Cultivating opportunity: Building a high quality fresh produce supply chain in PNG

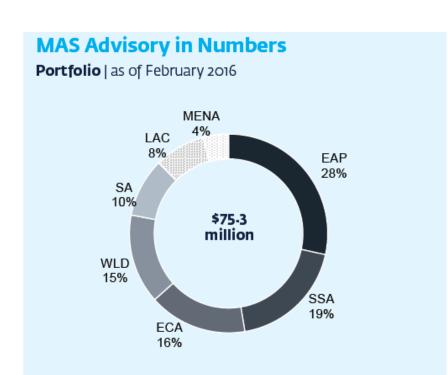






IFC, Manufacturing, Agribusiness and Services

- IFC is the largest development institution focused exclusively on the private sector
- IFC is both an investor and advisor for agribusiness companies around the world
- \$75 million agribusiness advisory portfolio
- 66 client engagements, chiefly in East Asia and Africa
- 1 project in Pacific: PNG Agribusiness



PNG Rationale and problem analysis

- More than 80% of PNG population dependent on agriculture for livelihoods
- Identification of a committed "lead firm" in the fresh produce sector
- Women are responsible for a majority of fresh produce supply
- IFC research showed that a number of critical issues lead wholesalers to source high quality fresh produce from abroad:
 - High post-harvest losses
 - Expensive, unreliable transport and logistics
 - Farm-level production does not meet quality and volume expectations
 - Ineffective coordination between market actors



information on

market expectations

and decision-making

Wholesale market players source high quality fresh produce from abroad Farm level production does High post harvest Ineffective coordination Expensive, unreliable not meet quality & losses between market actors Transport and logistics volume expectations Poor handling Lack of formal Limited access to Financial insecurity Inadequate road at the farm and relationships quality inputs of farmers network aggregation points along supply chain • Few importers of Limited access to Poor packaging No road connecting Highlands seed mobile banking Lack of formal Poor practices Sell only in bulk with POM Limited financial organizations of farmers to Existing roads poorly maintained Insufficient outlets literacy engage in rural areas Insufficient feeder road network Cash => crime risk Few market players Broken or absent Some capacity Insufficient Dedicated Gender roles Resistance by buyers and cool chain gaps at farm level and inequality Transport aggregators to invest Lack of sufficient TA: PMVs (public motor vehicles) · Few cool stores, long Women responsible for majority bad for produce, expensive Lack of confidence that quality, seed selection/saving: distances from farms of supply, but: · Limited credit to invest · soil composition; quantity, and timeliness Poor, expensive electricity Less freedom of movement Identification of pests Insufficient trust and expectations can be met locally supply Lower literacy/numeracy development of cooperatives for application of pesticide • Path dependence on imports Reefer trucks break on poor High gender-based violence collective investment Capacity gaps of FPDA (predictable) roads Less likely to access training · Inadequate monitoring of time poor (household, temperature in transit community obligations) Lack of specific · Insufficient cool chain Less control over resources

management expertise

Reliable High Quality Fresh Produce for Domestic Modern Markets

Farm level production meets quality & volume expectations

Post harvest
Losses are minimal

Efficient transportation is available

Market players coordinated

High quality inputs available

- Partnership with suppliers
- Use chain in reverse for delivery

New GAP adopted as needed

 'On demand' farmer advisory services functioning (in person and ICT)

Market specifications relayed to farmers

 Feedback loops from market to farm established (ICT; info at depots, trainers, farmer showcase) Improved financial security for farmers

- Mobile bank accounts
- Trained on farm finance and budgets

Evolution in gender roles towards greater equality

Women responsible for majority of supply and:

- Have access to safe transport
- received literacy and financial training,
- Increasingly taking on leadership roles
- Face reduced risk of violence Men share in farming and household and social responsibilities

Good handling at the farm and aggregation points

- Packaging appropriate to location and product is available and used
- District depots fitted out

Cool chain established

- District level depots (not cooled)
- Aggregator provides scheduled, timely transport to main cool store
- Functioning cool store available and sufficient size, design for purpose
- Sufficient electricity supply
- Improved and monitored reefer trucks drive to ports
- All containers equipped with temperature sensors and real time data to buyers.
- Good cool chain practices adopted

Distance from farm minimized

 District level deports => shorter distance on expensive transport and poor roads in poor vehicles

Dedicated produce transport available

- Aggregator invests in transport (initially)
- Trust and organization of cooperatives develops allowing collective investment

Road network improved

Over time:

- · Highlands Highway connected to POM
- Roads better maintained
- More feeder roads new more farms

Integrated, privately operated supply chain

- Contracts established between aggregators and wholesalers
- System for registering farmers established and functioning.
- Farmer organizations emerge and mature
- Improved feedback from market to farm (ICT), including price
- Advance orders facilitate crop planning
- Retailer promotes local produce and individual farmers in stores (photos, stories, contests)

PNG Agribusiness project activities

Component 1: Farmer Capacity Building



Farmer Advisory Service

- Production/quality
- Soil testing & advice
- Crop planning
- Post harvest management
- •Farm business record-keeping
- •"On-demand" in person at depot; via mobile phone
- •Specialists, as needed eg Citrus



Farmer Organisation Strengthening

- Farm registration/Database (GPS Map)
- Organisation development
- Banking/Financial literacy
- •Leadership (women & men)
- •Gender roles; gender-based violence



Inputs & Postharvest

- •Open pollinated seed selection training, seed bank & exchange
- •Bulk access to imported seed using chain in reverse for delivery
- Packaging (will test: recyclable crates & bins; breathable sacks, etc.)

Component 2: Lead Firm Market and Cool Chain Advisory



ICT

- •Trackability & traceability systems
- Market feedback loops
- •Real-time temperature sensors
- •FAQ & Hotline (Phase 2?)
- •Links to pestnet.com, through advisors
- Production calculator App, available through advisors
- Produce photo records of market out-turns available via Advisor smart phone

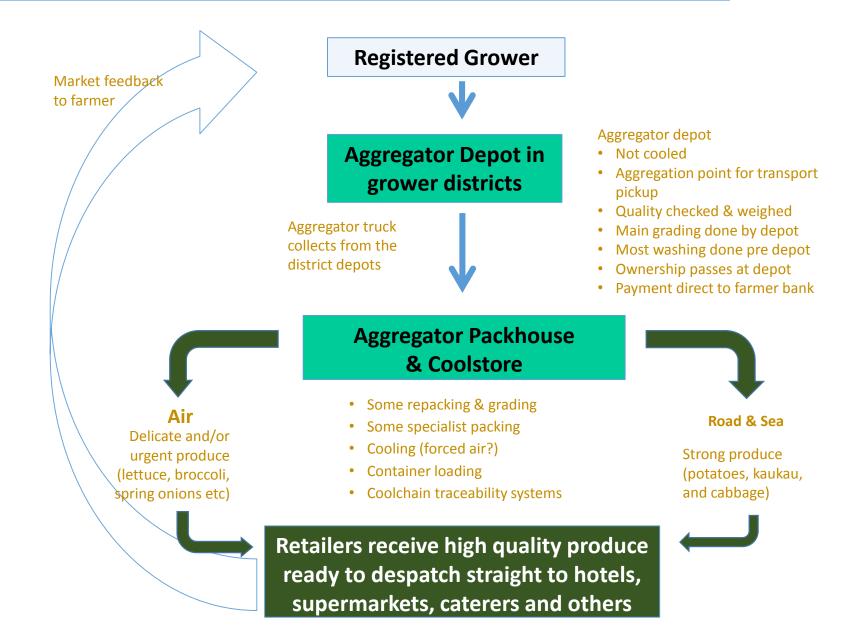


Coolchain advisory

- •Trackability & traceability systems
- Container packing and monitoring
- Despatch records, including electronic quality records
- Market feedback loops
- •Real-time temperature sensors

ANNEX

PNG Agribusiness project structure



PNG Agribusiness project targets 2015-2018

OUTPUT: Supply chain solutions advised

- 10 Trainers trained
- 38 Workshops and training events
- 5 diagnostics/reports produced
- 2 lead firms advised
- 3 procedures/policies proposed for improvement or elimination

OUTCOME: Supply chain performance and communication strengthened

- 2 lead firms adopting recommendations
- 3,500 women trained by IFC trained people and or institutions
- 10,000 people accessing agricultural technologies
- 10,000 farmers reached (70% women)

IMPACT: Economic empowerment of women in PNG Fresh Produce Supply Chain

- 10,000 farmers improved performance (quality and income); 70% women