

~~Semillas~~

Plántulas
de
Esperanza



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HORTICULTURE
INNOVATION LAB

UCDAVIS
UNIVERSITY OF CALIFORNIA

Our goal – cultivars and seed adapted to small-scale low-input rural agriculture



Nuestra Esperanza

- **Work with women's groups to develop vegetable production and marketing and seed and seedling production as a business**

Technology  **cooperative business**

Activities to achieve goals

- Evaluate virus resistant tomato lines
- Organize field days for communities and women's groups
- Training

Technology, hands-on experience and knowledge

I. Field Days



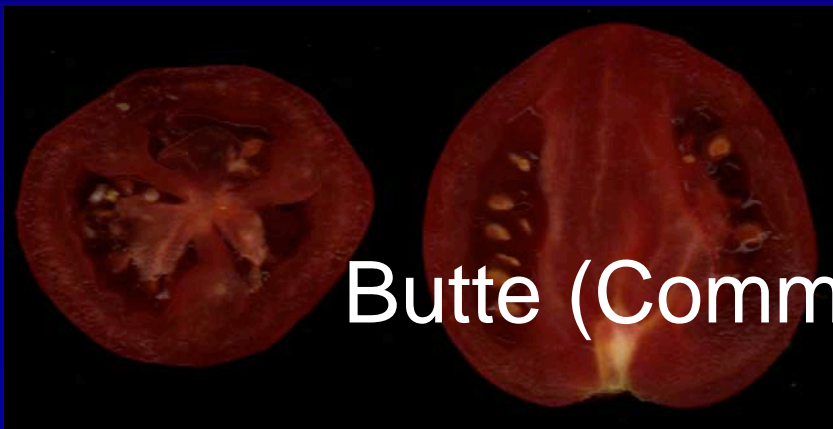
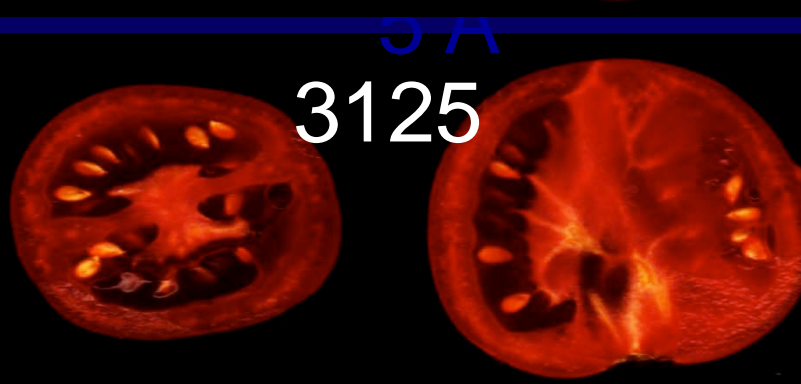
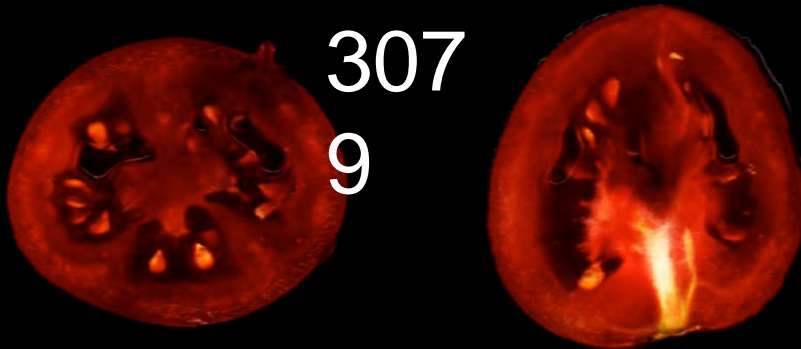
Martha,
Evaluating
'Semillas de
Esperanza'
tomatoes in
Tisma,
Nicaragua

Women's groups



Impacts

- **Identified tomato cultivars with virus resistance and desirable market characteristics**



Impacts

- **The cultivars are being grown and sold by women's groups**

**BUT! not as seeds
rather as seedlings**

(plantulas en bandejas)





Problem:
Resistant to virus,
but not to soil
pathogens
Ralstonia

Dilemma?

how to get resistance to BOTH virus and
soil pathogens

Hybrid

Physical , not genetic

Scion resistant to
virus

Rootstock resistant
to root pathogens,
i.e. Ralstonia





Original business model:

Women's groups sell flats of virus resistant seedlings.

New business model:

Women's group sell flats of added-value grafted plants

Grafting Workshop Zamorano Honduras



Matt
Kleinhenz

Willie
Chen

Grafted Tomatoes



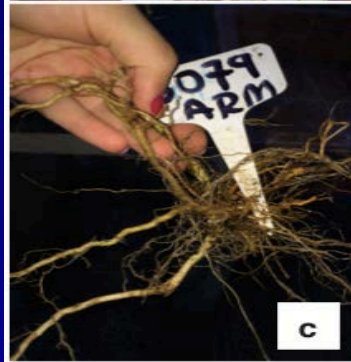
Horticulture
Innovation
Center

Julio Lopez
Patricia Arce
Gabby Hernandez
Sessya Cruz

Yield (Kg) data from grafting trial
Insituto Tecnologico de Costa Rica – San Carlos

Scion	3125	3079
Non-grafted	Dead	Dead
Self-grafted	Dead	Dead
Grafted onto 'BB'	1.98	0
Grafted onto 'Armada'	1.12	1.12

Grafted plants and roots

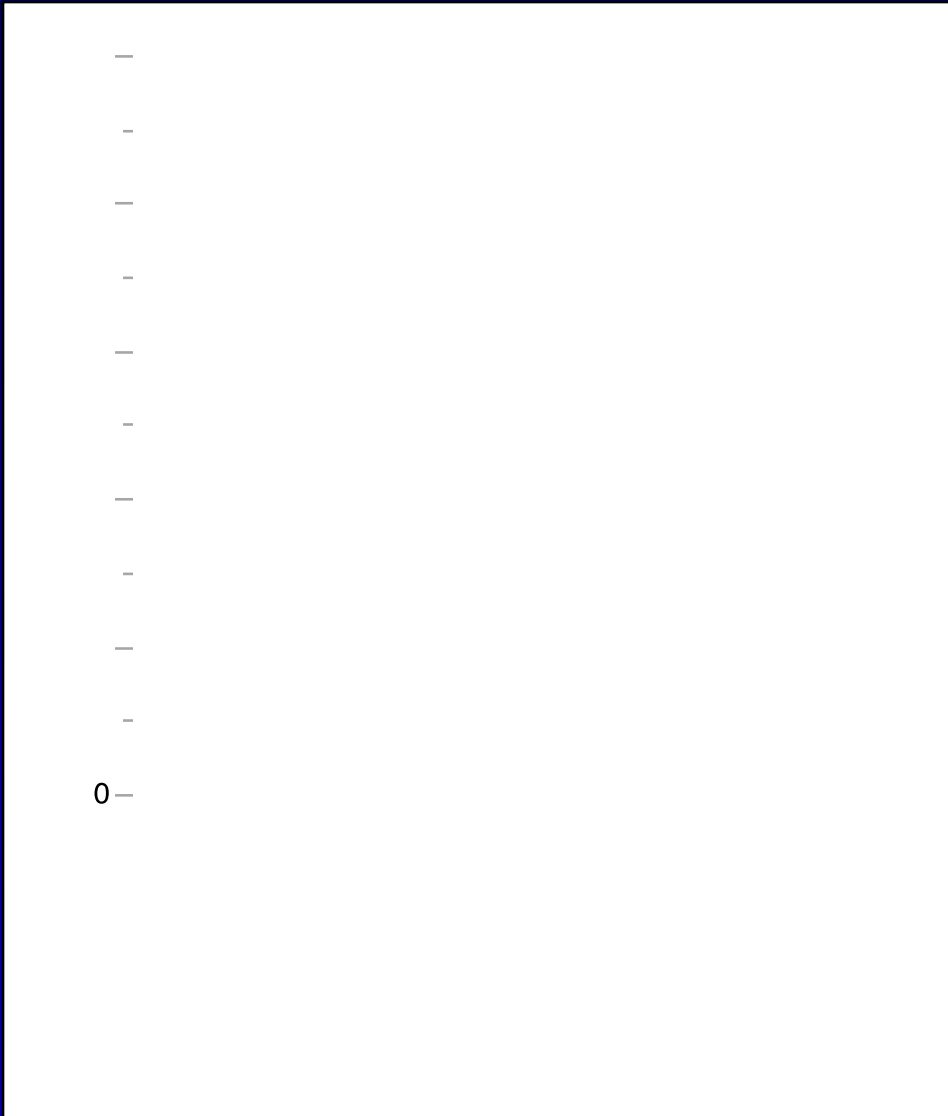


Data from
Srta. Katherine Duran
Instituto Tecnológico
De Costa Rica

Zamorano, Honduras

Percent increase in
yield of grafted plant
Compared to non-
grafted

**Grafted
Combinations
Yielded 100%
more**





All derived from wild
Tomato species

Seedlings of scions
And rootstocks

Scions:
AVRDC lines

Rootstocks:
Bred lines, Takii
H9776
+ eggplant

Wow! Grafting works

- Women's groups can produce a value-added product as a small business – grafted tomato seedlings
- 100% yield increase and reduced risk to growers

Drying beads Inter-CRSPing

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Technology to
dry seeds for
Longer term
storage

Rhino Research and **Kent Bradford**

Our technology



Scion resistant to virus

Rootstock resistant to root pathogens, i.e. Ralstonia

