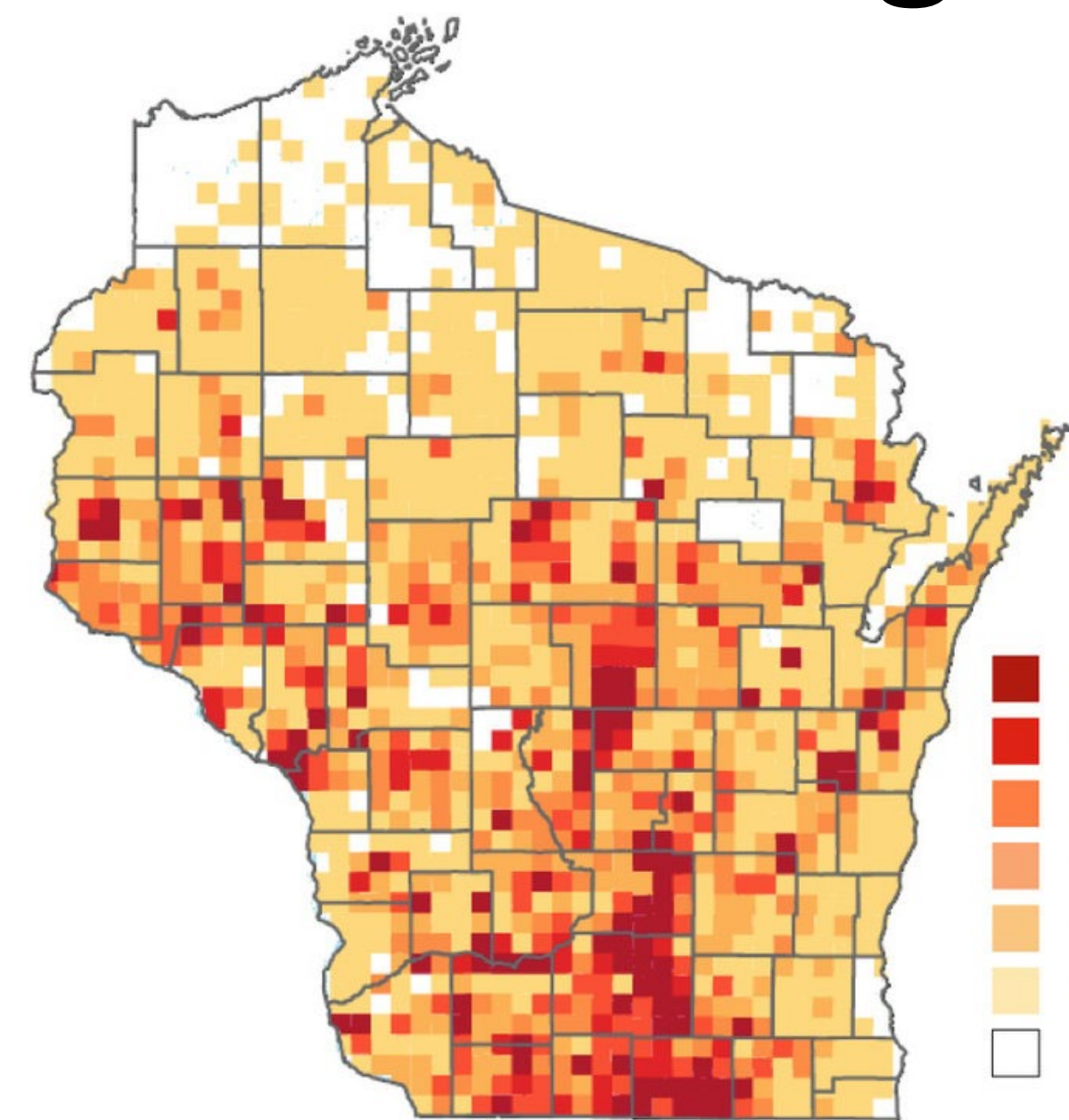


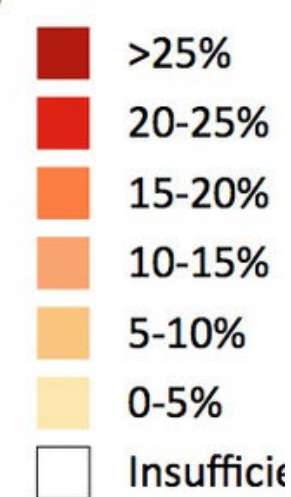
Water Quality Research Station: a long-term lysimeter network in Wisconsin

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Need for Soil Nitrate Leaching Monitoring



Map of Wisconsin showing the percentage of groundwater samples in each township above the 10 mg L⁻¹ nitrate-N drinking water standard.



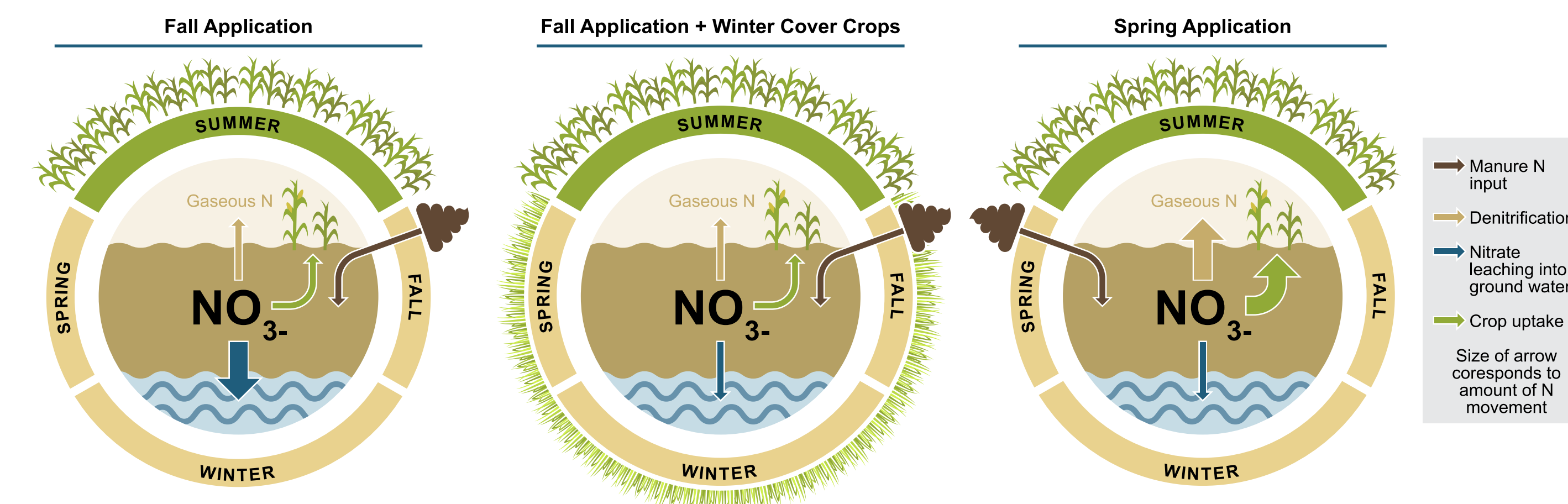
Field Deployment of Automated Equilibrium Tension Lysimeters



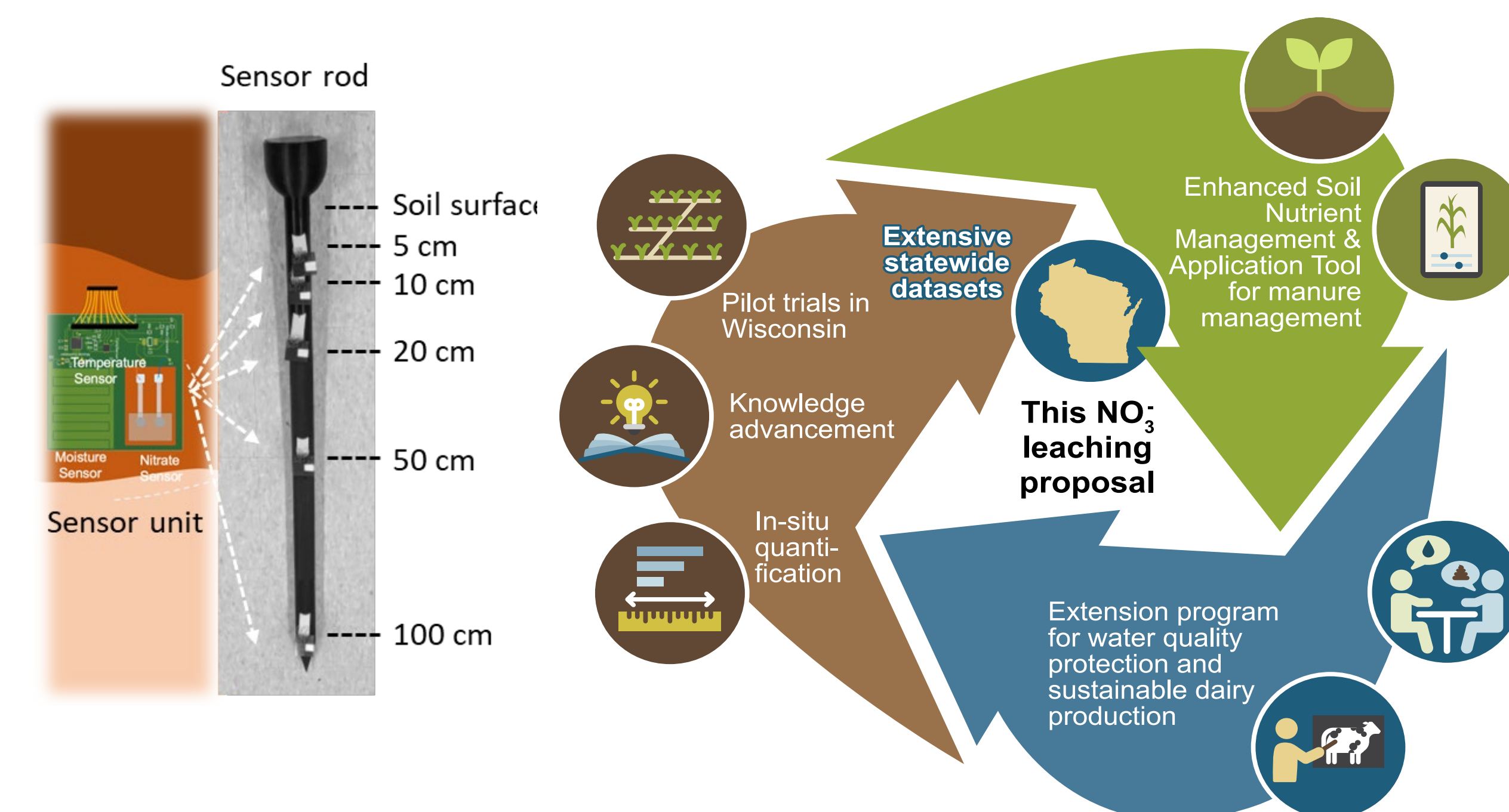
Ongoing Research

Dairy manure

When, where and how to apply manure?



Can changes in manure application timing and the use of cover crops reduce Nitrate leaching?



Nitrate in Groundwater

Human Health Concerns

- Drinking water with high levels of nitrate is unsafe for everyone!
- It poses an acute risk to infants and women who are pregnant, a possible risk to the developing fetus during very early stages of pregnancy
- a chronic risk of serious disease in adults, such as thyroid disease and cancer.

Environmental Concerns

- In addition to phosphorus, nitrate plays a significant role in the over enrichment of water bodies, driving algal blooms

Other Midwest states have long-term systems to collect in-season nitrate leaching for nutrient management, but Wisconsin does not.



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