Nutrition-Sensitive Agriculture: What Works and Why

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Feed the Future Results Framework

FEED THE FUTURE GOAL
Sustainably Reduce Global Poverty & Hunger

INDICATORS:
Prevalence of poverty &
Prevalence of underweight & stunted children

OBJECTIVE
INCLUSIVE AGRICULTURE SECTOR GROWTH

Improved agricultural productivity
Expanded markets & trade
Increased investment in agriculture & nutrition-related activities
Increased employment opportunities in targeted value chains
Increased resilience of vulnerable communities & households

OBJECTIVE
IMPROVED NUTRITIONAL STATUS (WOMEN & CHILDREN)

Improved access to diverse & quality foods
Improved nutrition-related behaviors
Improved use of maternal & child health & nutrition services
From Inclusive Agriculture Sector Growth to Improved Nutrition

Objective
Inclusive Agricultural Sector Growth

Objective
Improved Nutritional Status (Women and Children)

“I think you should be more explicit here in step two.”
How Does Agriculture Affect Nutrition?

**Food Consumed**
- Calories
- Protein
- Micronutrients

**Income Invested in...**
- Diverse diet, nutrient-rich foods
- Health care
- Sustainable livelihood for year-round food and health care access

**Gender Roles within Agriculture**
- Maximizing women’s control of income
- Managing time and energy demands
Main Agriculture and Nutrition Pathways

Key components of the enabling environment:
- Food market environment
- Natural resources
- Health, water, and sanitation
- Nutrition/health knowledge and norms
Most direct pathway: Agriculture as a source of food

- Production decisions are influenced by market prices, relative costs and risks, productive assets, preferences and cultural norms
- Processing and storage impact food access and nutrient content
Food Production Pathway

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- Food market environment
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Food Production

Household Assets and Livelihoods

Agricultural Livelihoods

Agricultural Income

Women’s Empowerment

Non-food Expenditure

Food Access

Health Care

Health Status

Caring Capacity & Practices

Female Energy Expenditure

Child Nutrition Outcomes

Mother’s Nutrition Outcomes

National Economic Growth

National Nutrition Profile
Household food production (esp. nutritious foods)

- Ghanaian children in HH keeping poultry twice as likely to have minimum dietary diversity (Saaka)

- In Burkina Faso, HHs collecting wild foods and those producing food rather than cash crops had better dietary diversity (Ruiz); also in Burkina Faso, women’s BMI improved in a project promoting micronutrient-rich food consumption (Olney)

- In Rwanda, hemoglobin and serum ferritin improved for those consuming high-iron beans (DeMoura); OFSP, vitamin A cassava, and iron pearl millet also have some positive results
Some Evidence on Food Production Pathway to Nutrition

Processing & Storage

- Micronutrient Fortification (Eichler & Martorell)
- Good management, processing and storage can increase food access and reduce stunting, perhaps by 1 SD! (Turner, Leroy, Roy)
- Occupational risks:
  - E.coli and Salmonella in agricultural wastewater (Griffiths)
  - Increased malaria where water is stored (Griffiths)
  - Risks in value chains, e.g., zoonoses (IFPRI)
Agriculture as a source of income

- Improved year-round income and cash flows to meet household needs, including diverse, nutritious foods, and health care

- Assumes nutritious foods and health services are accessible – reflects the importance of generating demand and need for nutrition behavior change
Some Evidence on Income Pathway to Nutrition

- Income correlated with stunting at macro level, but at micro level, evidence sparse (Webb & Block, Kadiyala, Webb & Kennedy)
- Increased obesity in rural areas
- Household income correlated with household dietary diversity, especially for female-headed households (Coates & Galante)
- Non-agricultural income role in lean season (Ruiz, Dury, & Martin-Prevel)
- Correlation between income and diet diversity, but not evidence of effects on nutrition at household and individual level

Patrick Webb, and Steven Block PNAS 2012;109:12309-12314
Agriculture as a means to women’s empowerment

- Women are more likely to spend added income on the health and nutritional needs of the household.
- Women’s access to income is more often considered than time and energy use.
Women’s Empowerment Pathway

Key components of the enabling environment:
- Food market environment
- Natural resources
- Health, water, and sanitation
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Diagram showing the flow of economic growth and its impact on nutrition, with key components such as food production, food prices, processing & storage, food expenditure, food access, diet, health status, female energy expenditure, child nutrition outcomes, and mother’s nutrition outcomes.
Control over assets and use of income

- Women’s control lead to better diets for women and children (Olney, Coates)

Time Use & Child Care

- Tension between earning income and child care (Webb, Johnson)

Female Energy Expenditure

- Physical work compromises pregnancy and lactation nutrition (Herforth)
The Enabling Environment: Food Market Environment

- Intra-household decisions on food production, expenditure and savings, and power dynamics are influenced greatly by the enabling environment.

- Availability and affordability of diverse, nutritious foods in local markets drive choice, preferences.

- Time and energy availability are influenced by ease of food preparation.

- Disease burden influenced greatly by food safety environment, and environmental sanitation.
Panelists

- Yunus Abdulai, Agriculture/Livelihoods Specialist and Deputy Chief of Party, Resiliency in Northern Ghana (RING) project
- Dr. Sidi Coulibaly, Health and Nutrition Director of the Project Victoire sur la Malnutrition (ViM) project in Burkina Faso
- Mr. Papa Sene, Sr. Technical Advisor to the Yaajeende project in Senegal
Design nutrition-sensitive agriculture activities, outcomes, and indicators that link with nutrition-specific activities in co-located areas, and

Reference the frameworks, principles, and pathways.


Thank You!