

Adding Brassicas to Northeast Grazing Swards for Nutrition and Remediating Soil Health Damage

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United States
Department of
Agriculture

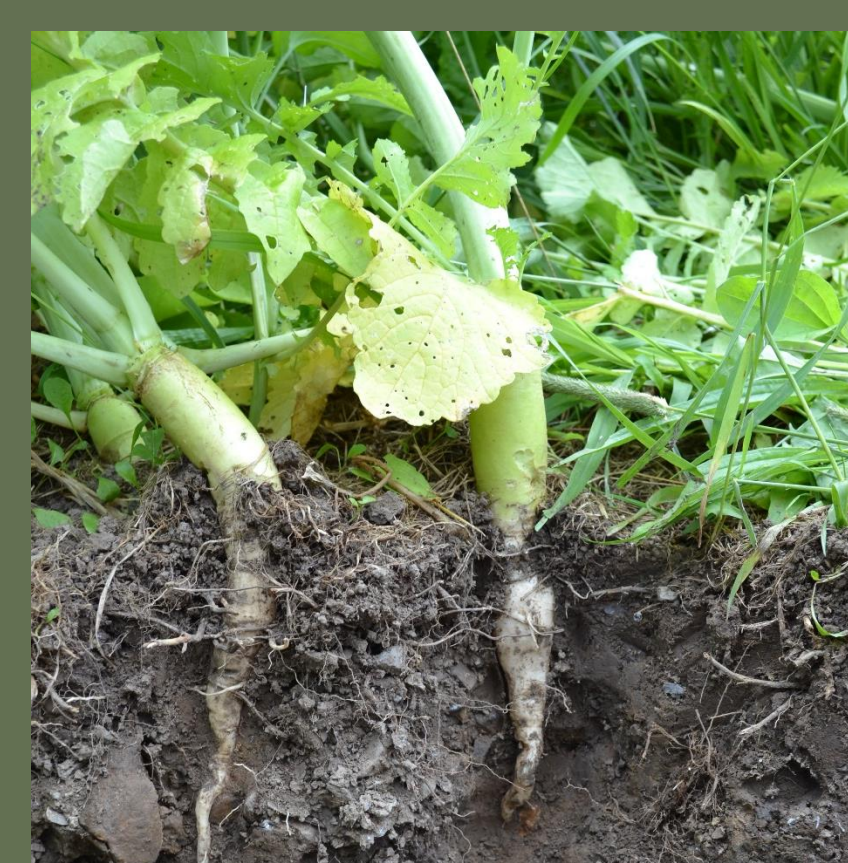
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Brassicas Can Offer Two Benefits to Livestock Farmers in the Northeast

1. Nutrient dense forage during cooler season grazing.
2. Some species provide roots to break up compaction and improve soil health.



Earlier work focused on no-till into existing swards. Only success was along cow-paths. To duplicate the paths the next study burned back sward with acetic acid in 3 inch bands



Band spraying acetic acid to burn back sward. Results didn't provide reliable results. Pasture sward returned



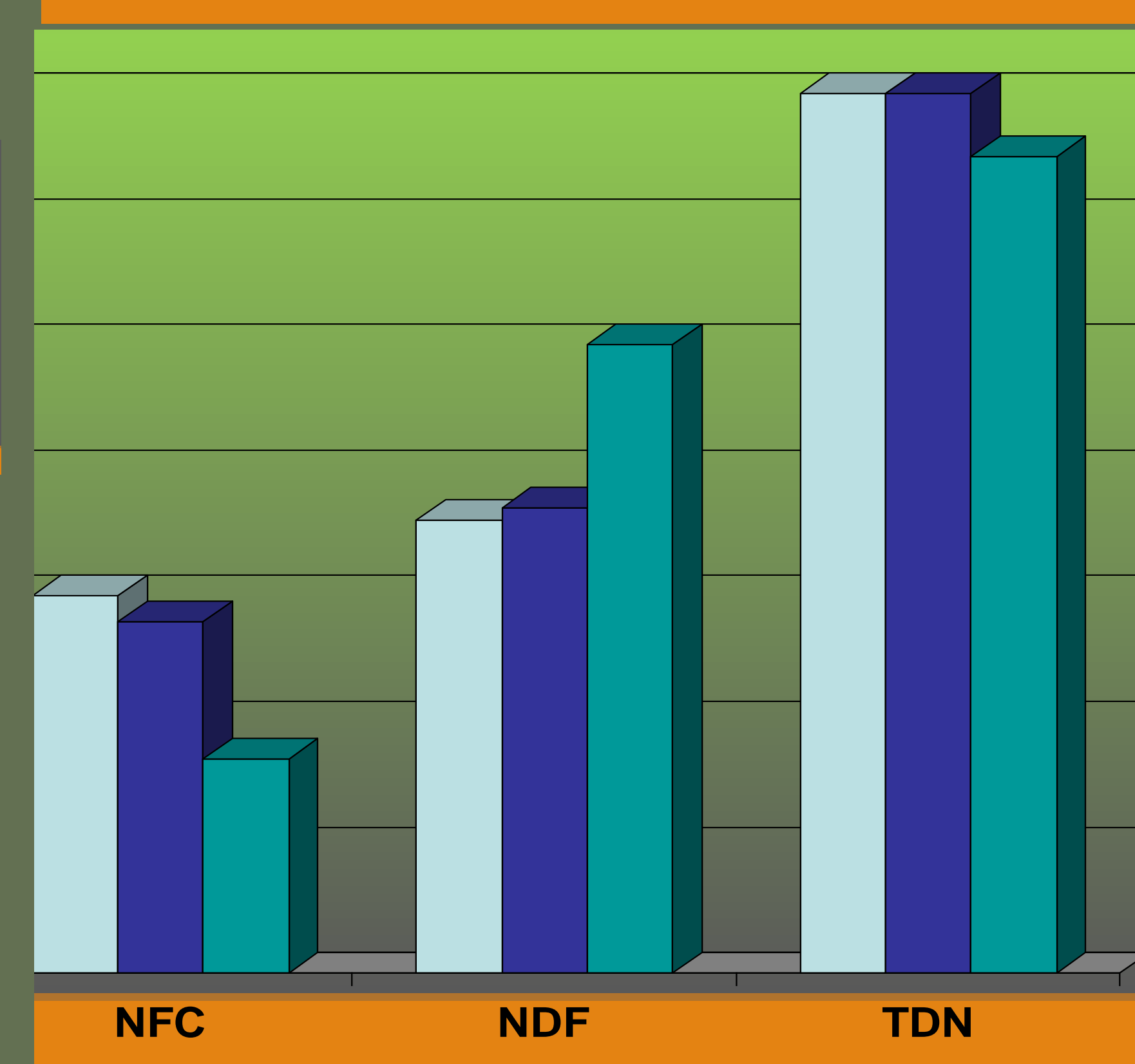
The pasture above was sprayed with glyphosate prior to no-tilling brassicas. It provided the flock shown here with 135 days of pasture during a NY winter.

Nutritional Benefits of Brassicas

Brassica	Quantity *
High % digestibility	30-40 % NDF
High Energy Content	11-14 MJ ME/kg DM
Protein Brassica Leaves	15-25 %
Protein Brassica Tubers	10-16 %

*Ayres and Clements, 2002

Cheaper Milk When Pasture Sward Contains Brassicas



20% Kale

20% Daikon

Control Pasture

1,200 Lbs Cow, Giving
50 lbs of Milk Requires

23 lbs Control Pasture +
8 lbs Corn Meal

OR

43 lbs Pasture w/Turnip

Nutritional Cautions

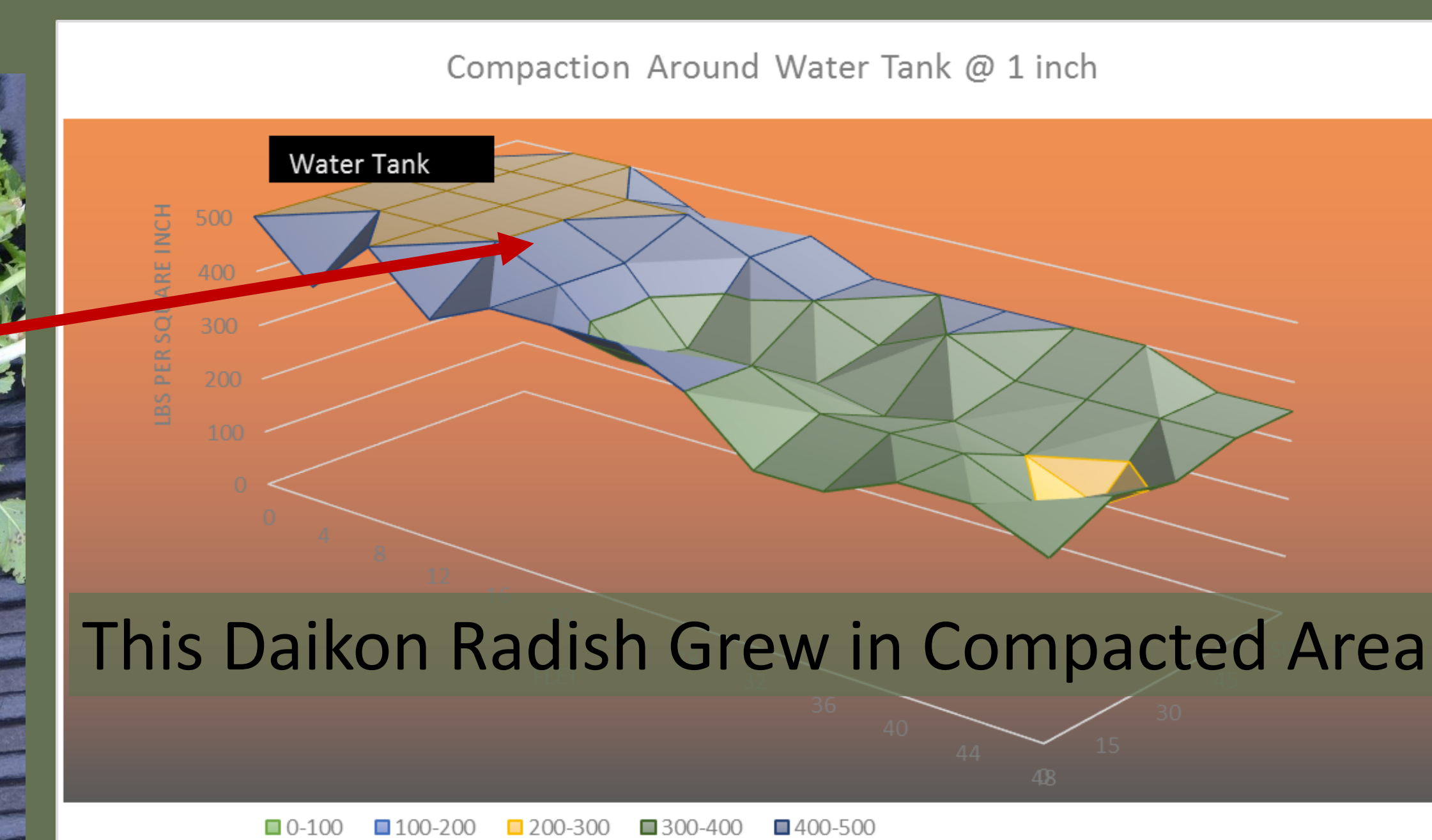
- High Potassium Levels Not Safe for Dry Cows
- If Grazed Just Prior to Milking can Cause "Off Flavors"
- Can Reduce Thyroid Function. Feed Additional Iodine to Counteract.

Brassicas as a Soil Health Tool



Compaction
Around Feeders
and Water
Troughs Reduces
Grazing Area and
Allows Runoff

Compaction Near Water Trough



Summary

Brassicas for an interruption crop between two pasture seedings. Should be direct seeded after existing sod is killed.

Daikon Radish works best for soil health remediation in selected areas, can be no-tilled. Tubers will continue to grow even when area is grazed at a 30-45 day rest period.