

Innovations in Vegetables

Warwick Easdown
Regional Director, South Asia



AVRDC

The World Vegetable Center



Overview

What's appropriate

What we're currently doing

What's also new in those areas

What else is novel?



AVRDC

The World Vegetable Center

Appropriate Innovations

Suitable for smallholder farmers

Publicly available and already implemented

Accessible by AVRDC and partners

Only local adaption needed



AVRDC

The World Vegetable Center

Our current innovative introductions

Protected cultivation



Best varieties



Pest management



New crops



New structures



Drip irrigation



AVRDC

The World Vegetable Center

Our current innovative introductions

Mungbean production



New areas



Intercropping



Seed



Insect pests



Harvesting

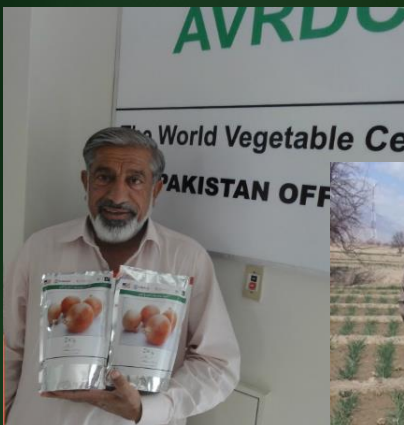


AVRDC

The World Vegetable Center

Our current innovative introductions

Value chains



Basic seed



Seed value chains



Baselines



Validation



AVRDC

The World Vegetable Center

What's also new in these areas?

Oman - protected field production



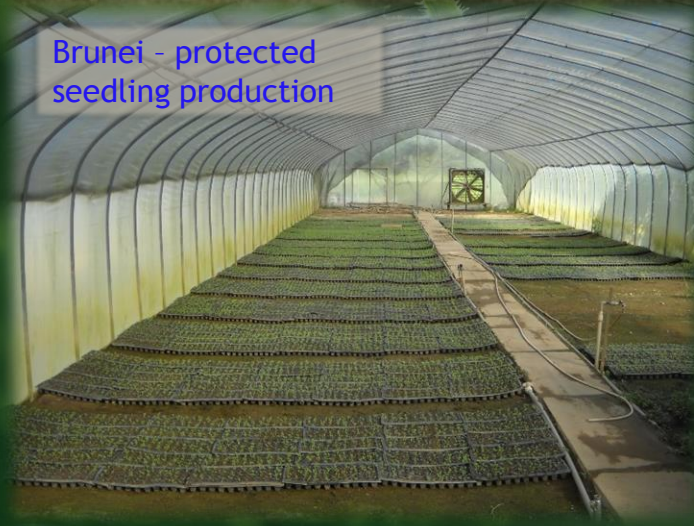
Vietnam - protected vegetable cultivation in Da Lat



Mauritius - protected tomato production



Brunei - protected seedling production



AVRDC

The World Vegetable Center

What's also new in these areas?



Soil solarization for non-chemical
control of nematodes



AVRDC

The World Vegetable Center

What's also new in these areas?



Core mungbean collection



Sources of resistance to viruses and insect pests



AVRDC

The World Vegetable Center

What's also new in these areas?

Rootstocks and scions grafted to produce high-yielding, biotic stress resistant and/or abiotic stress tolerant plants



Lam Dong Province, Vietnam:
100% uptake by farmers -
grafting with resistant
eggplant and tomato
rootstocks to manage
bacterial wilt of tomato



AVRDC

The World Vegetable Center

What else can be considered?



IPM for Eggplant fruit and shoot borer



Biopesticides for diamond back moth in crucifers



Phosphorous acid for control of late blight



AVRDC

The World Vegetable Center

What else can be considered?



Identification of virus complexes



Farmers' knowledge of virus management



Training in insecticide use

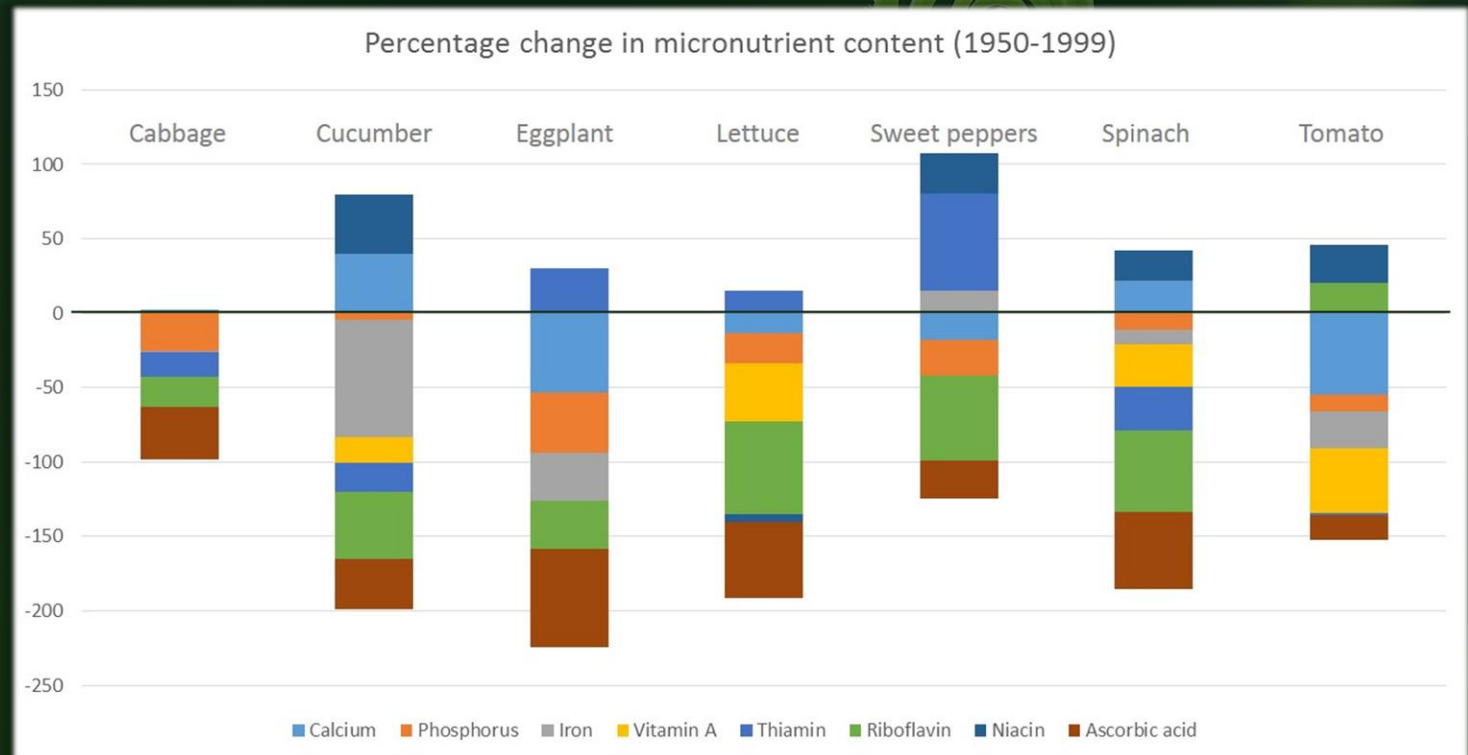


AVRDC

The World Vegetable Center

What else can be considered?








Nutrient dense
crops

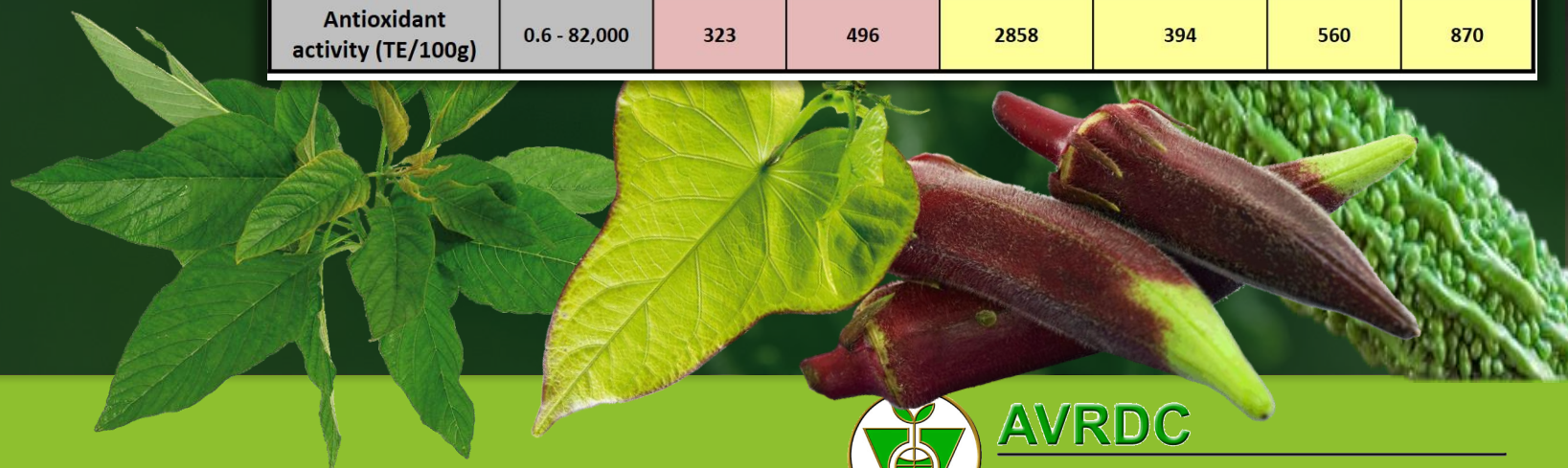


AVRDC
The World Vegetable Center

What else can be considered?

Expanding the use of traditional vegetables

| | | | | | | | |
|---|--------------|--|---|---|---|---|---|
|  | |  |  |  |  |  |  |
| | Ranges | Tomato | Cabbage | Moringa | Amaranth | Aibika | Sweet potato leaf |
| β-carotene (mg/100g) | 0.0 - 22 | 0.40 | 0.00 | 15.28 | 9.23 | 5.11 | 6.82 |
| Vitamin C (mg/100g) | 1.1 - 353 | 19 | 22 | 459 | 113 | 82 | 81 |
| Vitamin E (mg/100g) | 0.0 - 71 | 1.16 | 0.05 | 25.25 | 3.44 | 4.51 | 4.69 |
| Iron (mg/100g) | 0.2 – 26 | 0.54 | 0.30 | 10.09 | 5.54 | 1.40 | 1.88 |
| Folates (mg/100g) | 2.8 – 175 | 5 | ND | 93 | 78 | 177 | 39 |
| Antioxidant activity (TE/100g) | 0.6 - 82,000 | 323 | 496 | 2858 | 394 | 560 | 870 |



AVRDC

The World Vegetable Center

What else can be considered?



Peri-urban vegetable production



Gardens and dietary diversity

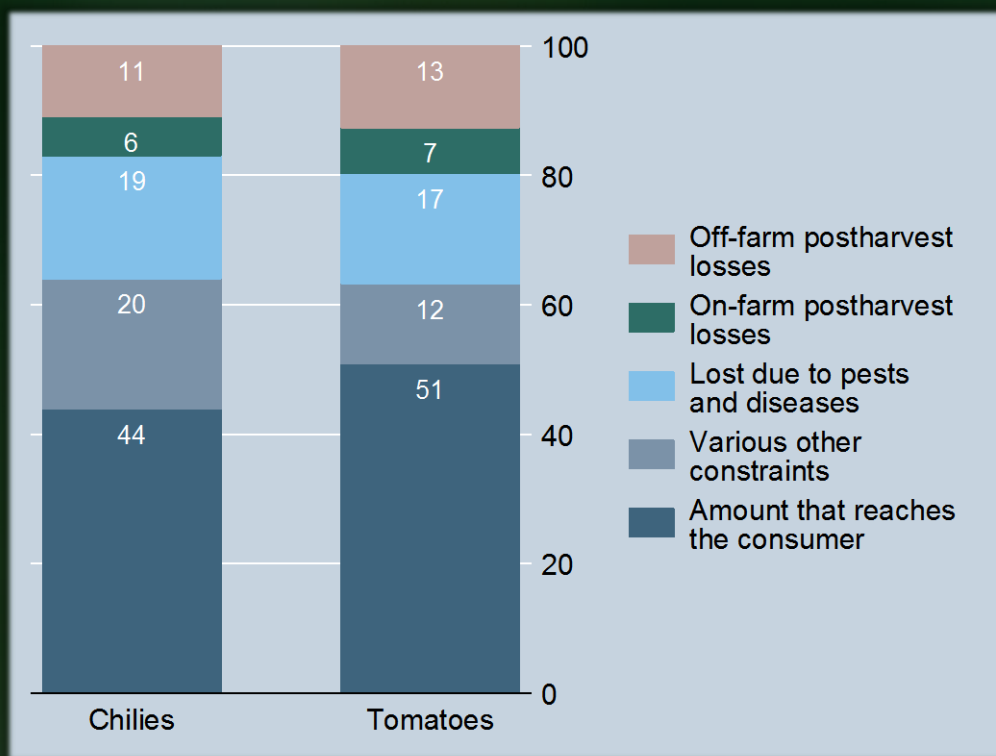


Smallscale seed kits



What else can be considered?

Identifying pre- and postharvest losses in chili and tomato is just the start



Sources: AVRDC-TNAU survey 2013 (pre-harvest losses); Viswanathan et al. 1998 Status of Harvest and Post Harvest Losses of Tomato in Tamil Nadu, Agricultural Engineering Today 22(5/6): 28-35 (postharvest losses)



AVRDC

The World Vegetable Center

What else can be considered?

Stronger engagement
with the private sector in
best-practice hubs



AVRDC

The World Vegetable Center

Thank you



AVRDC

The World Vegetable Center

