



SNAP BEAN SEED INNOVATION

Kenya's first locally bred snap bean varieties

University of Nairobi · UNISEED Kenya PLC · Innovation Profile

OVERVIEW

This innovation involves the development and commercialisation of new locally bred snap bean varieties by plant breeders at the University of Nairobi. The varieties carry genetic resistance to major diseases affecting snap bean production in Kenya, eliminating or greatly reducing the need for protective fungicides. The innovation is being brought to market through UNISEED Kenya PLC, a seed company associated with the University of Nairobi, targeting both export and domestic markets.

The business model is documented as a Lean Business Canvas, presented at the IPMO-C4D Lab Training Programme under the Innovation Incubation and Commercialisation (IIC) Programme on 4 December 2024, Nairobi, Kenya.

INNOVATORS

Lead Innovator: Paul Kimani & Team

Department: Plant Science and Crop Protection, Faculty of Agriculture

Institution: University of Nairobi, Kenya

Commercial Vehicle: UNISEED Kenya PLC — Snap Bean Seed Product Line

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PROGRAMME CONTEXT

The innovation was developed and presented under the Innovation Incubation and Commercialisation (IIC) Programme, specifically the IPMO-C4D Lab Training Programme. The presentation took place on 4 December 2024 in Nairobi, Kenya. No specific external funder is named in the source document.

PROBLEM BEING SOLVED

Snap bean farmers in Kenya face the following documented challenges:

- Heavy crop losses caused by rust, angular leaf spot, anthracnose, root rots, and common bacterial blight
- Heavy reliance on expensive chemical fungicides to manage these diseases
- Risk of produce rejection and penalties for exceeding allowed fungicide residue levels
- Dependence on expensive imported seed from multinational companies
- Low productivity of currently available varieties
- Seed packages exceeding 10 kg, requiring high capital investment (over KES 6,000 per kg)

| | | | | |
|------|-------------------|-------------|-----------|-------------------------|
| Rust | Angular leaf spot | Anthracnose | Root rots | Common bacterial blight |
|------|-------------------|-------------|-----------|-------------------------|

THE INNOVATION / SOLUTION

New varieties carry genetic resistance to multiple diseases, eliminating reliance on protective fungicides. Certified seeds are locally produced and available in affordable small packages (100 g, 200 g, 500 g and 1 kg). Varieties are legally protected (patented), with seed available only through approved distributors and licensed seed producers.

| | |
|----------------|---|
| 30% | Yield advantage over existing commercial varieties (as stated in source document) |
| >80% | Proportion of premium grade (extra fine & fine) pods — delivering better returns to farmers |
| 2 | Named varieties documented: KSB 13-01 and KSB 13-05 |

Variety KSB 13-01: Tested in Isinya, Kajiado County

Variety KSB 13-05: Tested in Mwea, Kirinyaga County

Additional field trial: Kabaa, Machakos County

MARKET SCALE (AS STATED IN SOURCE DOCUMENT)

| | |
|---------------|---|
| 50,000 | Growers countrywide (target market) |
| 1,000+ | Agro-input dealer points of sale |
| 3 | Processors with contract farmers |
| 5 | Fresh produce exporters / large-scale farmers |

TARGET CUSTOMER SEGMENTS

- Smallholder farmers (under 0.25 ha)
- Large-scale farmers
- Local fresh produce exporters
- Fresh produce companies
- Canning processors
- Agro-input dealers
- Local seed companies

REVENUE STREAMS

- Seed sales to agro-input dealers
- Seed sales to large-scale producers
- Seed sales to snap bean exporters
- Seed sales to canning processors
- Seed sales to supermarkets and local markets
- Technical backstopping and training services for contract farmers and companies
- Licensing agreements
- Spin-off investments

COMMERCIAL PARTNERS NAMED IN SOURCE DOCUMENT

The following organisations are referenced in the presentation in relation to product testing or market channels:

QUICKMAT

NAIVAS Ltd

FOODPLUS