lt; -3$</td>
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<tr>
<td>Overall impact score</td>
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<td>2</td>
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</table>
Step 5: Modify as Needed

- Substantial negative impact: modify project design (or accept alternative) and repeat impact assessment.
- Moderate negative, neutral, or moderate/substantial positive impact: proceed to Step 6.
Step 6: Assess Alternatives and Justify Selection

• Rank all approaches based on impact score.
• If the proposed approach ranks lower than any of the alternatives but will be pursued anyway, justify the decision for keeping it.
• Reasons for keeping?
Step 7: Mitigation Plan

- If proposed approach was estimated to have neutral or negative impact, prepare a mitigation plan to be implemented if negative impacts occur.
  - Activities to minimize potential negative impacts.
  - Pre-determined modifications to be implemented if negative impact is observed.
Step 7: Mitigation Plan (continued)

• Describe the process for reviewing nutritional impact over the course of the project, including:
  – Final impact evaluation.
  – On-going monitoring of nutritional effects.
  – Indicators for assessing nutritional impact.
  – Data collection plans (dates and/or milestones).
Step 8: Review Plan

• Specify the review process for this impact assessment, including the groups and/or individuals to conduct the review.

• The purpose is to ensure a realistic assessment.
Thank you