

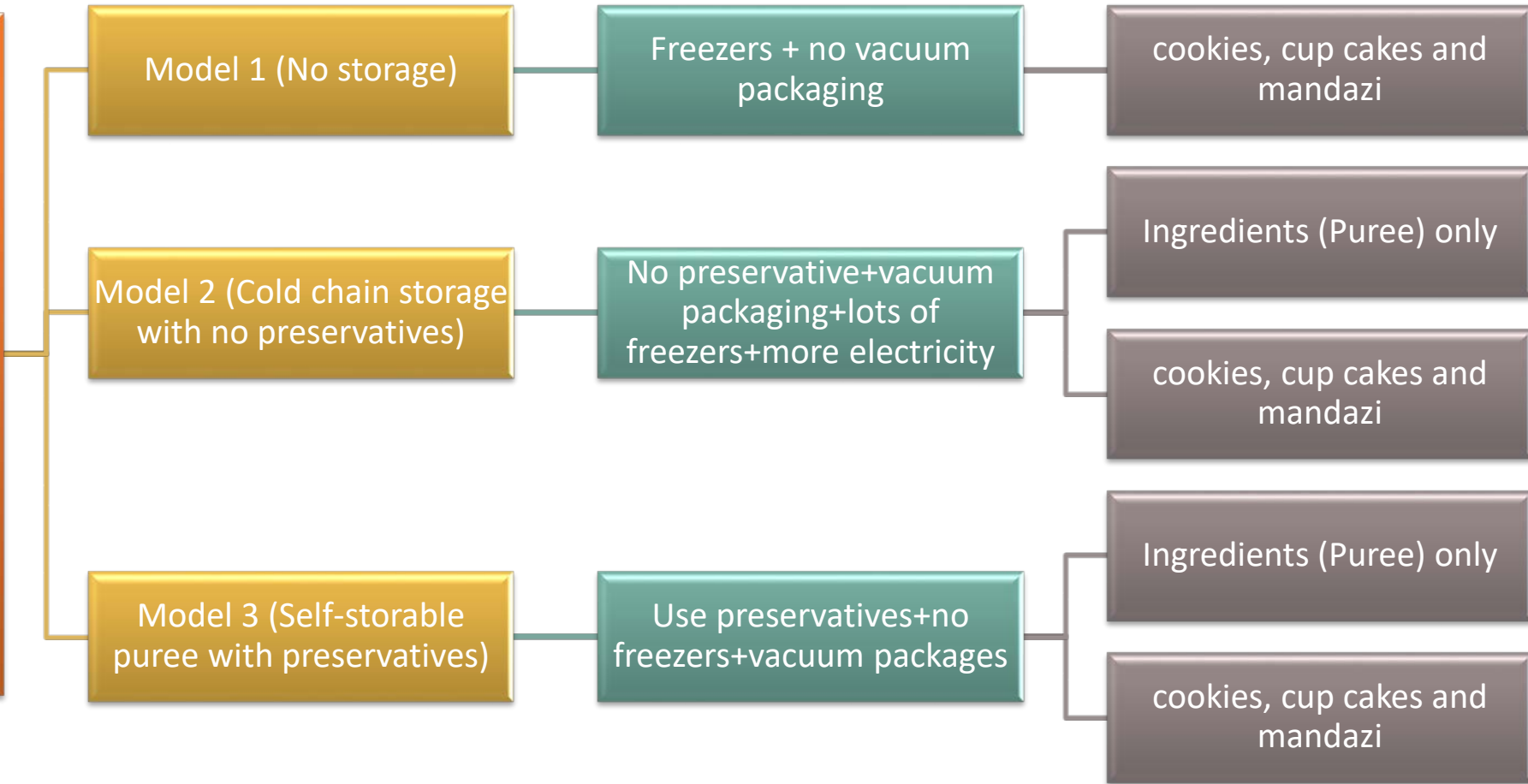
Financial Feasibility for Selected Business Models of OFSP value addition Industry



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Types of Business Models



B2B

B2C

Assumptions

- **Area 36 SQM – 1 shop – normal outlet**
- Product Business Model: Puree, Cookies, Cup cake and *Mandazi*, Bread
- 15 years project-life cycle
- Discount Rate: 15%
- Sensitivity Analysis
- OFSP root price per Kg: 0.25 USD
- OFSP Puree cost per Kg: 0.35 USD
- Maintenance cost – 10% of equipment cost
- Sales take off – 20%, 30%, 40% 50%, 80%, 90% and 100% within one year time period
- Competitive prices for cookies (10 pc of pack): 0.55 USD per pack; Mandazie: 0.10 USD per pack; cup cake: 0.25 per pc.
- Average size of OFSP root procurement for production of cookies, cup cake and mandazi: 1500 kg per month; if it is Puree only business then 3000 Kg per month

Cookies



0.50 USD

Mandazi



0.10 USD

Cup Cake



0.25 USD

Puree



0.35 USD per
Kg



Products

| S.No | Investment |
|------|---------------------------|
| 1 | Washing bay |
| 2 | Chopping boards |
| 3 | knives |
| 4 | Potato Cutter |
| 5 | Disks for Potato Cutter |
| 6 | Steamer |
| 7 | Puree machine |
| 8 | Work tops |
| 9 | Generator (7 Kva) |
| 10 | Cooling rack |
| 11 | Electronic Weighing scale |
| 12 | Steaming baskets |
| 13 | Chest freezer |
| 14 | Scoops |
| 15 | vacuum sealer |



Puree machine



Steaming



Vacuum sealer

| | |
|----|----------------------|
| 16 | Fryer |
| 17 | Planetary Mixer |
| 18 | Oven |
| 19 | Baking trays |
| 20 | Refrigerator |
| 21 | Depositor |
| 22 | Pin Roller |
| 23 | Ingredient Baskets |
| 24 | Ingredient Scoops |
| 25 | Small Weighing Bowls |
| 26 | Large Weighing Bowls |



Fryer



Depositor



Oven

| | |
|---|-----------------------------------|
| 1 | Office Furniture & equipments |
| 2 | Set up of Electrical and plumbing |
| 3 | Legal documentation |
| 4 | Business consultancy costs |

| S.No | Indicators |
|------|--|
| 1 | Bussiness Development |
| | Business development officer |
| 2 | Marketing Strategy costs |
| | sampling, advt. trial, product development for customers |
| 3 | Professional technical Staffs for production |
| 4 | Inputs |
| | Roots OFSP for cookies |
| | Puree costs |
| | Puree costs for Cookies |
| | Puree costs for Mandazie |
| | Puree costs for Cup cake |
| | Other Ingridents |
| 5 | Transport |
| | Small Utility Truck* |
| 6 | Permit costs |
| 7 | Product certification per year |
| 8 | Electricity costs |
| 9 | LPG |
| 10 | Fuel and lubricants for transport |
| 11 | Packing Materials |
| 12 | Maintaince Costs for Puree production |
| 13 | Maintaince Costs for final production |

Financial Viability

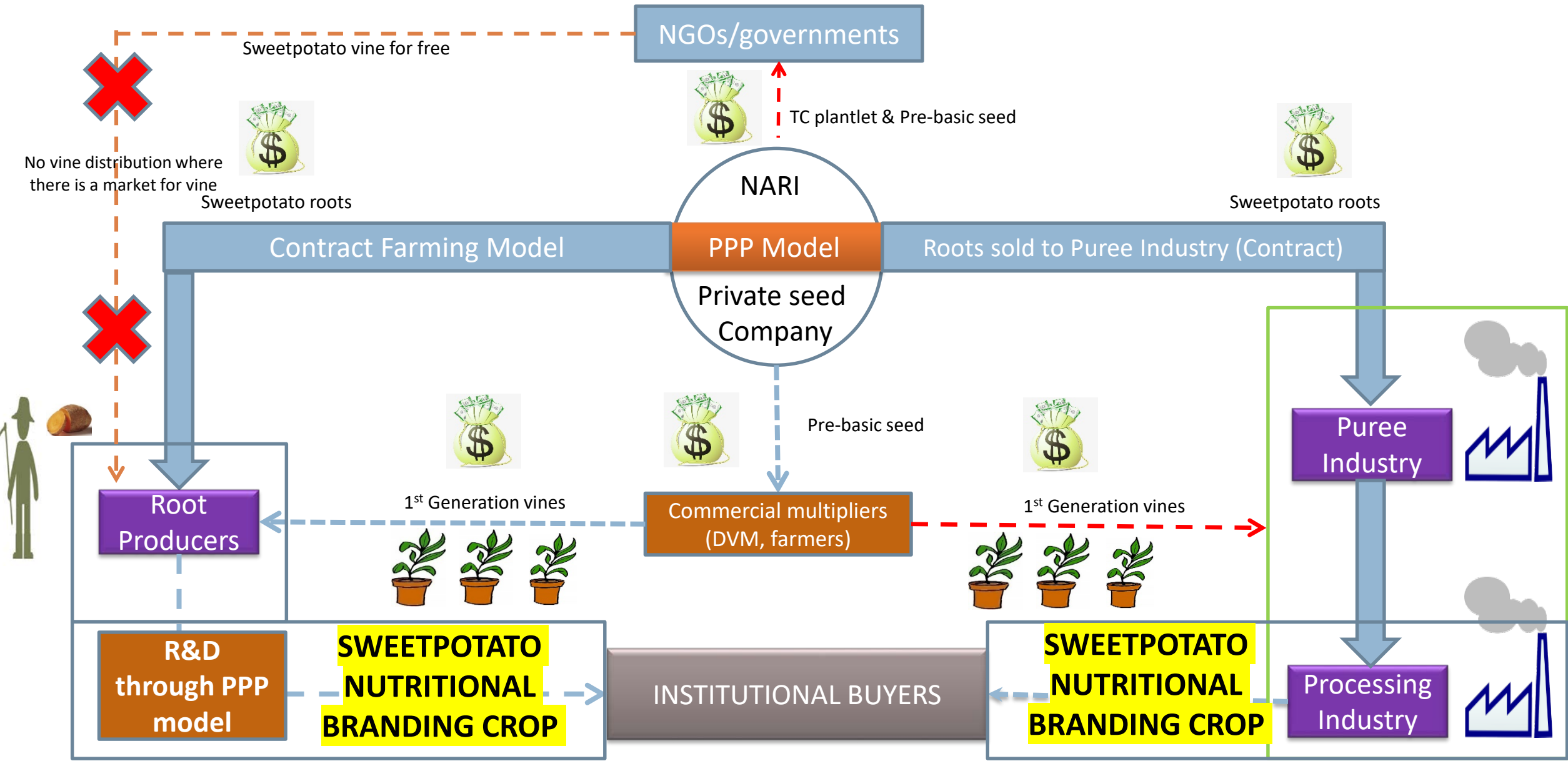
| Type of Business Model | Name of Business Model | Particulars | Total Investment | Project life-cycle | NPV | IRR | Discount Rate | Payback period |
|--|------------------------|--|------------------|--------------------|-----------|-----|---------------|----------------|
| Model 1 (No storage) | Model 1 | Freezers + no vacuum packaging | \$ 37,030 | 15 | \$378,304 | 54% | 12% | 1 |
| | <u>Model 2A</u> | | <u>\$ 21,330</u> | 15 | \$162,457 | 30% | 12% | 3 |
| Model 2 (Cold chain storage with no preservatives) | Model 2B | No preservative+vacuum packaging+lots of freezers+more electricity | \$ 42,930 | 15 | \$376,232 | 51% | 12% | 1 |
| | <u>Model 3A</u> | | <u>\$ 18,930</u> | 15 | \$179,308 | 32% | 12% | 3 |
| Model 3 (Self-storable puree with preservatives) | Model 3B | Use preservatives+no freezers+vacuum packages | \$ 40,530 | 15 | \$380,177 | 53% | 12% | 1 |

Sensitivity Analysis

| Type of Business Model | Name of Business Model | 10% Increase in Production & Investment Costs | | | | 10% reduces in revenue | | | | 10% increase in Production & investment costs & reduction in revenue | | | |
|--|------------------------|---|-----|---------------|----------------|------------------------|-----|---------------|----------------|--|-----|---------------|----------------|
| | | NPV | IRR | Discount Rate | Payback period | NPV | IRR | Discount Rate | Payback period | NPV | IRR | Discount Rate | Payback period |
| Model 1 (No storage) | M1 | \$336,434 | 47% | 12% | 3 | \$298,603 | 46% | 12% | 3 | \$256,733 | 40% | 12% | 3 |
| | M2A | \$125,359 | 26% | 12% | 3 | \$109,113 | 25% | 12% | 3 | \$72,015 | 20% | 12% | 3 |
| Model 2 (Cold chain storage with no preservatives) | M2B | \$331,000 | 45% | 12% | 3 | \$293,377 | 44% | 12% | 3 | \$248,146 | 38% | 12% | 3 |
| | M3A | \$143,895 | 28% | 12% | 3 | \$125,964 | 27% | 12% | 3 | \$90,551 | 22% | 12% | 3 |
| Model 3 (Self-storable puree with preservatives) | M3B | \$335,340 | 46% | 12% | 3 | \$297,323 | 45% | 12% | 3 | \$252,486 | 39% | 12% | 3 |

Sweetpotato Innovative Business Model

B2B & B2C Business Model through PPP system



Spillover effect

- Packaging industry (environment friendly)
- Energy sector (solar)
- Logistic sector
- Health sector

Theory of Change

Operationalizing the strategy to run model smoothly

RTB Innovative (R&D) Business Model

iNutri-RTB incubation center (Youth – agribusiness graduates) through Public Private Partnership (PPP) Model

