

# Presentation to the Senate Agriculture Committee

Improving Soil Health



**Grassroots  
Innovation**  
*Since 1939*

# Harry Stoddart

- ▶ ED since January 2023 - 100 days today
- ▶ “Retired” Farmer - 30 years
  - ▶ 2000 acres
  - ▶ Conventional and organic
  - ▶ Conventional, conservation and no-till
  - ▶ Management Intensive Grazing
  - ▶ Hogs, Beef, Sheep
- ▶ Former Business Strategy Consultant
  - ▶ PricewaterhouseCoopers
  - ▶ IBM
  - ▶ George Morris Centre
  - ▶ Several Boutique Consultancies

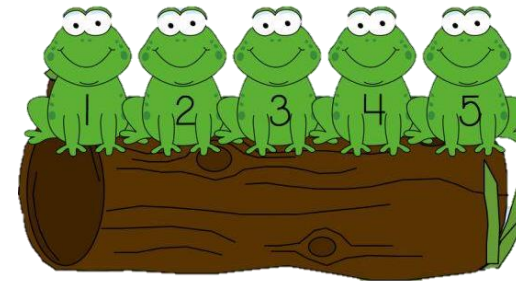


Passionate about environmental stewardship in agriculture

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# 3 Messages

- ▶ Don't reinvent the wheel
- ▶ Knowledge versus Adoption
- ▶ Unintended consequences





# Don't Reinvent the Wheel



**Building soil organic matter** to support a healthier soil ecosystem and create a better rooting environment for crops



**Diversify crops** to increase soil biodiversity, improve soil fertility, break disease cycles and improve pest control



**Minimize soil disturbance** to enhance wildlife habitats and protect soil microbiology



**Keep living roots throughout the year** to continue to feed soil microbes and attract different microbial populations



**Keep the soil covered** to support biodiversity, reduce erosion and support nutrient management



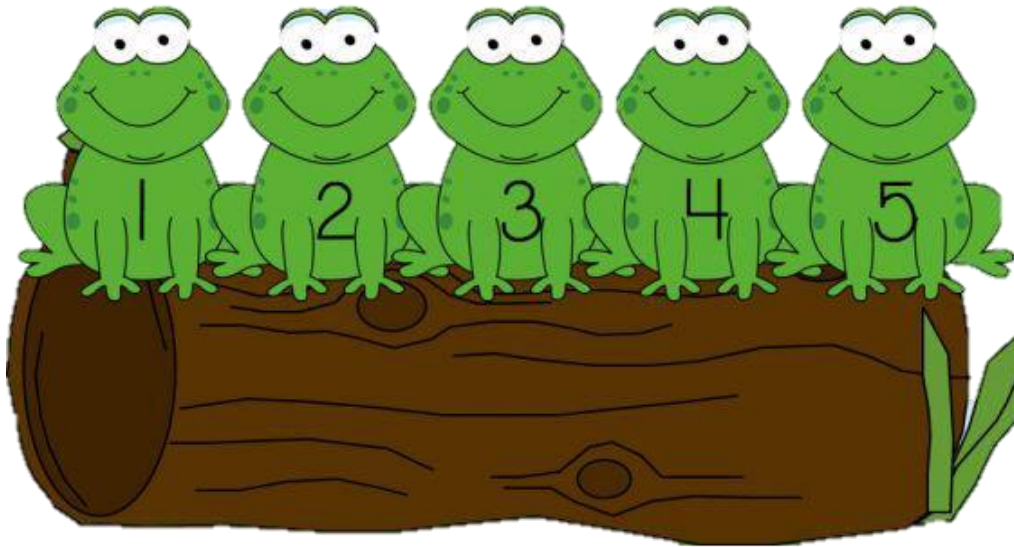
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## Don't Reinvent the Wheel

- ▶ When was “No-til” coined?
  - ▶ 1966 - Allis-Chalmers
- ▶ First farmer in Ontario to continuously no-till started in what decade?
  - ▶ Jim Murrison, 1960s
- ▶ First zero-till or no-till research plots were established at the University of Guelph?
  - ▶ 1969

# Knowledge versus Action



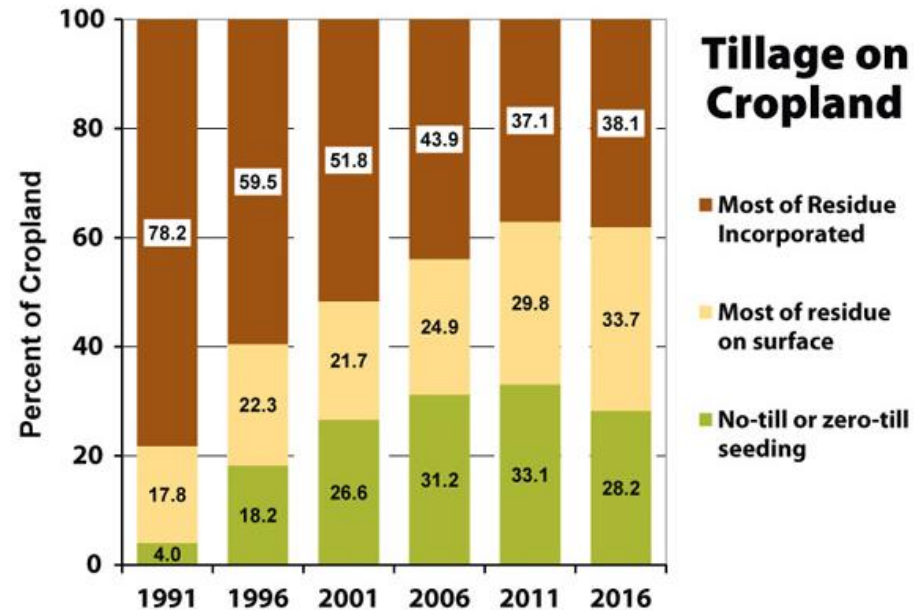
If 5 frogs are on a log and 4 decide to jump off, how many frogs are still on the log?  
5 - Deciding and Doing aren't the same thing



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# We Don't Need More Knowledge - We Need Implementation

2021 Census of Ag puts  
No-Till at 30% of Seeded  
Acres



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# Unintended Consequences



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# Unintended Harms

## ▶ Production Insurance

- ▶ Discourages innovators
- ▶ Extends adoption financial impact

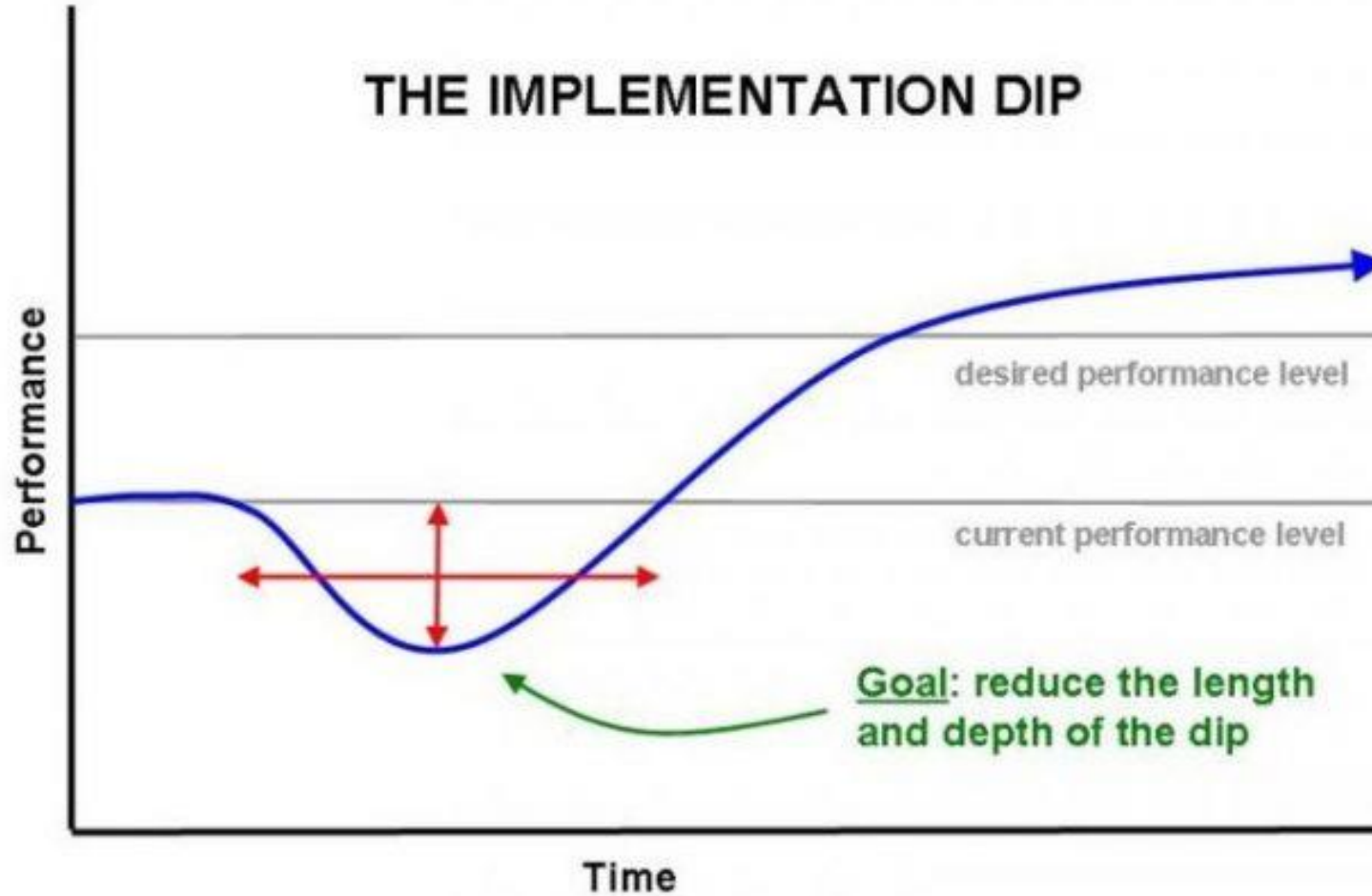
## ▶ Unseeded Acreage Benefit

- ▶ Push to get acres in harms soil - compaction by working soils that are too wet
- ▶ Extension of deadlines is counter productive in the long-term



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# The Implementation Challenge



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# Unintended Benefits

- ▶ Healthy soil benefits society
  - ▶ GHG emissions
  - ▶ Non-point source phosphorus, nitrogen, turbidity
  - ▶ Water infiltration
    - ▶ Flood reduction
    - ▶ Groundwater recharge
- ▶ Significant cost avoidance in climate change adaptation



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# The Path Forward

- ▶ No-till adoption clustered around the pioneers
  - ▶ Research plots don't lead to adoption - they aren't real world
  - ▶ Real conditions at scale
- ▶ AAFC Living Labs
  - ▶ Good start
  - ▶ Agenda isn't healthy soils directly - flavour of the year
  - ▶ Time horizon is too short
  - ▶ 4 years of plots only gets once through a C-S-W Rotation - barely past yield dip
- ▶ Needs a network across the province



“Not from here” Syndrome

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We need to redefine a beautiful farm  
landscape.

This is Ugly



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# This is Beautiful



Lawrence Hogan's Bio Strip Till, April 20, 2023



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# The Path Forward

- ▶ Nothing to discover
- ▶ Nothing to invent
- ▶ Nothing to patent
  
- ▶ No equipment to sell.
- ▶ No products to sell.
  
- ▶ Just good old-fashioned extension
  - ▶ Unfortunately, the majority of “extension” in Ontario is product-tied

BE CAREFUL WHO YOU LISTEN TO



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