Sustainable Agricultural Mechanization:
Partnership Models

Alliance for a Green Revolution in Africa (AGRA)

By
Dr Hans Balyamujura
Figure 1: Broad Segmentation of Farmers

Tier I
- Large Commercial Farmers

Tier II
- Medium Sized Commercial Farmers

Tier III
- Small Holder Farmers Linked into Well Defined and Tight Value Chains

Tier IV
- Smallholder Farmers not Linked into Well Defined and Tight Value Chains

Access to Credit in a Commercial Bank

Level of Difficulty in Understanding the Agribusiness Environment
1. Tier II Business Models ...

1.1 Farmer Organisation Business Model (IKURU) ...

Figure 1: Tier II Mechanization Business Model

Key
- Individual Farmer or group of farmers
1.1.1 Operational Structure ...

Key Characteristics
- Seed multiplication
- Rental service

Figure 2: Rural Entrepreneur Structure
Operational Structure Cont’d …

• Farmer Organisation/Supplier Branch
  • Total cost structure (Personnel and operations)
  • Cost of normal commercial maintenance service (Sales service)
    • Mechanization service as a marketing tool (sales promotion)
    • Supplier branch sets up an efficient use of demo units
  • The service delivered in partnership with the Farmer Organisation and the Multi National/National company
  • Commercial maintenance service
    • Maintenance team supports the Farmer Organisation's repair work to ensure efficient utilization of the team of mechanics at the supplier branch
1.2 Tier IV Business Model ...

Figure 5: Cashew Nut Spraying Contractor

Key
- Individual Farmer or group of farmers
1.2.1 Rural Entrepreneur ...

Cashew nut Tree Spraying Service

Spraying Contractor

Cashew nut C

Cashew nut B

Cashew nut A

Cashew nut D

Cashew nut E

Cashew nut F

Farmer Spraying Services
- Spraying cashew nut trees
- 400 trees per season
- 17 to 25 farmers
- Charges 1 to 2 US$ per tree or 1 to 2Kg per tree
- Yield is between 3 and 6kg per tree

Figure 6: Rural Entrepreneur Structure
1.2.2 Design ...

Investment of US$ 1,000.00

- The Value chain business/FO trains the contractor
- Spraying contractor understands the needs of the value chain
- Individual contracted by FO/Value chain business
- Farmers contracted under a FO/Value chain business
- Standards set and managed by FO/Value chain business
- All chemicals supplied by the FO/Value chain business
- Good husbandry/spraying results in between 2 and 4 kg increase in yield per tree.
  - In the long term, this can increase to 11Kg per tree of raw cashew nuts.
- Spraying contractor can spray other crops during peak spraying demand.
- All maintenance and technical support provided by FO/Value chain business.
  - Investment includes 2-year maintenance and start up chemicals (approximately 60 trees)

Average revenue of US$ 800.00 per season
End