FROM SEED TO SHELF – VALUE CHAIN DYNAMICS IN KENYAN HORTICULTURE

David Knopp – Emerging Markets Group, Ltd. 10/5/05
1. Value Chains are dynamic and complex. A facilitator must carefully prioritize interventions at key leverage points throughout the chain.

2. Development of a business services market (and other supporting markets) is directly dependent upon growth within the core value chain.

3. When developing supporting markets within a value chain, a careful balance must be struck between stand-alone and embedded service offerings.
VALUE CHAIN: A FRAMEWORK FOR INTERVENTION

Supporting Markets

Sector-specific providers

Cross-cutting providers

Financial (cross cutting)

Global Retailers

Exporters

Wholesalers

Processors/Traders

Producers

Input Suppliers

End Markets

Inter-Firm Cooperation (Vertical)

Enabling Environment

Inter-Firm Cooperation (Horizontal)

Firm-level Upgrading


2. Funding Level: USAID funded, $5 million

3. Objective: To increase growth and income among rural micro- and small-enterprises through increased access to business services
   ✓ Access to Markets
   ✓ Access to Resources and Skills
KENYA BDS APPROACH

1. Select Target Industry
2. Conduct Value Chain Analysis
3. Identify and Prioritize Constraints
4. Design Interventions
5. Tender Among Local Facilitators
6. Award, Support, and Monitor
KENYAN AVOCADO SUBSECTOR

Domestic Fresh
- Fresh Fruit Retailers
- Supermarkets
- Wholesale Markets

Export Processed
- Large Scale Processors
- Brokers/Traders

Export Fresh Market
- Exporters

Functions
- Retailing
- Exporting
- Wholesaling
- Processing
- Assembly
- Grading
- Production
- Input Supply
- Extension
- R&D

Suppliers
- KARI Nurseries
- Private Nurseries
- Chemical Stockists
- Ministry of Agriculture
- FPEAK
AVOCADO VALUE CHAIN FRAMEWORK (Jan. ’03)

Enabling Environment
- Exporters targeting wholesale speculative markets
- Secondary market non-existent
- Lead firms purchasing through spot market brokers
- Smallholders selling as individuals
- Weak regulatory enforcement = exportation of low quality fruit = poor image abroad
- EurepGAP, Traceability, MRLs

End Markets
- Exporters targeting wholesale speculative markets
- Secondary market non-existent
- Under-developed supply of business and financial service markets
- Access to material input markets limited

Supporting Markets
- Lead firms purchasing through spot market brokers
- Smallholders selling as individuals
- Access to material input markets limited

Inter-Firm Cooperation
- Lead firms purchasing through spot market brokers
- Smallholders selling as individuals

Firm-level Upgrading
- Smallholder trees dominated by indigenous and non-marketable varieties
- Failure by smallholder farmers to operate farm as a business
But which comes first?! How do we prioritize interventions?!

Kenya BDS started with an end market orientation, followed by strategic inter-firm cooperation (i.e. business linkages) which were critical for injecting cash within the system and stimulating growth throughout the value chain.
Initial out-grower scheme piloted with one exporter

**Vertical Linkages**
- MOU with Lead Firm
- Negotiation of Supply Contracts
- Hand-holding of “the deal”

**Horizontal Linkages**
- Cluster Analysis and Production Census
- Identification, Formation, Capacity-Building of Groups
- Development of “Group Management Officers”
EMERGENCE OF SUPPORTING MARKETS

Business services and inputs offered on credit through “embedded arrangements”
GROWTH OF END MARKETS DRIVES PRODUCTION

Business transactions from pilot initiative drove production and expansion within value chain

Support Services
- Graders
- Collection
- Group management

Support Services
- Pickers
- Supervisors
- Top-working

Exporter
- Global Wholesalers and Retailers
- Global Refineries
- Processor
- Processor
- Processor

Producers
- Inputs
  - Pesticides
  - Seedlings
  - Fertilizer
# Evolution of the Value Chain

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallholder Farmers</td>
<td>405</td>
<td>1,223</td>
<td>12,900</td>
</tr>
<tr>
<td>Registered Producer Groups</td>
<td>14</td>
<td>31</td>
<td>289</td>
</tr>
<tr>
<td>Market-Variety Avocado Trees</td>
<td>5,666</td>
<td>12,700</td>
<td>62,000</td>
</tr>
<tr>
<td>Grade 1 Yield per Tree</td>
<td>5%</td>
<td>16%</td>
<td>64%</td>
</tr>
<tr>
<td>Exporters with Supply Contracts</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Processors for Secondary Market</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Stand-Alone Service Providers</td>
<td>0</td>
<td>20</td>
<td>101</td>
</tr>
</tbody>
</table>
Peter Kariuki:

- 140 avocado trees
- 2002 – 1,000 grade 1 pieces sold at Kshs 1.00 per piece
- 2005 – 50,000 grade 1 pieces sold at Kshs 3.00 per piece
- Enjoys guaranteed market and price
- Plans to fence farm and drill a borehole for regular water supply
Anthony Mwangi:

- Previously an avocado broker
- Under program was trained as a sprayer by exporter, servicing 65 trees/day at Kshs 200
- Has gone “independent” this season, and anticipates on spraying 85 trees/day at Kshs 297
- Welcomes the idea of self-employment
MARKET ACTOR – PROCESSOR

Sunil Savla, AvOil Industries, Ltd:

- Commenced crude-oil processing operations May 2005
- Processing 20 tons per day through supply contract arrangements
- Will propagate grafted Hass seedlings for participating farmers next season
GROWTH WITHIN THE “CORE” DRIVES DEVELOPMENT OF SUPPORT MARKETS

- Demand for business services exists
- Monies are available to purchase services
- Role of facilitator to develop supply

Pilot linkage kick-starts support service delivery through embedded arrangements.

Pilot program success serves as demonstrator effect with other farmers and lead firms.

Participating farmers ready to upgrade farms. Other farmers ready to enter program.

Increased cash flow within entire value chain.
### Embedded Services

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Risks</th>
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<tr>
<td>Enables lead firm to produce per market specifications</td>
<td>Heavy investment may overexpose a lead firm</td>
</tr>
<tr>
<td>Overcomes financing constraints among MSEs</td>
<td>May inhibit development of stand-alone service providers</td>
</tr>
<tr>
<td>Useful when support market is immature or non-existent</td>
<td>Potential to “over-service” leading to market distortions</td>
</tr>
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### Stand-Alone Services

<table>
<thead>
<tr>
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<th>Risks</th>
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<tbody>
<tr>
<td>Increased competition leads to lower prices and improved service delivery</td>
<td>Lead firm has limitations on quality and standardization</td>
</tr>
<tr>
<td>Maximizes outreach</td>
<td>Financing constraints may inhibit service delivery</td>
</tr>
<tr>
<td>Levels power relationships amongst value chain actors</td>
<td>Difficult to kick-start in an immature market</td>
</tr>
</tbody>
</table>
1. A facilitator may exploit a pilot linkage opportunity to catalyze growth within the chain and commercially upgrade an entire industry. (*start small…think BIG*)

2. Value Chains are continually evolving. A facilitator must “ride the momentum” while ensuring a fair distribution of benefits throughout actors in the chain.

3. Embedded arrangements can serve to kick-start immature service markets, however stand-alone offerings may provide greater opportunities for outreach and enhanced competition.
ASANTE SANA!
david@kenyabds.com