

Experiment: Results

Soil Testing & Quality

Yields



Experiment: Soil Test Results

Organic Matter

No-Till Beds	July 2012	Dec 2013	Result
No 5:	4.5 %	3.9%	- 0.6
No 9:	4.3%	2.4%	- 1.9 - 2.5%
Tilled Beds			
No 17:	4.4%	3.3%	-1.1
No: 24	5.5%	4.0%	-1.5 - 2.6%

Cation Exchange CEC meq/100g

No-Till Beds	July 2012	Dec 2013	Result
No 5:	11.2	7.9	-3.3
No 9:	8.3	5.8	-2.5 -5.8
Tilled Beds			
No 17:	10.5	7.1	-2.4
No: 24	11.5	8.1	-3.4 -5.8

Potassium mg/kg

No-Till Beds	July 2012	Dec 2013	Result
No 5:	236	134	-102
No 9:	149	138	- 11 -113
Tilled Beds			
No 17:	177	104	- 73
No: 24	267	109	-158 - 231



Other tests showed a similar trend:

Phosphorous, Boron, Calcium, Magnesium, Buffer ph, Nitrate, Sulfate

Experiment: soil in water test

Tilled bed:
soil broke
down into a
uniform silt.
Did not
maintain
aggregate



No till bed:
soil
maintained
structure

Experiment: Comparing Yields

Salad Greens:

Planted in 8' & 16' plots

Succession Planting Dates:

Tilled Beds -

June 19th - Aug 21st **133lbs**

No-till Beds

April 9th (whole beds) 172lb

June 19th - Aug 21st 111lbs*

283lbs

*Nutrient reduced in No-till beds due to earlier planting



Experiment: Comparing Yields

Carrots: Planted whole 60' beds

Planting dates:

No Till Bed 9 (Nelson)	May 16th	147lbs (8lbs damaged)
Tilled Bed 24 (Nelson)	May 19th	173lbs (70lbs damaged)
No till Bed 5 (Bolero)	July 5th	301lbs
Tilled Bed 17 (Bolero)	July 15th	179lbs*

*later planting date

Total:

Tilled beds -
352lbs

No-till beds
- 448lbs

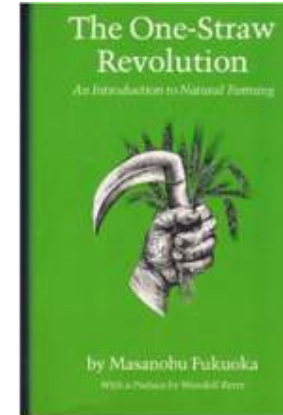


Experiment: Size and appearance of Bolero carrots



Resources & Bibliography

- **The Soul of Soil**
Grace Gershuny & Joe Smillie
- **Growing Vegetables with a Smile**
Nikolay Kurdyumov
- **Teaming with Microbes**
Jeff Lowenfels & Wayne Lewis
- **Building Soil for Better Crops**
Fred Magdoff & Harold Vanes
- **Managing Cover Crops Profitably**
Clark & SARE
- **The One Straw Revolution**
Masanobu Fukuoka (ed. Larry Korn)
- **Virginia Association for Biological Farming**
Ron Morse (info on no-till equipment)
- **Rodale Institute New Farm**
(website)



- **Peacefull Valley Farm & Garden Supply** (cover crops)
- **Johnny's Selected Seeds Catalogue** (cover crops)
- **Fedco Seeds Catalogue** (cover crops)
- **Organic Seed Alliance**
- **plantcovercrops.com** (Midwest Cover Crop Council)



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