

Innovations in Fencing & Cropping Systems *A Path to Resiliency*

*Arcadia Farm and Woodlot Owners
Breakfast & Strategic Planning Workshop*

May 3, 2025


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Sustainability Focus Across the Value Chain



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Principle #1

**Continuous Improvement
is the Name of the Game in
Building Resilience...**



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Innovations – *Top 10*



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#1 - Data Management & Analysis Systems

- You can't manage what you can't measure
- Hard to track progress & cannot report improvements
 - Baseline & Project Case GHG emissions
- Technology is only as good as its underlying database



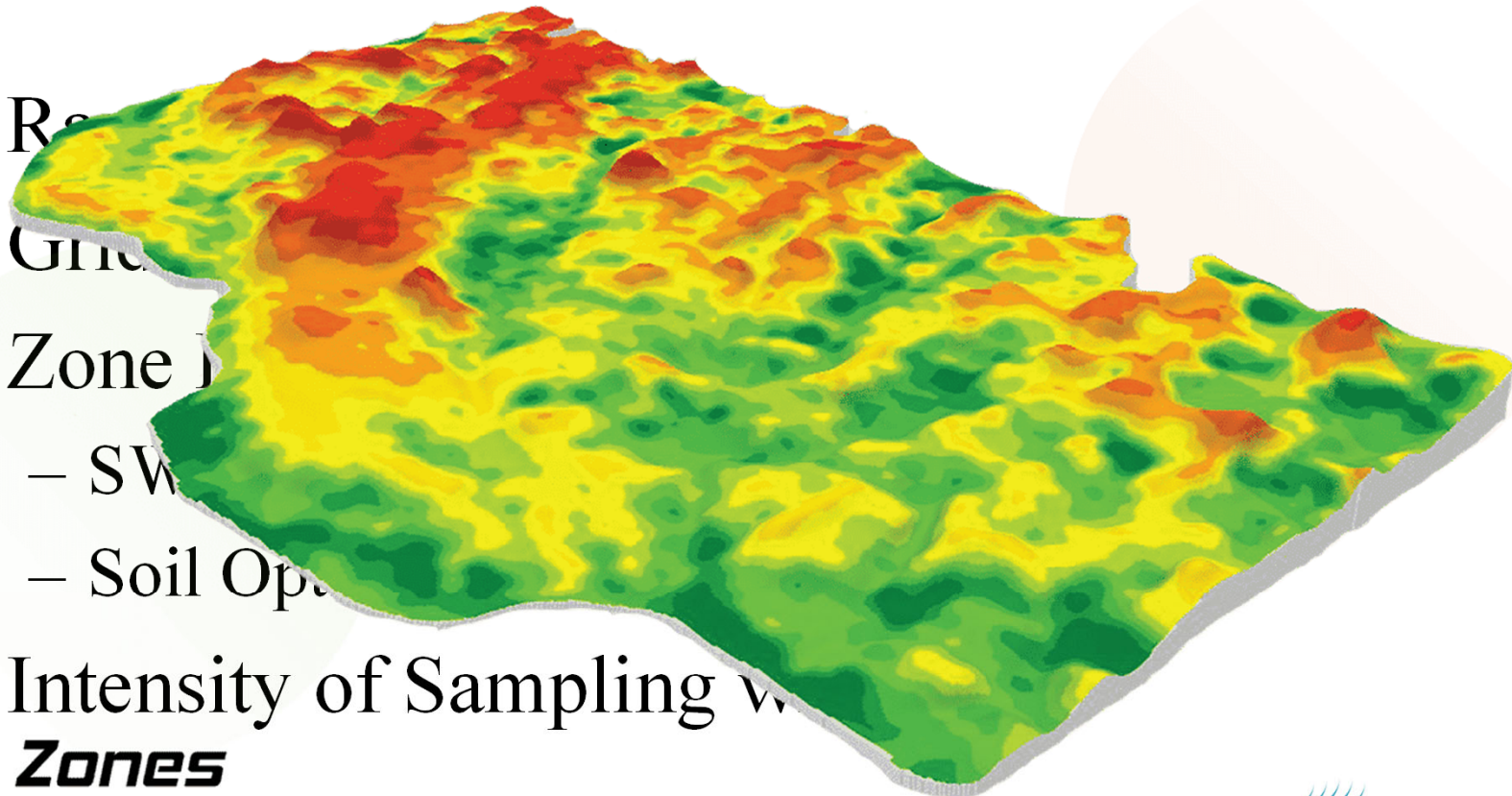
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#2 Understand Soil Variability

- Re
- Gnc
- Zone 1
 - SW
 - Soil Op
- Intensity of Sampling w

ZONES



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#3 Effective Nutrient Cycling

- Rhizosphere as a nutrient storage system
- Partnership with soil microbial community
- Soil nutrient bank account build vs. maintenance
- Minimize losses
- Maximize availability



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nutrient stewardship

4R Nutrient Stewardship can **help** grow crops sustainably

The 4Rs work to increase production/profitability for farmers while ensuring the future of the agricultural industry

RIGHT



SOURCE

RIGHT



RATE

RIGHT



TIME

RIGHT



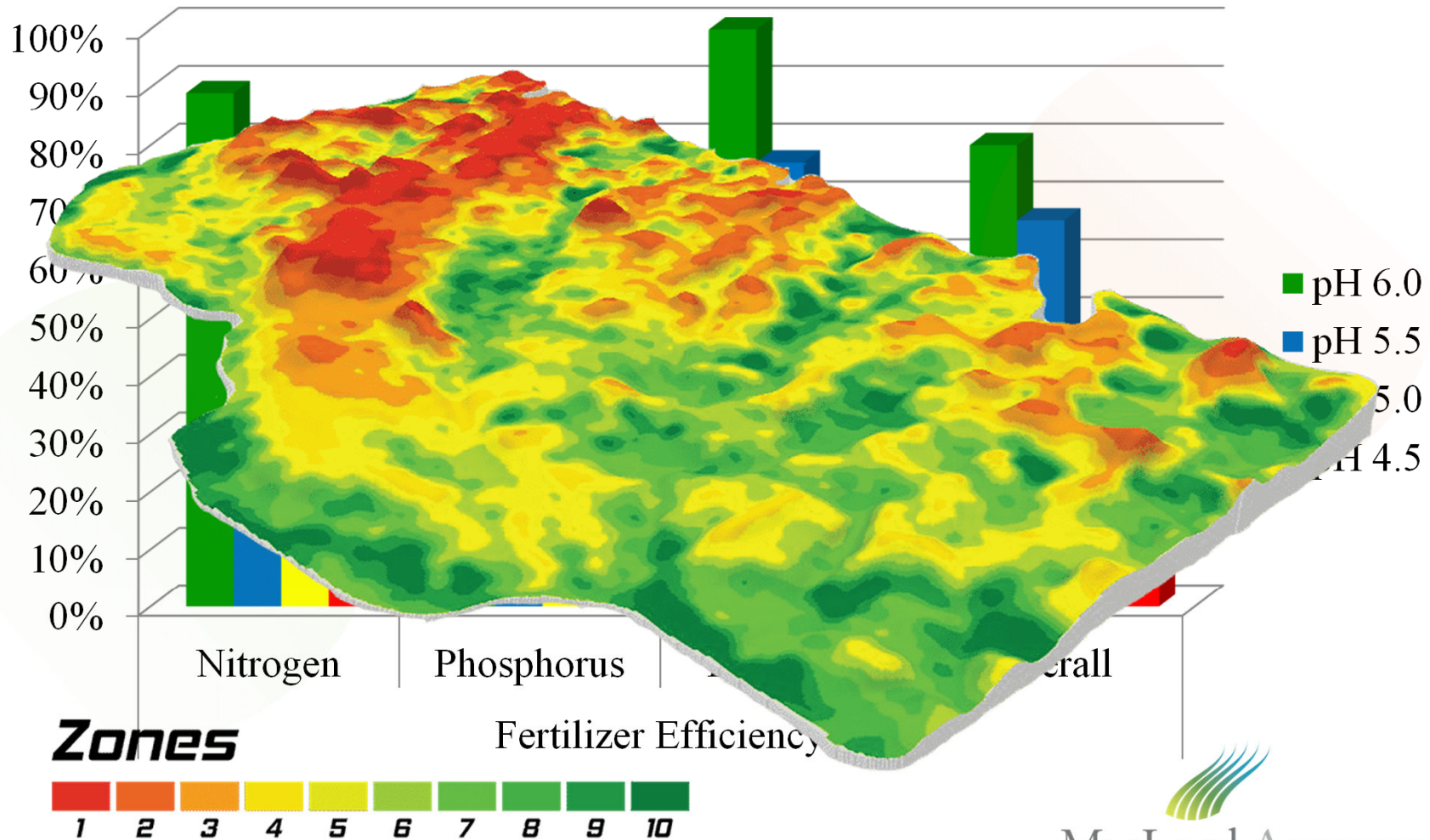
PLACE

<http://www.nutrientstewardship.com/about>

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Soil Chemistry Effects on Nutrient Availability



#4 Cropping Systems Design

- Functional Rotations – New Options Available
- Corn silage
- Winter cereals
- Perennial forages
- Integrating annual root crops
- Rotational tillage
- Weed management
- Maximize manure nutrient use efficiency

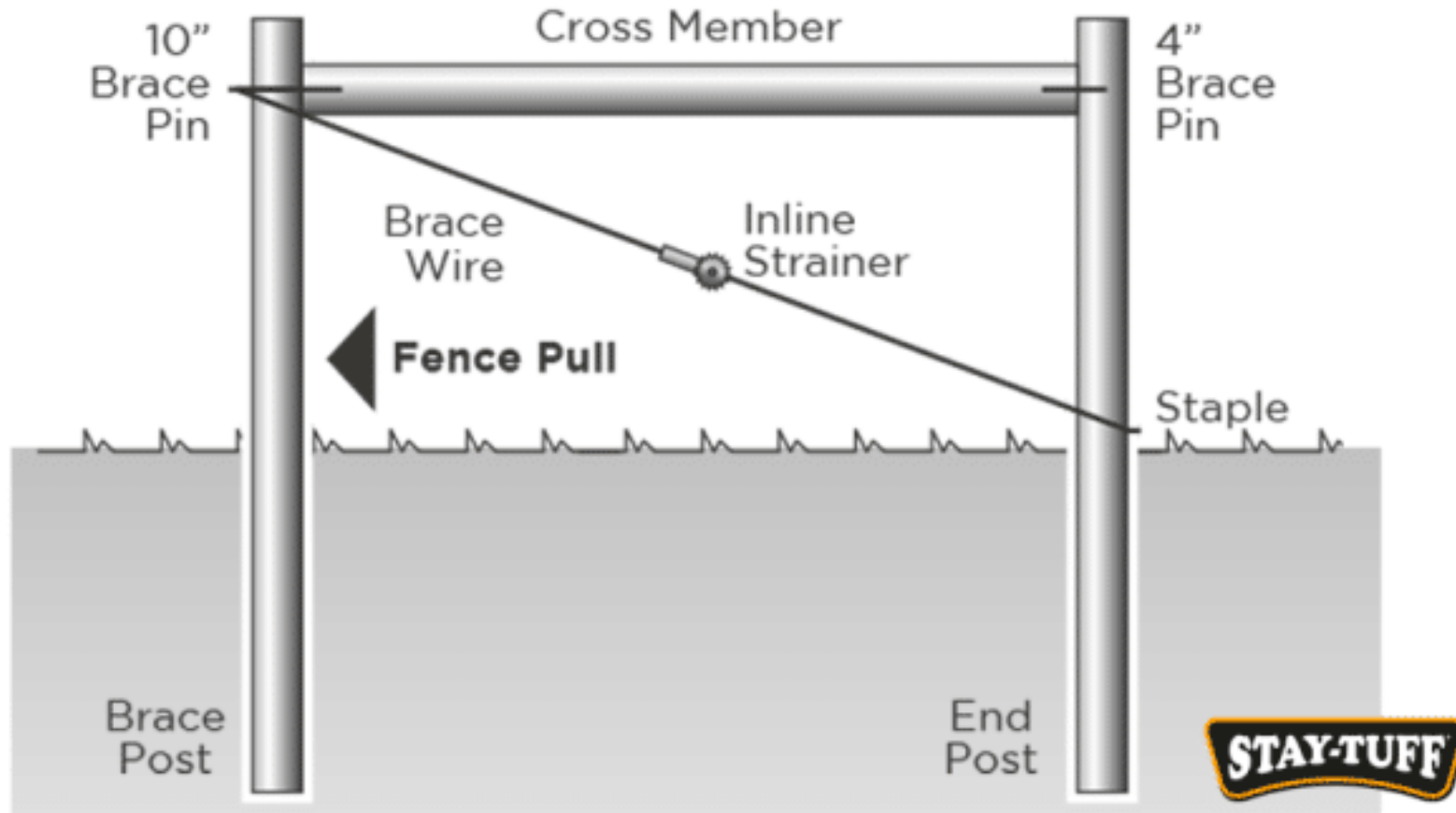


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#5 Rotational Grazing Systems

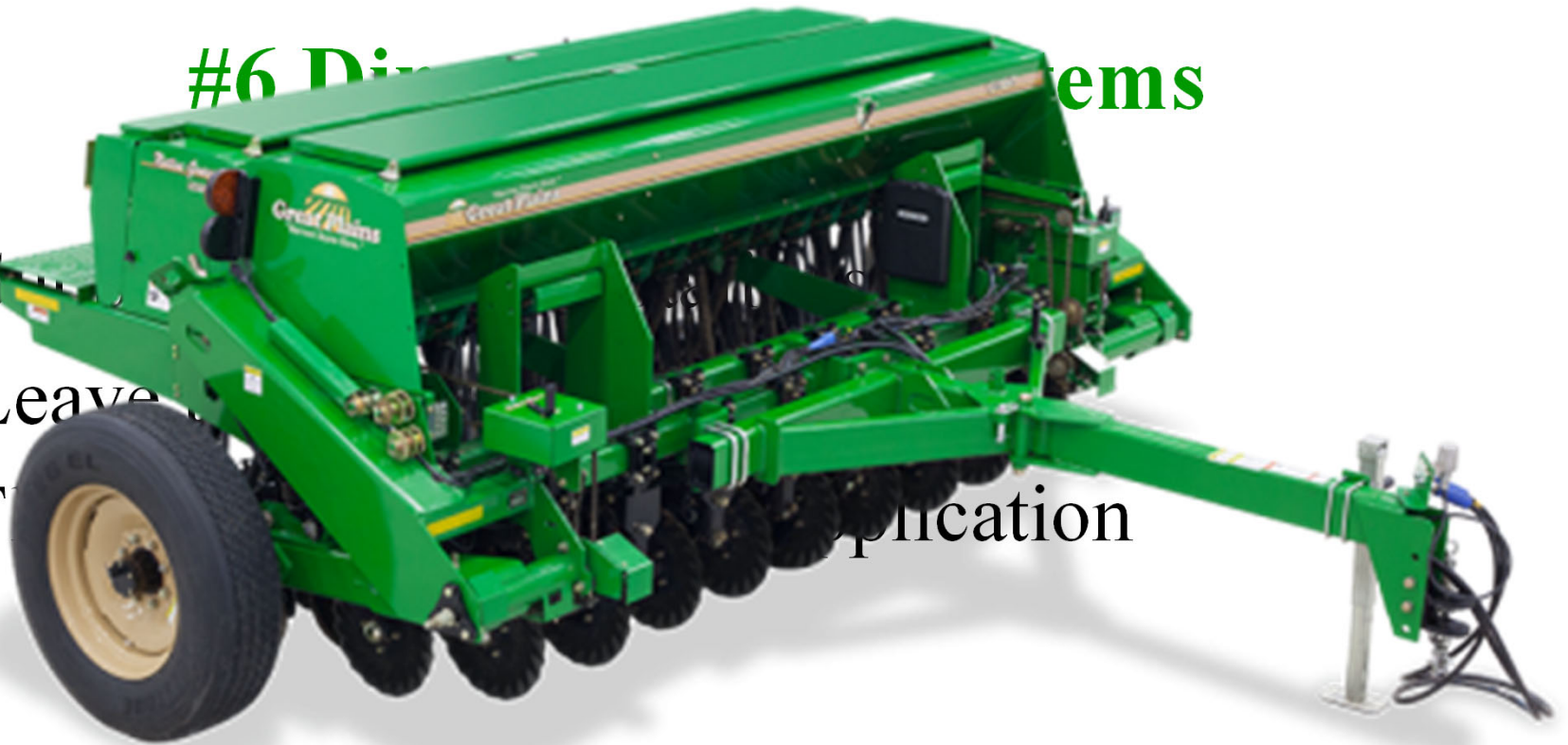


<https://www.canadianfga.ca/en/projects/advanced-grazing-systems/>

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#6 Direct Seeding Systems

- Seed
- Leave
- Fertilizer application



#7 Enhanced Legume Content

- Numerous options for integration
- Broadcast systems – frost seeding
- Direct seeding systems – post grazing or forage harvest
- Not a one and done, a strong case for continuous improvement



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#8 Variable Rate Fertilizer Application



#9 Fence

- Smart Fence




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#9 Fencing Technologies

- Auto



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