Aligning the Food System to Meet Dietary Needs:

Fruits & Vegetables

Making the Case for Fruits and Vegetables
Why invest in F&V?

- Because they’re all the rage
- Because they’re good for you
- Because they’re good for the livelihoods of farmers and value chain actors
- Because we can: the odds are surmountable!
Fruits and Vegetables: The health case for investment

- Diet is linked to 6 of the 11 leading disease risk factors:

Source: Global Burden of Disease Study 2013 Collaborators (2015), Figure 5
Note: The graph shows global disability-adjusted life years (DALYs) attributed to level 2 risk factors in 2013 for both sexes combined.
Fruits and Vegetables: The health case for investment

- F&V address both undernutrition and overweight/obesity:
  - Contribute to micronutrient adequacy and dietary diversity
  - Reduce risk of coronary heart disease, overweight/obesity, and certain cancers
- Almost 2 in 3 of the world’s obese people live in low- and middle-income countries
Fruits and Vegetables: The case for agricultural investment

- Food-based dietary guidelines uniformly recommend increased F&V consumption
- 74% of the world’s population does not consume adequate F&V (400g/person/day)
- Production vs. recommendations especially low in LMICs

→ Lots of room for increasing market share!!
Fruits and Vegetables: The case for agricultural investments

- F&V typically generate greater income on smaller landholdings than cereals
- Production for household consumption and earned income ensure food and nutrition security
- Income is more likely to accrue to women with F&V production than with cereals/cash crops
Fruits and Vegetables: Responding to detractors

“They are too perishable”
- Technologies exist to vastly reduce postharvest losses

“They are too resource-intensive”
- Drip irrigation and conservation agriculture are examples of accessible technologies that reduce water, fertilizer requirements

“People won’t eat them”
- High-quality promotion efforts work, especially among children and individuals with disease risk factors
Strategies to increase consumption of nutrient dense fruits and vegetables

- Availability
- Price
- Demand
Availability

- Production
  - Land utilized for F&V
  - Productivity (yields, climate change)
  - Meeting need for nutritious food
- Postharvest losses
  - Quantity and nutritional quality
  - Packaging, cold-chain, physical damage, market linkages
- Seasonal availability
  - Early/late varieties
  - Protected culture
  - Irrigation
  - Processing/stabilization
- Local availability
  - Food environment, peri-urban production
Increased productivity could reduce prices
  ◦ Influence of climate change
Consider subsidies for F&V, similar to cereals
Balance price with smallholder needs for increased income
Household income influences ability to purchase
Demand

- Education
  - Human nutrition
  - Benefits of F&V consumption
- Food preferences
  - Culture/habits
  - Desire for highly processed foods
- Nutrition guidelines based on locally available food
- Marketing and advertising
- Vouchers for F&V
Research gaps

- Production and Availability
- Accessibility and Affordability
- Dietary Intake and Demand
- Metrics
Production and Availability

- How to ensure sufficient supply of F/V to meet nutrition needs globally?
- What innovations or policy changes can reduce the cost of production?
  - What are the effects of subsidies on producers and consumers?
- How will climate change affect production and availability?
- What is the effectiveness, feasibility and cost-effectiveness of:
  - Strategies for reducing post-harvest loss, especially in LMICs?
  - Strategies for reducing food waste at different points in the food system?
  - Interventions to reduce the risk of contaminants, such as mycotoxins and pesticides in food?
  - New technologies for maintaining “cold chains”, “dry chains”, and other systems for ensuring quality and safety?
Accessibility and Affordability

- How to reduce the cost of F/V to consumers without negatively affecting producers?
  - What are the effects of subsidies?

- What is the effectiveness, feasibility, and cost–effectiveness of strategies to make F/V more accessible and affordable?

- What are the roles of formal vs informal markets in supplying F/V in LMICs?
Dietary Intake and Demand

- What are recommended dietary patterns? → Need for locally-relevant, evidence-based food-based dietary guidelines
- What is F/V intake globally and across different countries and age groups?
- How to increase consumer demand for F/V?
- What are the environmental, economic, and psychosocial factors that drive dietary choices?
- What is the impact of changing the food environment, instead of or in addition to SBCC, in promoting F/V consumption?
- Can fruits and vegetables be positioned as convenient foods in the snack food market?
- What is the nutritional impacts of processed foods that are “fortified” with nutrient-dense foods?
What aspects of diet and diet quality are most important to measure, and how do we measure those?

What is the validity, precision, and reliability of metrics for monitoring availability, accessibility, and affordability of F/V?

How do we capture the psychosocial dimensions of food access and food preferences?

How are these metrics best used for policy decisions?

“Implementation science”: What process indicators and monitoring systems should be built into program implementation to ensure quality and guide program improvements?
Next Steps

- Share benefits of and strategy to enhance consumption of F&V
  - Policy makers
  - Development agencies
  - Researchers
  - Implementers
- White paper on topic to be shared widely
- Encourage multidisciplinary research and programs