Assessing Feasibility of Pest Exclusion Nets

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Netting Technology for Small-scale Vegetable Growers in Sub-Saharan Africa:
One-year pilot-project to evaluate the scalability of netting technology in Kenya

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Assessing Feasibility of Pest Exclusion Nets

Nets - what we know (findings from previous project):

- ✓ **Insect pest exclusion** *(influence pest population dynamics)*
- ✓ **Reduce / eliminate chemical pesticide applications**
- ✓ **Improve crop yield, produce quality and marketability**
- ✓ **Contain / retain beneficial bio-control agents**
- ✓ **Improve seedling germination, survival and transplant quality**
- ✓ **Microclimate modifications** *(temperature, RH, soil moisture, light)*

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Scaling Netting Technology to Small-holder Vegetable Growers in Sub-Saharan Africa

Who:

- Local growers
- CIRAD & ICIPE
- A to Z Textiles, LTD
- The Real IPM Company
- Cnt. for Large Scale Social Change
- Michigan State University
- Rutgers University

Where we work: Kenya

What we do:

Obj. 1: Determine growers' gross margins and return on investment (ROI)
Obj. 2: Broaden grower awareness of the application, advantages and availability of netting technology (*begin to develop a marketing plan*)
Obj. 3: Identify/create and provide growers access to affordable, low-interest financing for AgroNet/Net-house materials
Obj. 4: Investments and long-term commitments by prime partners to availability of netting technology

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Progress to date:

- ✓ Identified growers – six in each of five locations (one lead-grower/group);
- ✓ Finalized Net-House design and materials for uniformity;
- ✓ Commitment of personnel and financial investment by A to Z Textiles LTD;
- ✓ Net-House frames constructed by local builder;
- ✓ Growers trained in use of netting technology/Net-House;
- ✓ Interview/survey each small-holder and larger-scale growers at beginning of growing season.

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Our Approach:

- Green Tech Irrigation is the local builder
- Netting custom sewn to seal seams
- Dimensions - 20 m x 8 m 2 m, w/entry door
- 6 Net-Houses in Mwea (completed)
- 6 more Net-Houses each in Kiambu and Victoria Lake (end of February), and in Ngong and Machakos (mid-March)
- Socio-economist (hired) – survey growers
- AgriBusiness Mngr - financing and loan options

First Net-House installed in grower's field (Mwea)

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By the Numbers:

- **5 grower groups in different locations**
- **6 farmers per group** (M & F, 1 lead in each)
- **30 Net-Houses**
- **Paired Field Plots / Net-Houses**
  - **3 crops** (french bean, tomato & cabbage)
  - **3 treatments** (w/o pesticide, w/BioPesticide, w/Synthetic Pesticide)

Grower Groups

Training grower on Net-House use / maintenance

One-year pilot-project to assess the scalability of netting technology in Kenya

Determine grower's return on investment following crop yield/sales data analysis; and potential for sustained adoption based upon grower survey, available financing and marketing plan.

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