Scaling-out pigeonpea varieties to enhance resilience opportunities for smallholder farmers of the semi-arid region of central Tanzania

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Challenges & Study objective

- Resilient pigeonpea varieties with commercial value are not accessible to smallholder farmers of semi-arid ecologies.
- Limited investment by private sector on pigeonpea (Fig 1).
- Farmers grow obsolete and or local landraces.

Study objectives

- To introduce and popularize improved pigeon pea varieties in central Tanzania.
- To strengthen local seed delivery systems.

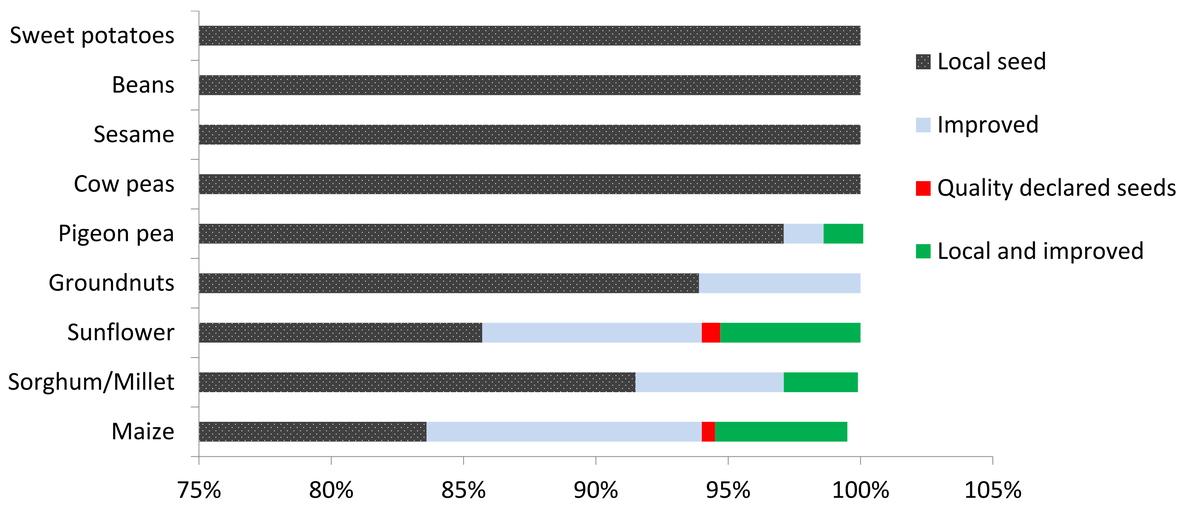

Fig 1: Seed status in central Tanzania

Introduced technologies

- Adapted high yielding pigeonpea varieties.
- Community seed banks and associated knowledge/skills, as a seed delivery mechanism.

Evidence

- The pigeonpea varieties introduced have yield advantages of up to 40% over local check (Fig 2).
- Partners and farmers (1327) trained and engaged to produce quality seed (Table 1 and Plate 1).
- Fifteen community seed banks formed and operational (Table 1& 2).
- Seed production and productivity enhanced (Table 2).
- Quality seed available across the two districts (Kongwa and Kiteto) (Fig 3).

Approaches for taking technologies to scale

- Private sector engaged for scaling-out the new varieties (Dry Land Agriculture Investment Company.
- Strategic partnerships with public sector for seed delivery.
- Participatory technology testing and learning.

Partners

We thank farmers and local partners in Africa RISING sites for their contributions to this work. We also acknowledge the support of all donors which globally support the work of the CGIAR centers and their partners through their contributions to the CGIAR system

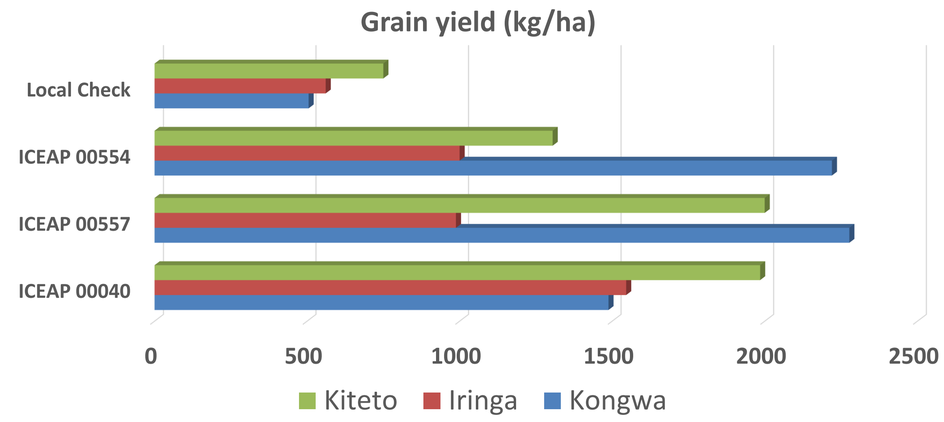

Fig 2: Performance of improved varieties

Table 1. Seed beneficiaries engaged on training and seed production

Village	Seed banks	Men	Women	Total
Njoro	3	202	117	319
Moleti	3	57	200	257
Mlali	3	130	171	301
Chitego	2	114	88	202
Manyusi	2	99	26	125
Laikala	2	95	28	123
	15	697	630	1327

Plate 1: Top left Farmers receiving packs of pigeonpea seed; Top middle- Hands on training on pest control in pigeonpea, Top right PVS on Pigeonpea

Table 2: Production and beneficiary tracking

No	Village	Crop	2016-2017 production	new beneficiaries for 2017-2018	Productivity (kg/ha)
1	Njoro	Pigeon pea	778	165	1233.5
2	Moleti	Pigeon pea	2,721	306	953.7
3	Manyusi	Pigeon pea	317	73	1144.2
4	Chitego	Pigeon pea	95	95	1328
5	Mlali	Pigeon pea	4,202	542	1725.9
6	Laikala	Pigeon pea	460	97	835.6
		Total	8573	1278	avge: 1203.5

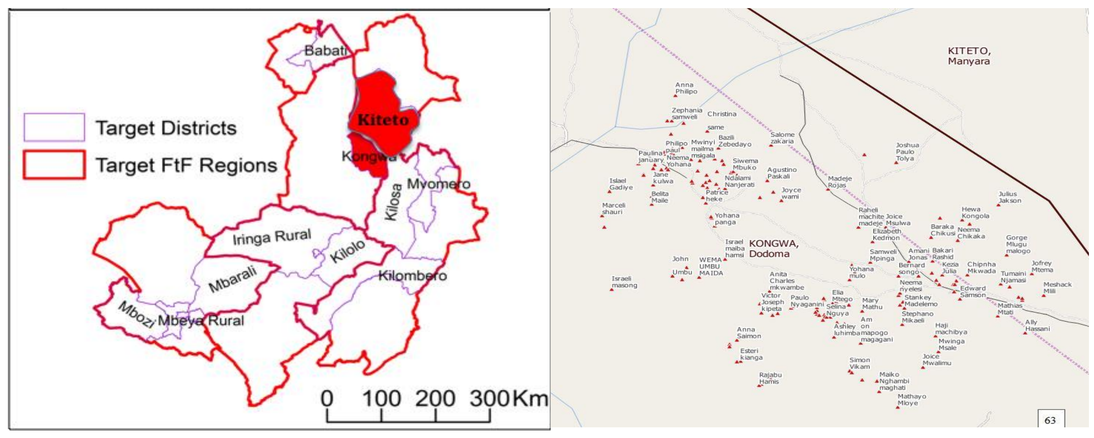

Fig 3: Pigeonpea seed coverage in Kongwa and Kiteto

Proposal for the future

- Stimulation of domestic demand for pigeon pea.
- Integration of agronomy, crop-livestock and seed system technologies in scaling out strategy.
- Strengthening quality control to unlock productivity and seed markets.