



Growing Public Health with Gardens

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Presenter Disclosures

for Christine Porter

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

Background: What do gardens do?

Previous observational research suggests that gardens:

- Almost certainly improve
 - social and emotional health (e.g., reduce stress)
 - built environment
 - health behaviors (e.g., vegetable consumption, activity)
- May improve physical health
- Provide some “ecosystem services,” including:
 - *Provisioning*: food and biodiversity
 - *Regulating*: water filtration and run-off management
 - *Cultural*: recreation, education, heritage preservation

Background: garden research in “my” projects

1. Food Dignity: 2011-2017

- 5 community-based organizations (CBOs) & 3 universities.
- Learning from and supporting CBO work to build sustainable, equitable community food security.

e's gardening



Credit: Jim Sutter, Blue Mountain Associates

Credit: East New York Farms!

Background: garden research in “my” projects

1. Food Dignity: 2011-2015
2. Team GROW: 2012-2015
 - Gardener Researchers of



Background: ga



1. Food Dignity: 2011-

2. Team GROW: 2012-

- Gardener Researcher

- Laramie, WY garden
food harvest for one

- Plus Ithaca Harvest Log – harvest quantification work led by Laurie Drinkwater at Cornell with 25 Ithaca, NY gardeners over two years.

Background: garden research in “my” projects

1. Food Dignity: 2011-2017
2. Team GROW: 2012-2015
3. Growing Resilience design pilots: 2012-2016
 - UW with Feeding Laramie Valley (FLV) and Blue Mountain Associates (BMA)
 - Co-designing and trying out RCTs on health impacts of gardens.



Methods

1. Food Dignity

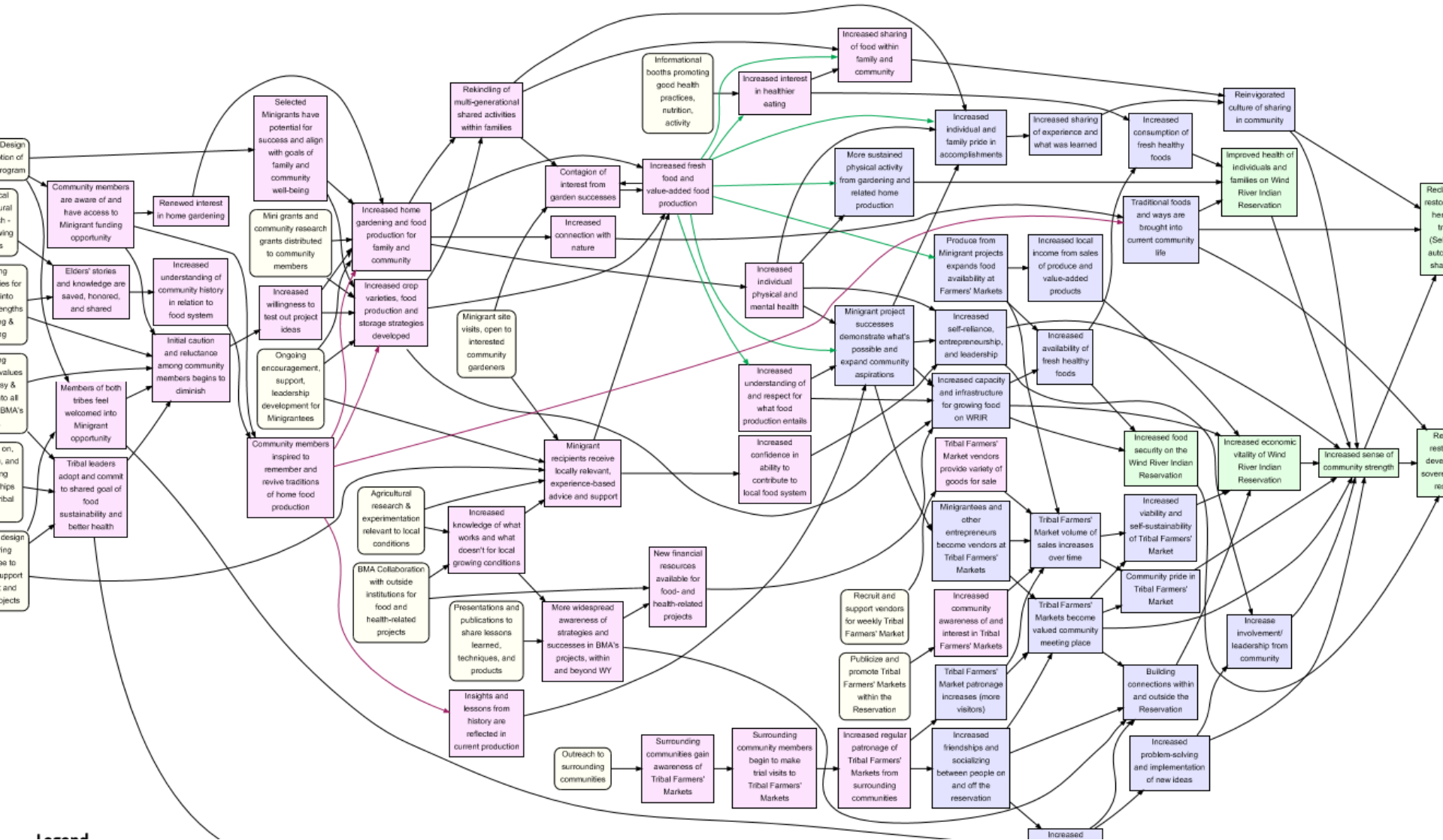
- Rigorous storytelling (full range of case study methods)
- First-person digital storytelling
- Collaborative Pathway Modelling



"Roots Rising" by Damon Brangman, Whole Community Project

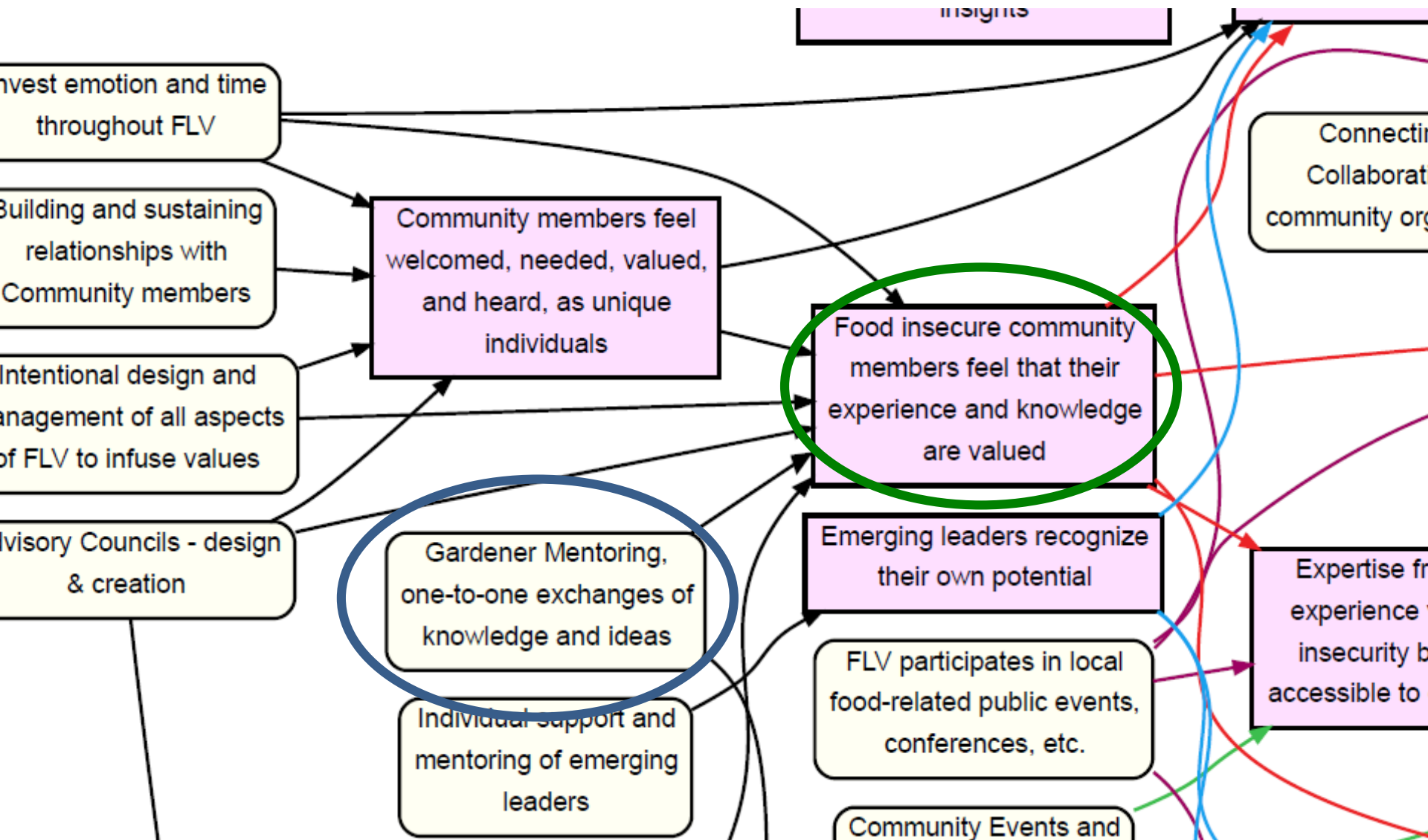
Blue Mountain Associates: Food Dignity Project

A Collaborative Pathway Model



Methods: Pathway close-up

1. Food Dignity



Methods

1. Food Dignity
2. Team GROW: 31 gardeners recorded every single harvest for entire season. Plus 20 took a survey.

Date	Crop type	Weight (ounces)	Food Use				Notes
			Eat	Store	Share	Loss	
e.g. 7/15	Beets w/ stems & greens	14.7	X				Some beets damaged by gophers. Just cut around gopher bites and ate the rest. Ate beets, stems, and greens
e.g. 7/30	carrots	32.3	10.3	12	10		Used in tonight's stir fry, froze some, and gave some to a friend
e.g. 7/31	radish	2.3				X	Estimated weight. Our best radish disappeared the day before we were going to harvest!
7/3	scallions	4.2 oz	X				<i>weight includes green part which we eat</i>
7/3	Rhubarb	5.02			X		<i>we give Rhubarb away</i>
7/6	scallions	2.4 oz	X				<i>(ditto 7/3)</i>
7/9	scallions	3.9 oz	X				<i>(ditto 7/3)</i>
7/13	chard	9.3 oz		X			<i>second planting due to Gopher stream + FREEZE FOR THE YEAR.</i>
7/16	chard	8.7 oz		X			<i>ditto - usually pick for 3 quart bags frozen</i>
7/24	chard	9.1 oz		X			<i>(ditto chard)</i>
7/24	scallions	4.3 oz	X				<i>(ditto 7/3)</i>

Methods

1. Food Dignity
2. Team GROW
3. Growing Resilience pilots
 - 21 households (14 garden and 7 control) in 2013
 - Pre-post biometrics (including BMI) & survey (including SF12 for mental and physical health)
 - Plus focus groups

Results I: Gardens for **health**

Growing Resilience pilot quantitative trends:

- Better BMI outcomes
- Increased hand strength
- Improved emotional health (SF12)

Team GROW gardener survey (n=20):

- All reported it improved their health at least “to some extent.”

Results I: Gardens for health

Growing Resilience pilot qualitative results:

- Reduction in medication use for chronic health issues:
 - “My blood pressure went down. I’m taking less meds.”
 - “My doctor took me off my anti-depressants... it really made a difference for my depression and my pain levels... taking fewer painkillers.”

Results I: Gardens for health

Growing Resilience pilot qualitative results:

- Reduction in medication use for chronic health issues.
- Deepened and widened family and social networks:
 - “It connected the neighborhood. It became our little mini-community.”
 - “It brought the family closer – everyone wanted to see what was coming from the garden. They’d all be around the kitchen when we were cooking.”

Results I: Gardens for health

Growing Resilience pilot qualitative results:

- Reduction in medication use for chronic health issues.
- Deepened and widened family and social networks.
- Improved emotional health:
 - “It gave me routine and a purpose to be outside in the sunshine. It calmed me.”
 - “It’s fun. It’s just fun. I put my swing right by the garden.”

Results I: Gardens for health

Growing Resilience pilot qualitative results:

- Reduction in medication use for chronic health issues.
- Deepened and widened family and social networks.
- Improved emotional health.
- Improved access to fruits and vegetables:
 - “I love fruits and vegetables, but can’t afford it... this is something I can afford.”
 - “It provided more fresh stuff for our family... that really helped our diet.”

Results II: Gardens for food

Team GROW harvest quantification (Laramie, WY):

- Average plot size: 253ft²
- Average yield: enough to supply 2 adults with vegetables for 4.5 months



Conk, S. & Porter, C.M. (2016) "More than a hobby: gardeners in Laramie, Wyoming produce and share nutritionally relevant quantities of food." *American Journal of Public Health*. 106(5): 854-856.

Results II: Gardens for **food**

Team GROW harvest quantification (Laramie, WY):

- Average 253ft² plot yielded enough veg for 1 adult for 9 months.

Growing Resilience qualitative results:

- “It gave me fresh vegetables for my family that I grew and saved me money.”
- “I can reduce my food cost.”

Results II: Gardens for food

Gardens for *quality* food:

- Quality was the most important motivation to garden for Team GROW survey respondents in Laramie.
- Gardening and garden harvests for sale at the Wind River Indian Reservation Tribal Farmers Market are the only sources for local produce there.
- Limited, low-quality produce motivated East New York Farms! & Dig Deep Farms organizations to grow and sell food in their neighborhoods.

Results III: Gardens for “cultural ecosystem services”

Recreation and aesthetic enjoyment:

- 18/20 of Team GROW survey respondents rated “leisure or pleasure” as an important motivation to garden.
- “Walking down those steps, digging in the dirt having a great time watering, watching the bees, I’m just in love with those silly bees. I kept my yard cleaner too.” -a Growing Resilience pilot gardener

Results III: Gardens for “cultural ecosystem services”

Culture and spirit :

- E.g., Indian Corn, callalo, long
- Sharing: “Who would have with bok choi?” -a Growing



Results III: Gardens for “cultural ecosystem services”

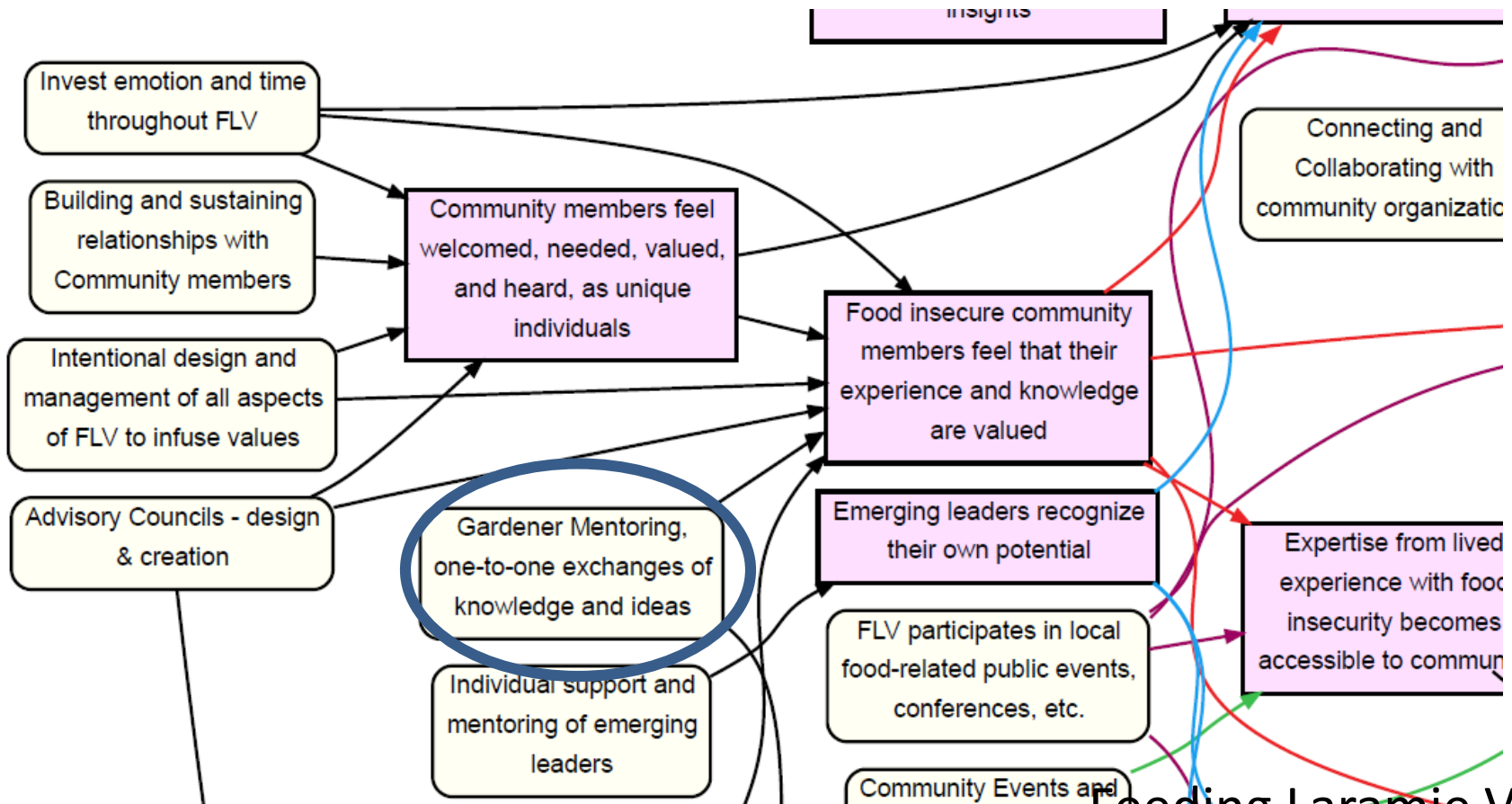
People and community:

- Team GROW gardeners shared 30% their harvests.
- “We look at empty lots and imagine pumpkin vines sprawling over the bricks and weeds.” – digital storyteller

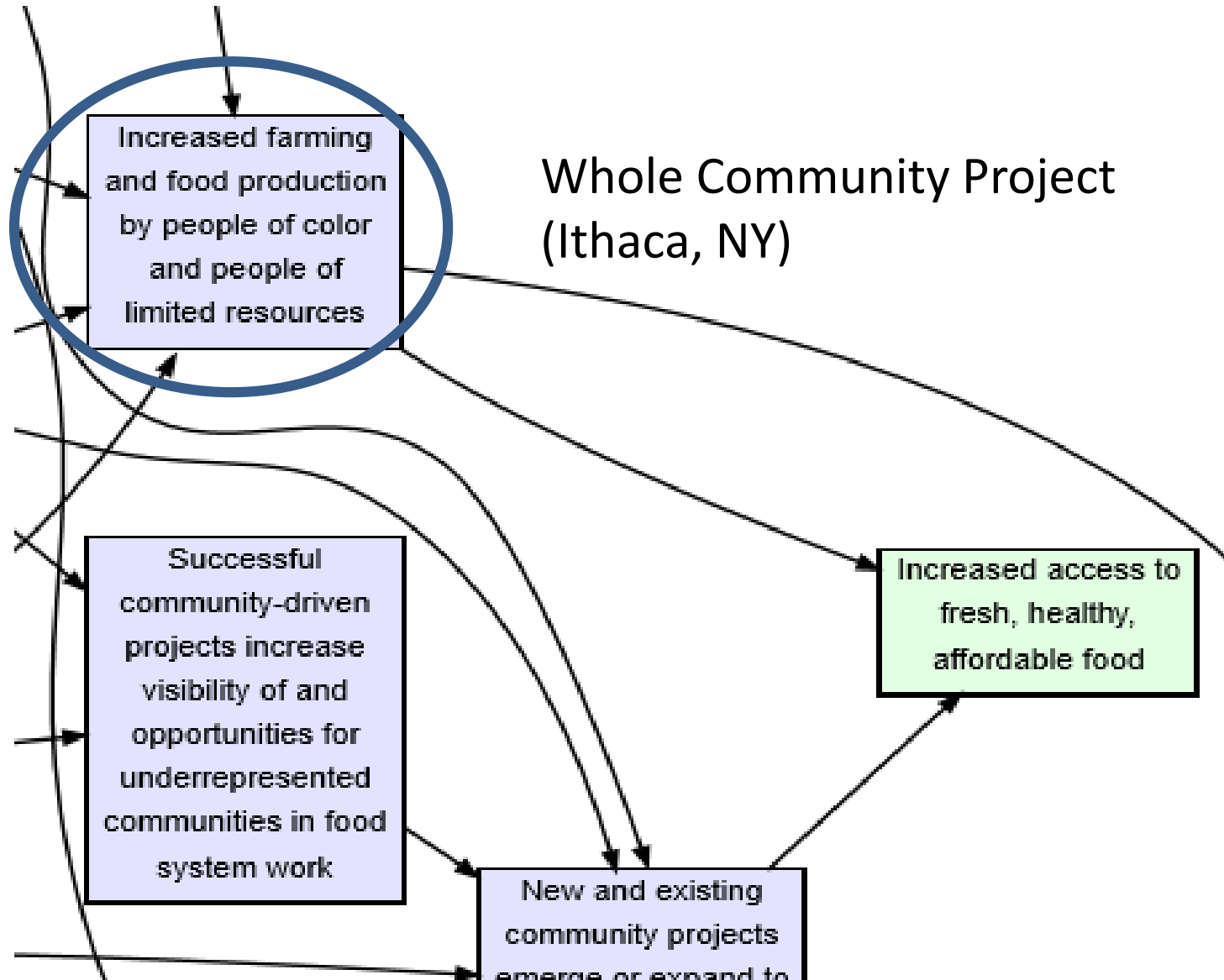


Results IV: Gardens for healing and transformation

- Growing food for social change appears in all 5 CBO Pathway Models.



Results IV: Gardens for healing and transformation



Results IV: Gardens for healing and



When Good Food Makes for Good Policing” by Marty Neideffer, Dig Deep Farms

Results Summary

Gardens grow:

I. Health

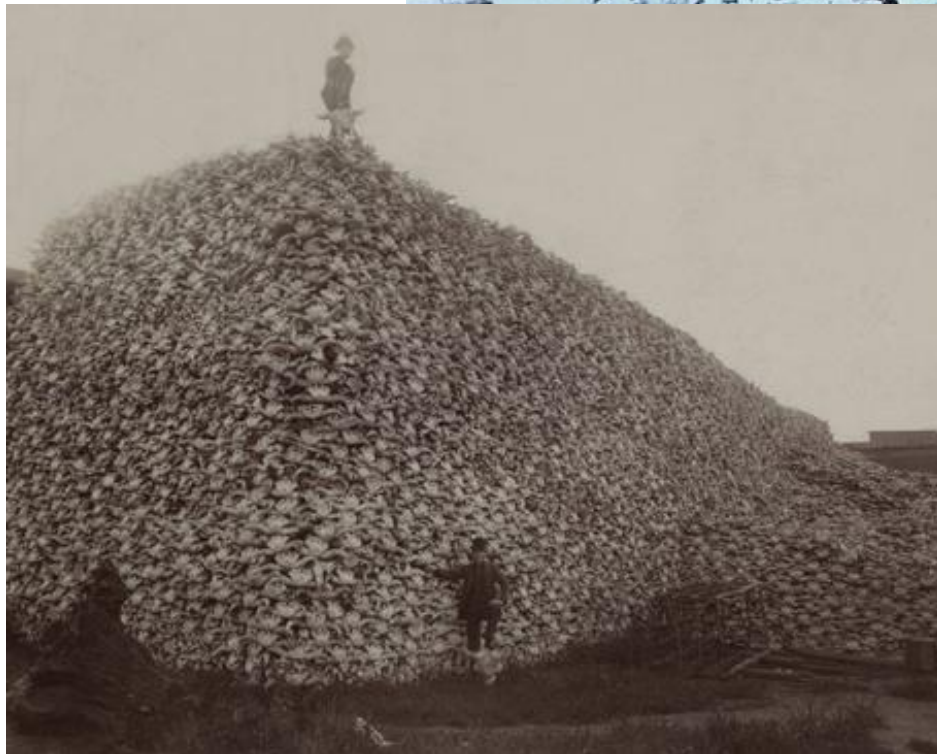
II. Food

III. Cultural ecosystem services

IV. Healing and transformation



“Kill every buffalo you can! Every buffalo dead is an Indian gone.” – a US Colonel, 1867



“Kill the Indian in him, and save the man.”
– Capt. Richard Pratt, 1892



“We need to put health back into the hands of the people.”

– Alison Sage, Northern Arapaho Tribal Health, during the Growing Resilience pilot, 2013



GROWING RESILIENCE

Implications

Put food and health in the hands of communities!
Gardening is one strategy for that.

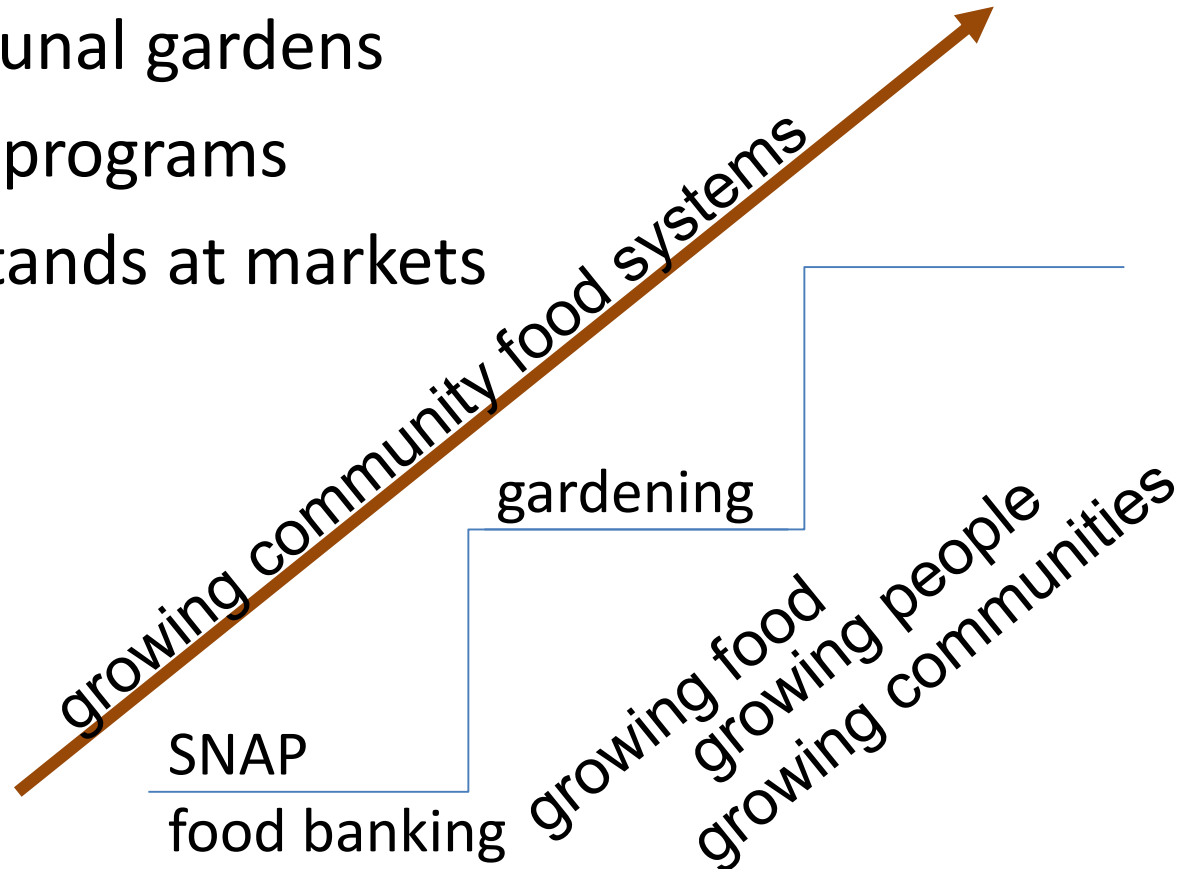
Implications

1. Public policy should foster home and community food gardening, for example:
 - treat garden collectives as agriculture
 - use SNAP-Ed Policy, Systems & Environment (PSE) expansion to support food justice CBOs
 - support amortization options for garden infrastructure
 - build community gardens into public lands and housing developments
 - allow and promote front-yard gardens
 - reduce water rates for food production

Implications

2. Use gardening intentionally to grow community, for example:

- planting and harvest parties
- front-yard communal gardens
- youth internship programs
- garden harvest stands at markets



Gratitude to gardeners and...

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