Business model analysis

Several learnings regarding production, cost drivers and the sustainability of the private multiplier supply chain have been identified:

1. Initial start-up costs for land preparation, including clearing and de-stumping, are high due to their labor-intensive nature; creating high barriers to entry for new entrants (accounting for 21% and 35% of total operating costs in commercial and QDPM models, respectively)

2. Business models are generally labor intensive, with the cost of labor at an average of 7,500 Tsh a day. 63% and 75% of total operating costs in the commercial and QDPM model, respectively, are spent on laborious activities (weeding, harvesting, field management)

3. As anticipated, expenditures for input materials are higher in the commercial model than the QDPM (31% versus 23%)

4. Productivity in models was lower than anticipated (71% and 62% in the commercial, QDPM models respectively). This is attributed to lower than recommended initial stem plantings, low rainfalls in the Central Region and limited use of recommended fertilizer.

5. CSEs in both the Commercial and QDPM models were profitable, independent of MEDA's subsidy, although, marginally. The true ROI for these models is demonstrated over time, after initial start-up costs are amortized and absorbed in subsequent years' revenue

CSE BUSINESS MODEL

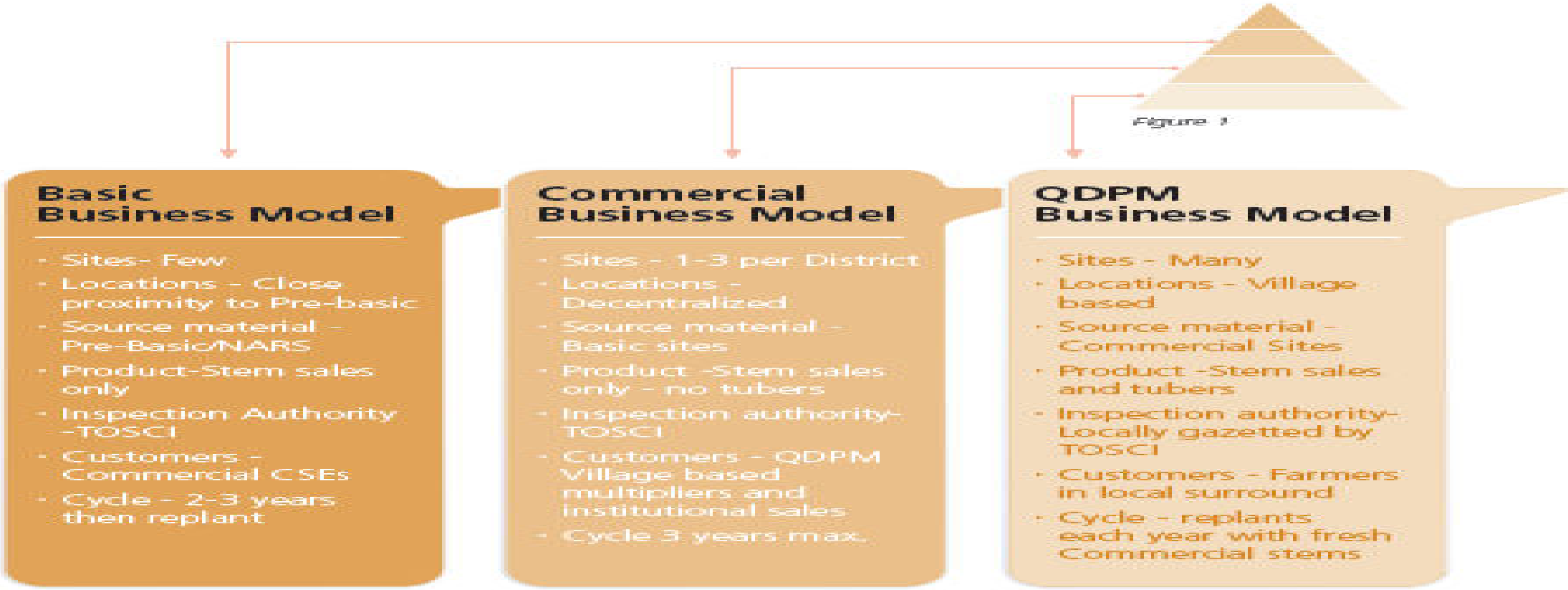

Figure 3 - - Levels MEDA is working with in Cassava Seed System Project

The business models

Figure 1 (above) provides a basic overview of the three levels that MEDA is working with of the four levels of seed multiplication. The 4th level, known as "Pre-Basic" or Breeder level seed, is actually the ***beginning*** *of the supply chain for certified seed, which is how new research breeder seed enters the chain, supplying the "Basic" business model.*

These various levels are needed to ensure the seed can be produced at a sufficient scale, and reasonable price for farmers. MEDA's primary focus is on the two lower levels, commercial and QDPM, which bring the materials to the end markets. Basic sites are a secondary focus, providing the linkage for connecting to the Pre-Basic production of new breeds coming into the pipeline.

Customer problem

- Existing varieties are Sheria
- Existing situation with diseases – CMD and CBSD
- Sheria yield is about 5 tonnes per acre
- Poor current agronomy knowledge and practices
- Financial resources to cover long growing season prior to sales
- Knowledge of value of purchasing planting material
- Rain fed agriculture – 1024.8mm annually

Existing alternatives

- Re-using own existing Sheria
- Purchasing or trading with local farmers
- Getting through District Councils
- FAO was distributing free material in some areas
- LIMAS is active, but not currently doing cassava
- Prisons through ASA
- Research Institutes – mostly to large farms or institutions

Solution/value proposition

Private farmers registering as seed dealers provide:

- Improved variety Kiroba resistant to viral diseases
- Consistent supply available – 16,000 plants x 1.5 = 24,000 stems approximately available to sell
- Quality assurance - Grown in accordance to standards
- Certified offering – known source planting material
- Offer agronomy knowledge to customers
- Financial services – either embedded, or referrals
- Sales and mentoring to other QDPM Multipliers

Cost structure

Sunk Cost – Land is owned	no cost
Clearing and de-stumpling,cultivation	840,000
Tools and equipment	314,000
Total sunk costs year 1	1,154,000
Planting material	640,000
Fertilizer	150,000
Chemicals	75,000
Planting related labor	150,000
Fertilizing and other pest control	75,000
Weeding and other field management	150,000
Other labor–rouging, thinning (in kind)	8,000
Harvesting stems	150,000
Security (in kind)	
Field supervision	170,000
Record keeping & management (in kind)	170,000
Marketing sales and promotion	160,000
Other misc Fees and technical expense	144,000
Inspection costs	90,000
Total in kind	745,000
Total costs both sunk and running costs including the in kind are	3,677,000
2,954,000 plus in kind 220,000	3,184,000

Key resources & stakeholders

CSE's – Farmers, laborers, local inspection system. Raymond also owns and operates a small agro dealer in village

- Resources to CSE's for stem sales
- Personal relationships with local farmers – previous Lead Farmer with FAO, knows other cassava growers
- Hidomoni Ward agricultural offices – especially the extension officer – Ramadan Mabumla
- Higher government institutions – MoAFC, Roots & Tubers group
- TOSCI – In certification schema – but also as a referral resource
- ASA
- Local leader – village leaders, district commissioner, MP
- NGO's – LIMAS, CARE, Concern Worldwide

Channel marketing

Planting material

- On farm sales pre-selling
- Farm shows and agriculture fairs
- Recruiting other CSE's MEDA assisted (for Commercial)
- Potentially resellers/Agro dealers
- Roadside stands and market days

Market segments

- Primary segment is other CSE's
- Approximately 6 existing QDPM plus new coming CSE's
- Remainder of stems may be sold directly to larger farmers
- Farmers selling to processors - aggregators
- Institutional buyers – Local govts, NGO's, CBO's

Success measurement

- Ability to maintain quality – meeting certification standards
- Market share
- Adoption of our varieties in area
- Growing and sustained demand
- Repeat customers
- Scale

Revenue/ business value

Calculation of value added – calculated similar to last year 200

Pricing model – consistent model of 200 Tsh per stem

Production – Quantity 24,000 x Price 200 = 4,800,000 Revenue year 1.

Years 2 and 3 estimated 40,000 stems would yield total revenue 8,000,000 per year

Year 1 = 4,800,000

Year 2 = 8,000,000

Year 3 = 8,000,000

Funding resources

- MEDA – 1,900,000
- Shortfall of 1,777,000
- Owner has saving and the ability to borrow
- other 745,000 was in kind

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