

A high-altitude mountain valley with two people working in a potato field. The scene is set in a rugged, mountainous region with steep, rocky slopes and a valley floor covered in green grass and patches of brown earth. In the foreground, two individuals are focused on their work. One person, wearing a yellow long-sleeved shirt, a black shawl, and a brown hat, is bent over, using a small tool to dig in the soil. The other person, wearing a colorful, patterned hat and a blue jacket, is also working nearby. The background features a deep valley with a small stream, a few traditional stone buildings, and distant, misty mountain peaks under a cloudy sky. The overall atmosphere is one of traditional agricultural labor in a high-altitude environment.

POTATO SEED HEALTH IN LOW-INCOME COUNTRIES

**Greg Forbes, International Potato
Center, Kunming, China**

Sustainable?





Diversity



Contour
planting



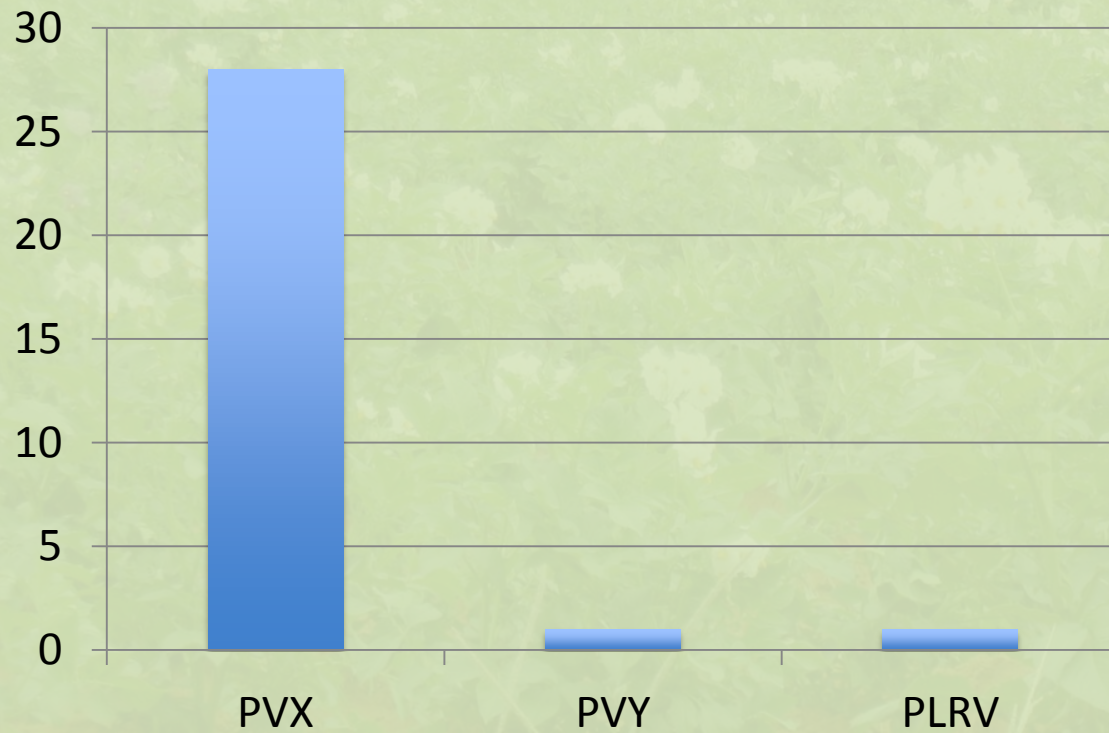
Seed

Healthy native potatoes



Healthy native potatoes

Virus incidence (%)





Degeneration - virus



Bacterial wilt



Certified seed,
ca 1910

24.06.2012 23:01



Clean seed,
ca 1960

Quality
from the top
of Europe



HOME | VARIETIES | ORIGIN OF SEEDS | INTERNATIONAL | **PROFILE** | CONTACT |



Profile

The DANESPO Group

News

General Terms and
Conditions for Sale

How to find DANESPO

Links

Production in the largest seed producing country in the world

Skilled employees and potato growers deliver the best potatoes and prioritise our customer service and good logistics for our clients.

Good logistics and a large network of Dutch growers enable us to do fast potato trading. We can react within a few hours and make potato transports for all parts of the world. [Contact DANESPO Holland](#)

Wide selection of varieties

DANESPO Holland work with several new and exiting varieties such as Cimega, Cronos and

DANESPO is one of the leading companies in Northern Europe producing, selling, trading and breeding quality ware and seed potatoes. We are specialized in sales to companies and professional potato growers.



Problem solved

A photograph of a large agricultural field, likely a tobacco plantation, with rows of green plants stretching into the distance under a clear blue sky. The plants are arranged in neat, parallel rows, and the soil between them is light-colored. In the background, there is a line of trees and some distant structures.

Clean seed replacement paradigm

Paradigms in science

(Kuhn 1970)

Paradigm: Universally recognized scientific achievements that for a time provide models and solutions to a community of practitioners

A pair of hands is shown holding several small, yellowish potatoes. The hands are positioned at the bottom and sides, cradling the potatoes. The potatoes are of various sizes and have a slightly rough, textured skin. The background is a soft, out-of-focus light color, making the hands and potatoes the central focus of the image.

Paradigms in science

(Kuhn 1970)

Paradigm: Universally recognized scientific achievements that for a time provide models and solutions to a community of practitioners

Paradigm paralysis: The inability or refusal to see beyond the current models

Paradigm
or
paralysis?



Country	Informal seed system (%)	Reference
Afghanistan	100	Kadian et al., 2007
Bangladesh	95	Ilngantileke et al., 2001
Bhutan	98	Kadian et al., 2007
Bolivia	98	Hidalgo et al., 2011
China	80	Muthoni et al., 2013
Colombia	90-98	FPAPA, 2010; Guzmán-Barney et al., 2012
Ecuador	97-99	Thiele, 1999; ESPAC, 2012
India	80	Kadian et al., 2007
Indonesia	94	Muthoni et al., 2013
Kenya	97	Gildemacher et al., 2009
Pakistan	95	Muthoni et al., 2013
Peru	99	Hidalgo et al., 2011
Uganda	96	Gildemacher et al., 2009

Crop	Seed Source: 'most recent/current season' (%)								
	Own stock	Friend, neighbor relative	Local market	Agro-dealer	CBSG	Government	NGO / UN	Contract growers	Other
Maize	30.3	9.5	41.9	6.1	0.2	4.8	6.4	0.1	0.0
Other cereals	40.0	12.1	37.9	2.2	0.8	0.9	6.0	0.0	0.0
Sorghum	51.2	12.1	28.3	0.2	0.1	1.1	7.1	0.1	0.0
Millets	44.6	21.1	18.7	0.7	0.0	2.4	12.4	0.0	0.1
Rice	15.1	9.3	64.3	6.9	2.5	0.0	1.9	0.0	0.1
Legumes¹	24.2	4.0	64.4	0.6	0.5	0.6	5.5	0.0	0.2
Groundnut	34.8	6.4	51.7	0.1	0.3	0.2	6.6	0.0	0.1
Common bean	10.4	0.9	81.3	0.8	0.9	0.4	5.1	0.0	0.2
Cowpea	26.7	4.4	56.6	2.4	0.5	4.4	5.0	0.0	0.0
Pigeonpea	30.1	5.5	61.4	0.4	0.2	1.4	0.6	0.0	0.3
Green gram	37.1	2.2	49.5	2.9	0.0	4.6	1.6	0.0	0.5
VPCs	47.3	29.9	18.3	0.1	0.5	0.4	3.2	0.0	0.4
Cassava	52.9	32.4	9.5	0.0	0.3	0.5	4.3	0.0	0.1
Banana	16.0	26.0	54.7	0.4	0.8	0.0	0.6	0.0	1.6
Sweet potato	79.2	14.6	3.5	0.0	0.0	0.0	2.7	0.0	0.0
Irish potato	38.8	36.7	22.0	0.0	2.0	0.0	0.1	0.0	0.4
Others²	22.9	9.1	33.5	22.3	0.0	1.4	8.7	1.5	0.7

McGuire S, Sperling L, 2016. Seed systems smallholder farmers use. Food Security 8, 179–195.



New
varieties?

clean seed replacement paradigm



Get clean
seed
(certified)

Integrated seed health strategy



Plant
resistance

On-farm
management

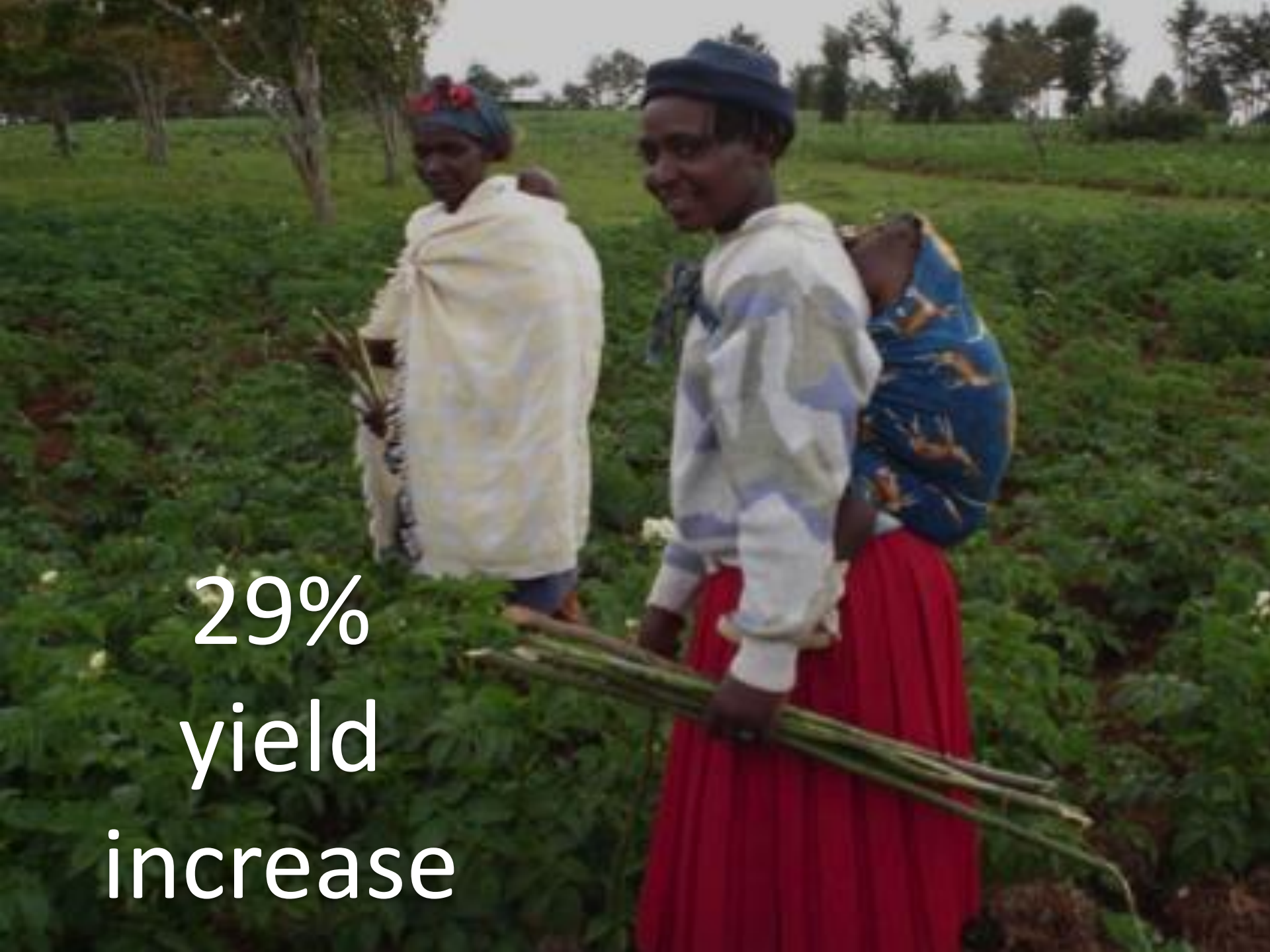
Get clean seed
(certified)



Virus?



Positive
selection



29%
yield
increase

Sanitation

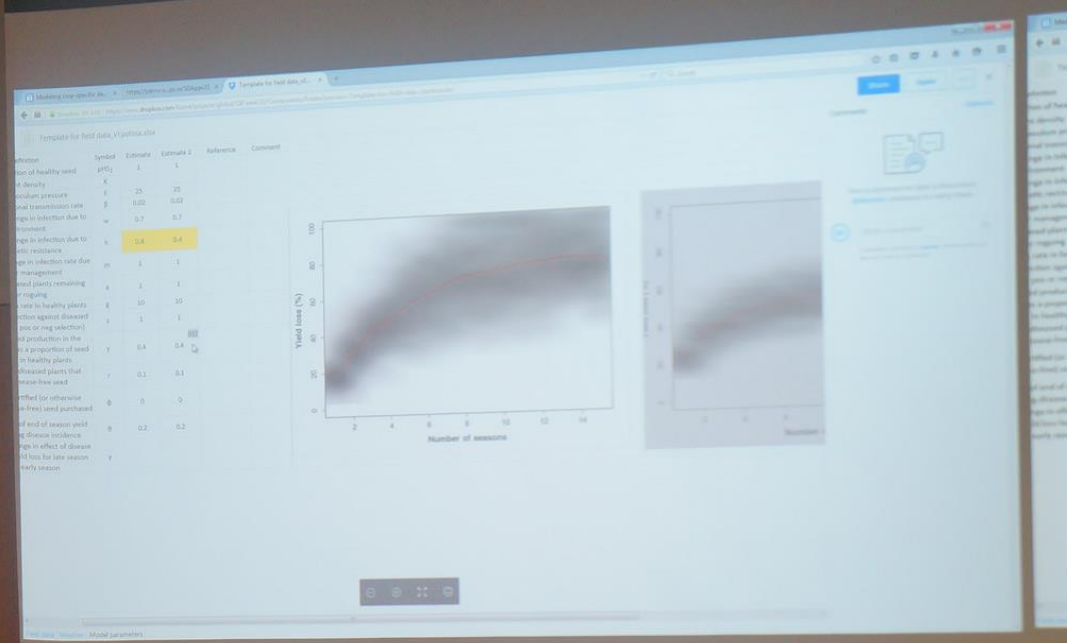
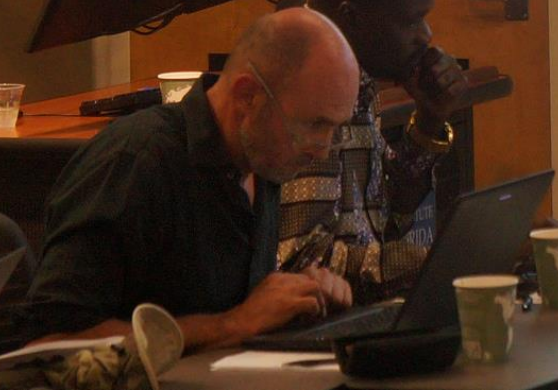


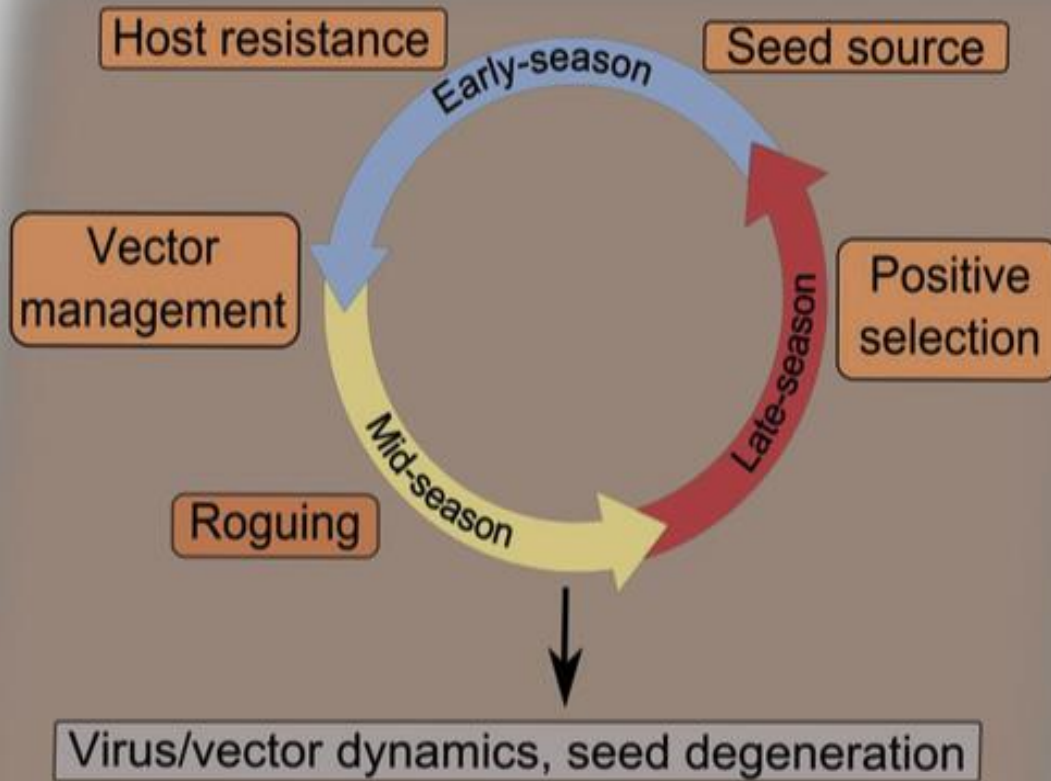


Workshop report:

Tools for managing seed degeneration in RTB crops

Facilitation: Kathleen Vaughan
Logistics: Julia Zamudio (CIP)
James Legg (IITA), East African





Resistance?

Selection
efficiency?

Environment?

Reversion?

Crop specific models

A close-up photograph of a pair of hands holding several small, yellow, speckled potatoes. The hands are positioned in the center of the frame, with the fingers gently cupping the potatoes. The potatoes are round and have a textured, slightly rough skin with small dark spots. The background is a soft, out-of-focus grey. The text "Thank you!" is overlaid in the center of the image in a white, bold, sans-serif font with a thin blue outline.

Thank you!