## New MDs

## The New MDS

Moms, Doctors, and Scientists working together to heal our children

#### Episode 27:

Regenerative Organic Farming and the Health Connection

Join in the conversation with The New MDS and our guest, veteran farmer and researcher, Howard Vlieger, as we delve into how healing the soil heals our health.



Tune in live March 26, 2025 at 12 PM PT / 3 PM ET.



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## The Basics of Regenerative Farming

- Soil Health Understanding & Working With Nature, Rather than Against it
- Biodiversity Constantly Improving Biological Life of the Soil
- No-Tillage Minimum Disturbance (Mechanical & Chemical) ALWAYS Maintain ARMOR on the Soil
- Carbon Sequestration Photo Synthesis By Having a Living Plant Growing as Many Days of the Year as Possible – Diversity
- Water Management Improved Water Infiltration and Water Usage
- Farm Resilience Reduced Synthetic Inputs for Improved Profitability and Improved Crop Quality & Improved Bottom Line Profits

# Healthy Soil



# June 15, 2009 Burley County North Dakota





## Brown Ranch: 13.6" in 22 Hours



## Sioux County Rainfall Infiltration

- Regenerative Average 5.39 inches per hour
- Traditional Average .98 inch per hour

	First Inch	Second Inch	Third Inch	Infiltration rate (in/hr)	Whole Field Average
Site	In-Row B/w Row	In-Row B/w Row	In-Row B/w Row	In-Row B/w Row	Infiltration rate (in/hr)
1-Regen	00:21.0 06:02.0	03:45.0 47:00.0	N/A N/A	16 1.27	4.9525
1-Trad	14:40.0 42:12.0	1:24:24 2:55:00	N/A N/A	0.71 0.34	0.4325
	In-Row B/w Row	In-Row B/w Row	In-Row B/w Row		
2-Regen	0:00:40 0:03:45	0:03:56 0:22:24	0:09:15 N/A	15.3 2.67	5.8275
2-Trad	0:10:25 0:05:36	0:59:55 0:35:43	N/A N/A	1 1.71	1.5325

## Sioux County Rainfall Infiltration

- Regenerative Average 5.39 inches per hour
- Traditional Average .98 inch per hour

## 27154 Gallons -1.0" of Rain per Acre

- Regenerative Average Infiltration
- $27154 \times 5.39 = 146,360$
- Rock River Subbasins
- 1,074,464 Acres
- 1,074,464 x 146,360 = 157,258,551,040 157 Billion 258 Million 146 Thousand 360 Gallons SOAKED IN

#### **Traditional**

- $27154 \times .98 = 26,679$  gallons soaked in
- Rock River Subbasins
- $1,074,464 \times 26,679 = 28,665,625,056$

#### The Difference

• 157,258,551,040 – 28,665,625,056 = 128,592,925,984 – 128 Billion 592 Million 925 Thousand 984 gallons DID NOT have to run away

# Would that have made a difference for Rock Valley in June of 2024?



### What is the cost?

- The cost for homeowners & businesses?
- The cost for the county, cities, states & federal roads, bridges & infrastructure?
- The loss of topsoil & farmland?
- The damage to the waterways, streams, rivers, lakes and oceans as chemicals and fertilizer move off target and cause harm?
- WHAT IS THE COST?

## You might ask, why do I focus on this topic?





### **2023 - VALUE OF LOSS\***

Average J's yield: 56 bu/a (fertilized for 70 bu/a)

Harvested 7 = 56 - 7 = 49 bu/a 'loss'

Average yield for area = 23 bu/a

480 acre field @ 23 - 7 = (16) x 480 = 7,680 bu loss. J's

average yield = 56 bu - 7 = (49) x 480 = <u>23,520 bu loss</u>

- Value per bu = \$40/bu = \$307,200 (ave based on area); \$940,800 (J's ave is 3X neighbors)
- \* Is this a value of loss or COST of glyphosate?





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#### Saga of Soggy Sauerkraut

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#### **Abstract**

The creation of undesirable (soggy) sauerkraut resulted in the loss of \$1,000,000 worth of organic sauerkraut in 2022, which prompted a multistep investigation of the cause and potential solution. The cause of this condition has been previously reported as unique fermentation conditions and the lack of key trace nutrients essential for cabbage (Brassica oleracea var. capitata) cell wall integrity. Because the condition was limited to organic sauerkraut in 2022, this investigation initially focused on differences in fermentation conditions between organic and conventional squerkraut. No differences in fermentation conditions accounted for the condition: therefore, attention was focused on