

Restoring Agricultural Soil Sustainability

Utilizing Dairy Manures in My Raspberry Production System

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Recognizing the signs -

- Decline in vigor, yield, and longevity
 - Genetic change?
 - Under fertilizing?
 - pH issues?
- Change in soil tilth/structure and color
 - Why? What's happening?
 - Is this a clue?
 - Oblivious to the biological component
 - Started educating myself
 - Internet articles
 - WSU Extension
 - Many ah-ha moments
 - Soil was an amazing complex of living organisms!
 - Started "connecting the dots"



Turning this thing around-

- My tilling was like a tornado
- Salt-based fertilizer wasn't helping

- 1st step: plant something in between rows. Over 60% of the field surface
 - Cover crop or permanent seeding?

- 2nd step: organic-based nutrients
 - Dried, pelleted chicken manure
 - Really wanted to use dairy manure



Challenges of using dairy manure-

- Types/forms - availability
- Volumes
- Transporting
- Application method and equipment
- Soil compaction
- Weather windows – time investment
 - Preharvest interval?
- Is it practical? Feasible?
- Food safety - the biggest concern







- Liquid/slurry
- 1000 Gallons/1250'row
 - = 3300 G./A
 - = 60 lbs. N
 - 11 lbs. P
 - 85 lbs. K
- PHI = 90+ days
 - NOP standard
- Handling and placement are extremely important, especially for the Food Safety concern.



Questions?

