



Reducing Tillage at Scale

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Soil Organic Matter

Infiltration

Water retention

Stable aggregates

Resilient biology

Nutrient availability

Crop health



Cover crops aren't
enough

Compost is costly

Reducing tillage
conserves OM but what
about weed control?





Organic no-till systems: limited



Reduced Tillage Strategies for Organic Growers

DECREASE

- Frequency
- Tillage intensity
- Depth
- Surface area disturbance

INCREASE

- Rotations
- Mulch
- Strip till
- Controlled traffic
- Days in living cover

Paul Buccaglia,
Fort Hill Farm
(CT)

Plant cover crops
without primary tillage

Brady 722 reverse flail
chopper

Plant CC within 1 or 2
weeks of crop harvest

NT seed drill





Seth Kroeck,
Crystal Spring Farm
(ME)

Fall planted oats, using
no-till drill

Early spring, use
Yeoman's plow to create
a zones for carrots



Carl & Goran
Johanson,
Goranson Farm
(ME)

Farmet Softer 3 for
primary tillage

Reduce # passes,
depth, inversion





Living mulch in wheel tracks

Gideon Porth, Atlas Farm (MA) left, center

Steve Munno, Massaro Community Farm (CT), right



Credit: Caro Roszell

Transferred mulch in wheel tracks

Chuck Currie, Freedom Food Farm (MA) top



Credit: Natalie Lounsbury



Credit: Caro Roszell

Rotations

Chuck Currie,
Freedom Food Farm (MA)

Year 1: Sweet potatoes /onion/melon on plastic, harvest, drill oats/peas/radish, transplant garlic in Oct, add leaves

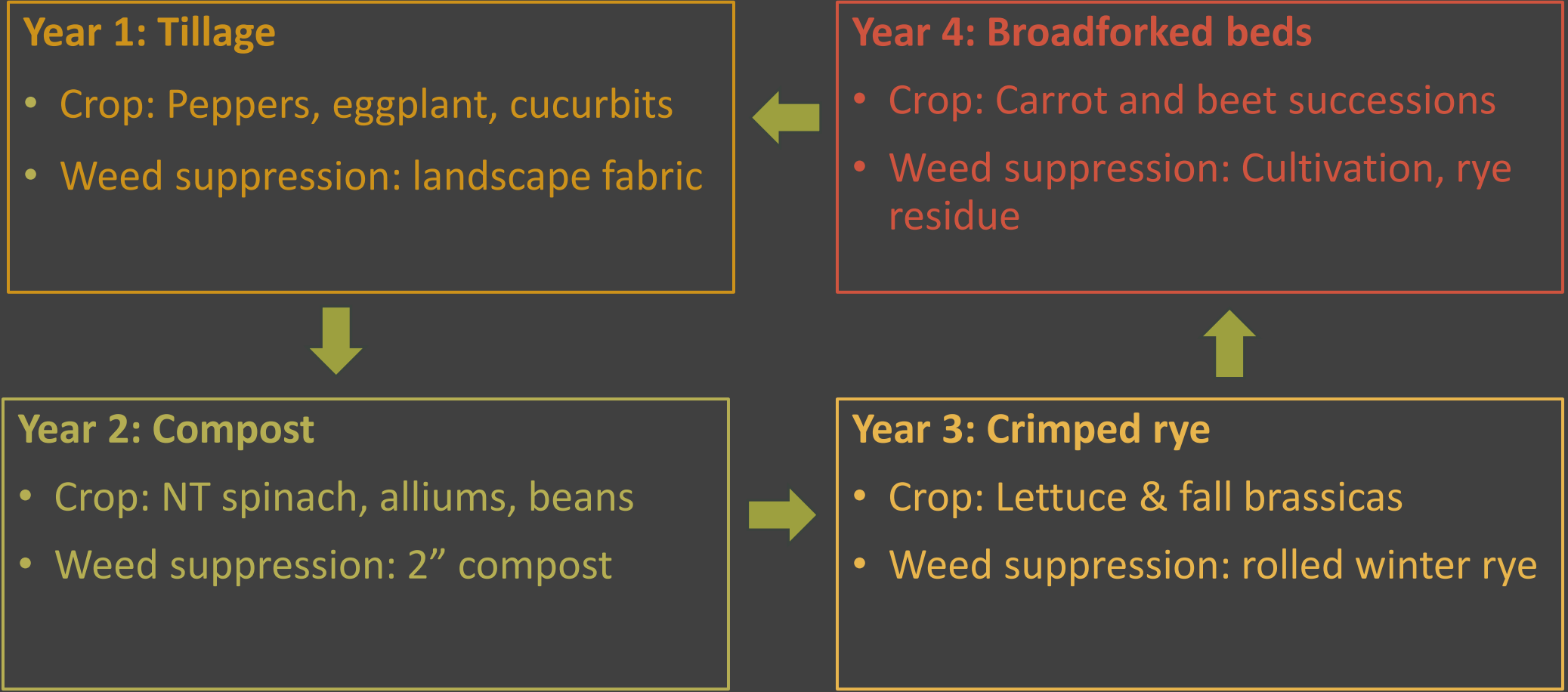
Year 2: Garlic, undercut to harvest garlic, transplant brassicas and mulch with green chop. Fall harvest of napa cabbage and kale, no-till drill overwintering cover crop

Year 3: Graze or harvest cover crop in spring, No-till drill summer cover crop



Mike Perisho, Andrews Farm (ME)


Four-year rotation – ¼ acre blocks



Innovative Strip Till

- ✓ Frequency
- ✓ Tillage type
- ✓ Depth
- ✓ Surface disturbance





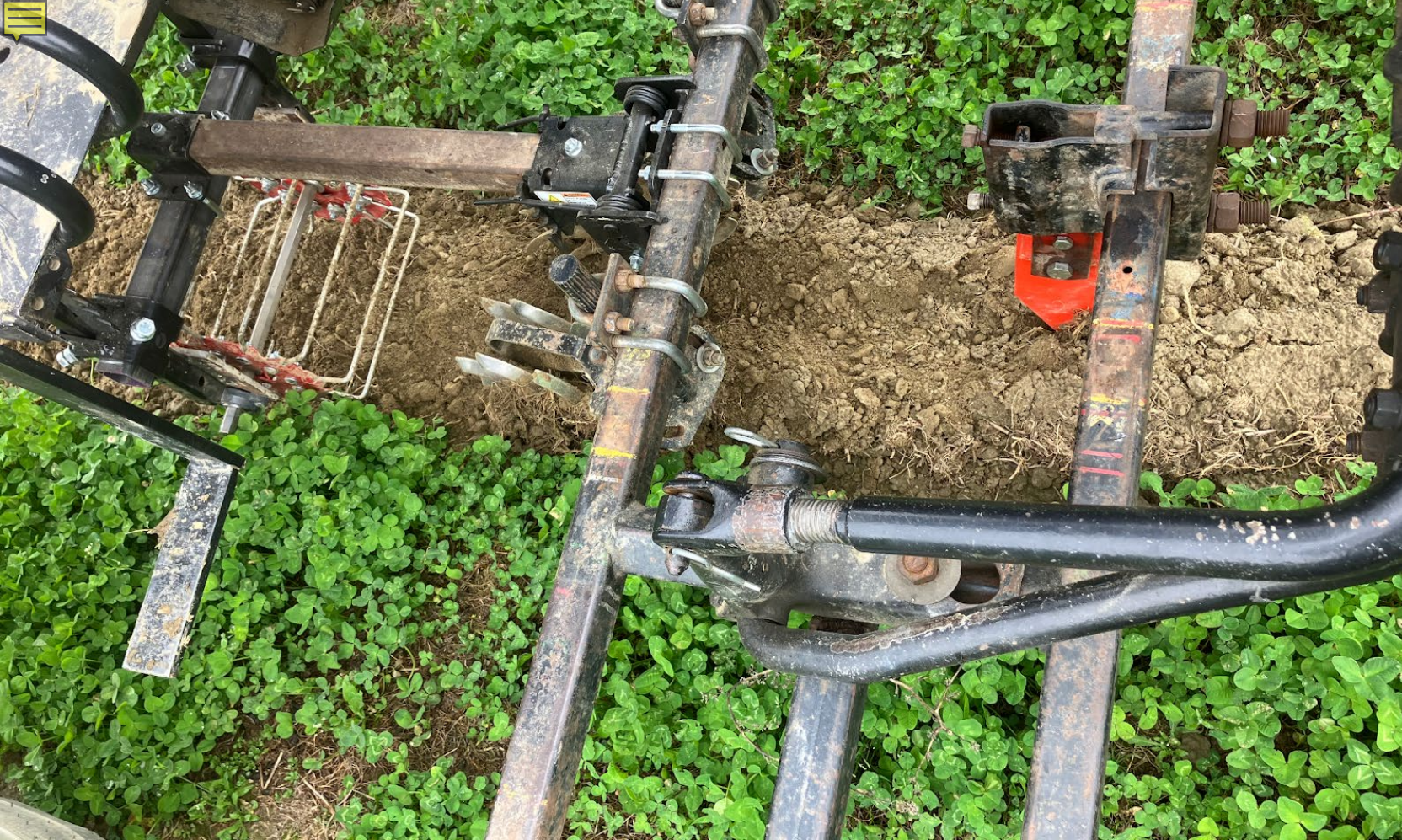
Andrew Woodruff, Island Grown Initiative Farm (MA)

Strip till into perennial white
clover









Gideon Porth, Atlas Farm (MA)

Strip till into clover with traditional zone builder, cultivate with modified equipment



Photos: Ryan Fitzbeauchamp

Interseeding: Ryan Fitzbeauchamp, Evening Song Farm (VT)



Controlled traffic

Spencer Blackwell, Elmer Farm (VT)

MENTAL SHIFT:

- Plan to tolerate some discomfort
- Reassess your standards
- Plan to be careful and timely: interseeding, cultivation, planting CC on time are essential
- Value cover crops as integral to cash crops (not optional)
- Remove barriers to cover crop
- Decide how to measure success
- Have patience (or faith?)
- Is it not working? Make it work!



Caveats

- Pick the brains of other farmers
- Don't experiment on your worst field
- Don't trial in the weeds
- Make a detailed plan & equipment in hand
- Have a backup plan
- It takes time and baseline healthy soil





Gideon Porth, Atlas Farm



Andrew Woodruff, Island Grown Initiative Farm



Mike Perisho, Andrews Farm



Carl & Goran Johanson, Goranson Farm



Chuck Currie, Freedom Food Farm



Seth Kroeck, Crystal Spring Farm



Lisa Griffin, Oxen Hill Farm



Paul Buccaglia, Fort Hill Farm



Steve Munno, Massaro Community Farm



Janna Siller, Adamah Farm



Joe O'Grady, Holcomb Farm



Nate Frigard, Crimson & Clover Farm

Questions?

Join the conversation!

Interested in reducing tillage,
future cohorts or field walks?

Email:

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Or give me your contact info





In development:
Rolling and crimping diverse CC mixes
Multiple crimping events
Sequential crimped cover crops

