Wallendal Farms
Grand Marsh, WI

One Family, One Farm, One Environment

Core Values

- **Innovators**
- **Practicing Integrity**
- **Adaptability**
- **Uphold Family**
- **Partner of Choice**
- **Sustainability**

Vision:

We passionately challenge ourselves to cultivate growth, personally and collectively, in order to create an enduring environmentally-conscious business and family.

Mission Statement:

We will succeed by innovating, producing high quality products, building strong relationships, growing our market intelligence and utilizing production technology.

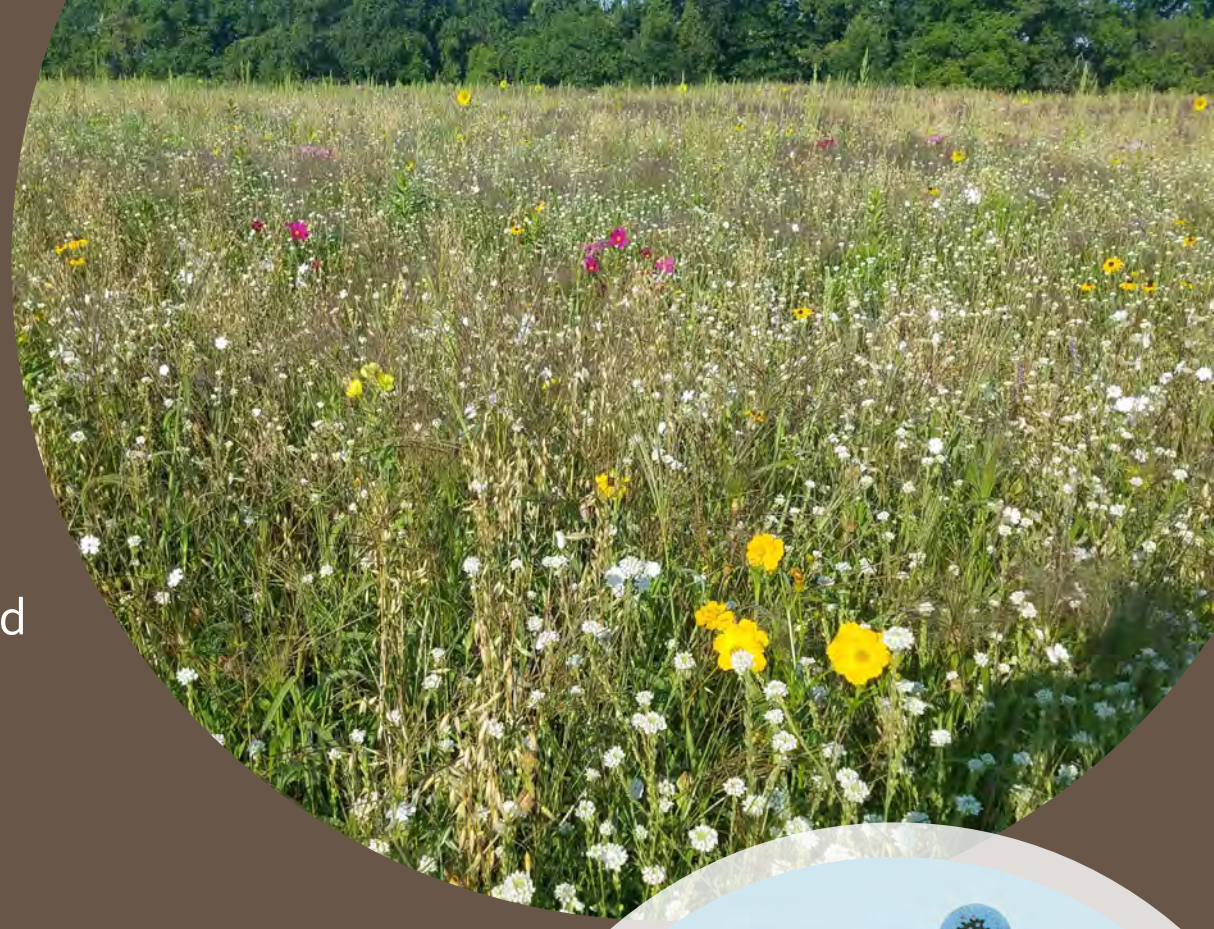
Overview: The Farm

- 3rd Generation Family Farm
- 3300 acres of row crops and vegetables all under center pivot
- What we grow:
  - *Forage Corn, Seed Corn*
  - *Seed Soy, Non-gmo soy*
  - *Alfalfa*
  - *Snap Beans, Sweet Corn*
  - *Kidney Beans*
  - *Pumpkins*
- Sandy Soil!! Soil is under 1% OM.
- 25% of Acres are Organic or in Transition
- Tech, Research, Growth Focused!

Best Farming Practices

- Conservation Strip Tillage
- Cover Cropping
- IPM Program
- Cultivation
- Research Focused
- Partnerships
- Soil/Water Probes
- Soil Health Focus and conservation application
  - EC Mapping
  - VRT, VRI and VR fertigation
  - Zone Sampling

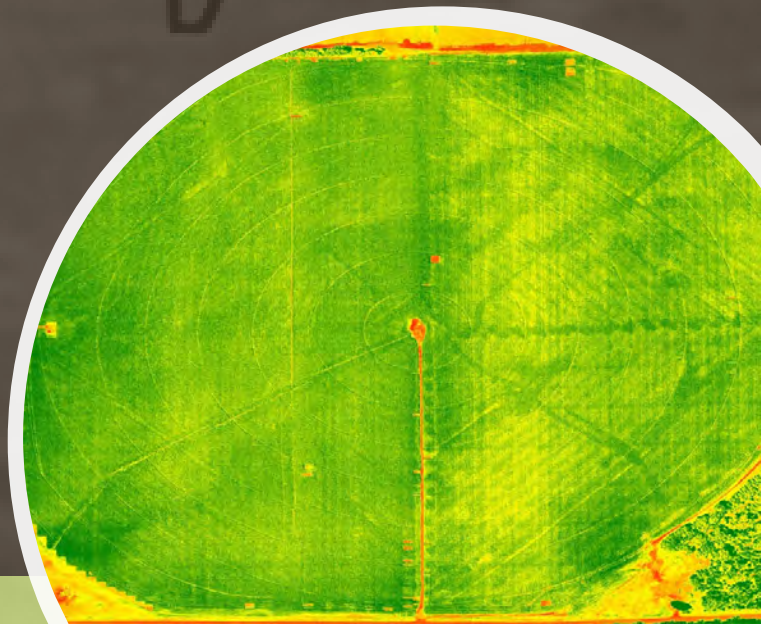
Your Environment is Ours, Too!!



- We work hard to farm sustainably and responsibly.
- We value the education from our historic projects and continue to uphold our established values.
- We work on projects for our environment:
  - Cover Cropping
  - Natural Pollinator Habitat Establishment
  - Ecology Restoration
  - Water Sustainability
  - Wind Erosion Control
  - Ground Water Studies

Research Based!

- Pete worked on NRCS soil sampling
- 1960's strip tillage and cover cropping
- 1988 first grid sampling
- Worked with NASA in 1988 to ground truth NDVI
- 20 year root rot research plot
- UW researcher relationships
- Currently NDVI, VR, and Biologicals research



Organic Transition

Why?

- Soil Health
- Reduced impact on environment
- Productivity
- Environmental regeneration and sustainability
- Experience with Veg Crops
- Demand
- Legacy of our farm

When?

- Started Transitioning in 2015/2016.
- Continuing to transition ground.
- 2016 started Officially organic farming

How?

- 20% Transitioned now, working to transitioning 33%+

Philosophy of Transitioning

- Increase soil health with use of cover crops
- Reduce the weed bank
- Prepare the land for our anticipated rotation
- Increase cover crop and rotation diversity
- Choose fields that needs soil health attention

How Are We Transitioning?

- 1 or 2 year cover-crop
- Soybeans
- Alfalfa
- Sunflower
- Practicing small scale trials
- Slowly!
- We've chosen ground that benefits most from organic practices.

Breaking Down the Numbers.....
Weathering the Storm

- Costs of weed management
- Cost differential of organic products vs. commercial products
- Front loading field fertility inputs
- Cover crop mixes and costs
- Rental agreements
- Revenue gap (if any)

Weed Management: Different Philosophies

- **Reduced Cultivation & Tillage**
  - Planting into an existing crop
  - Planting into a winter killed cover
  - Tilling and planting into a non-covered field and sowing an inter-crop

- **Traditional Tillage**
  - Tilling field
  - Cultivating until row closure

Weed Management: Reduced Cultivation

June 26th, 2018

July 19th, 2018

Non-vernalized rye spread 10 days, 5 days, and 0 days before planting

Results of Non-vernalized rye: 5-12 bu yield higher than cultivated rye

Weed Management: Reduced Cultivation

- Top Picture: 6/13/2018
- Planted 5/25 and crimped approx. 6/10/2018

- Bottom Picture: 6/26/2018
- Grass weeds starting to come through rye cover

- Soy eventually outgrew grass weeds, but was not a "clean" looking field

Weed Management: Reduced Cultivation

July 20th, 2018

July 29th, 2018

Interseeding!

Corn – Trialed in 2018 – Mix: Crimson Clover, Winter Peas, Teff Grass, Collards

Cucumbers: Trialed in 2018 – Mix: Buckwheat, Kale, Non-vernalized Rye

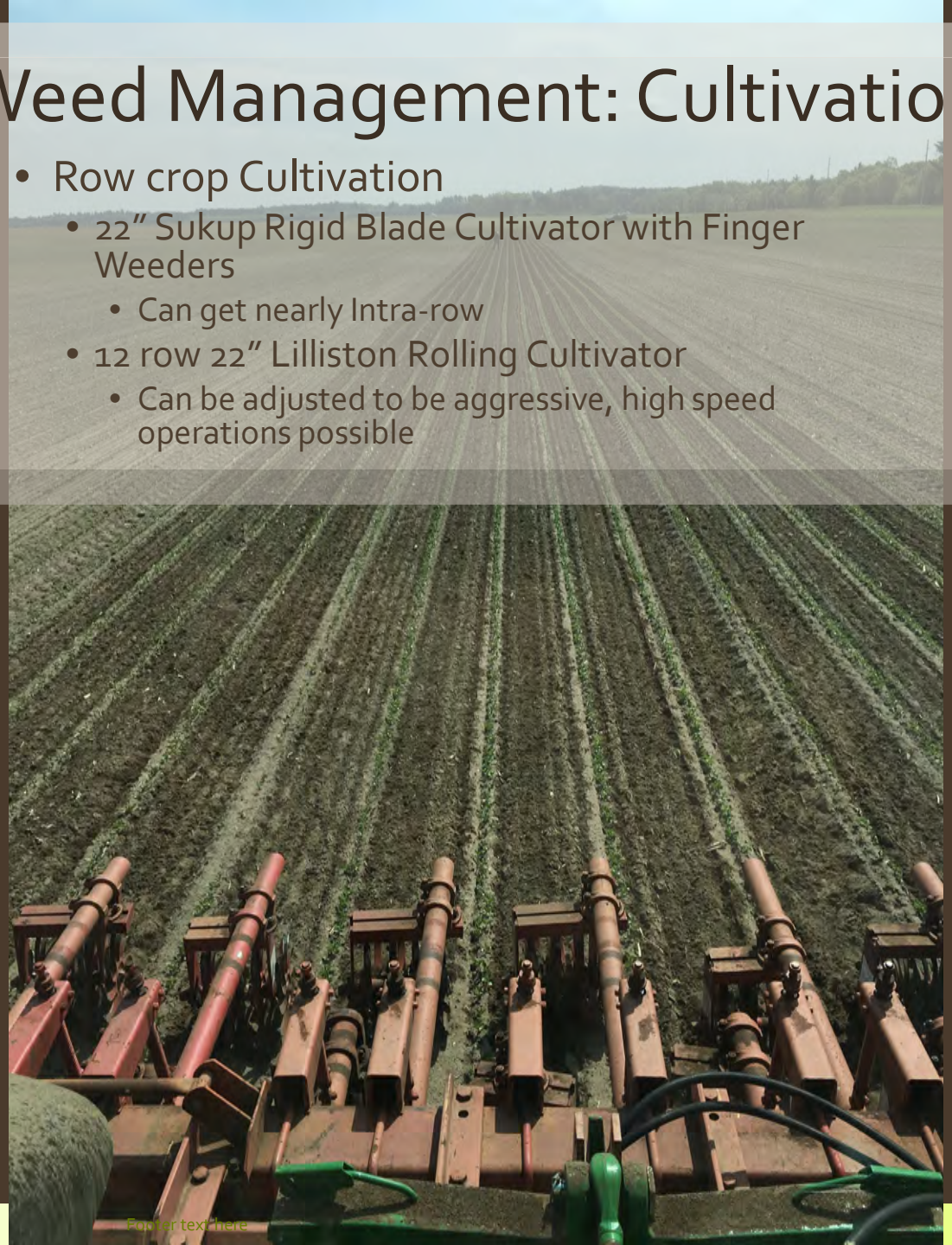
Weed Management: Cultivation

- Tillage:
  - Sunflower Disc
  - Rubin 9 Lemken
  - Turbo Till
  - Orthman Strip till

- Cultivation Early
  - Tine Harrow
  - Rotary Hoe

Weed Management: Cultivation

- Row crop Cultivation
  - 22" Sukup Rigid Blade Cultivator with Finger Weeders
    - Can get nearly Intra-row
  - 12 row 22" Lilliston Rolling Cultivator
    - Can be adjusted to be aggressive, high speed operations possible



Weed Management: Cultivation

- Row Crop Cultivation
  - Danish Tine Cultivator
    - All around versatile
  - C-shank Cultivator
    - Aggressive use when roots established


Questions?

Why We Care… Legacy!!

We are the Wallendal Farms Family