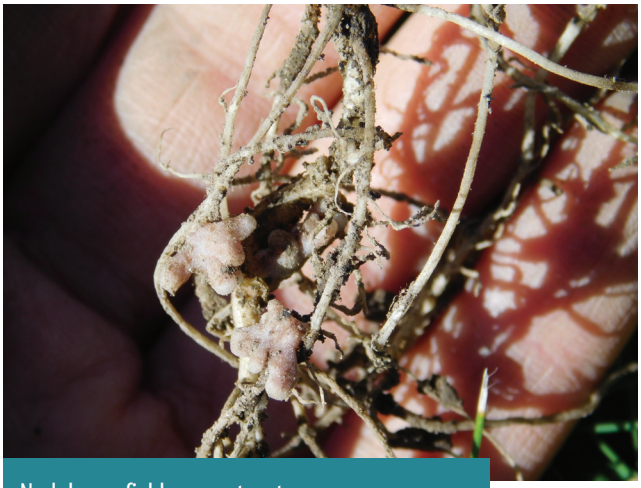
VELDMAN FAMILY

COVER CROPS FOLLOWING WINTER WHEAT

Goals of cover crops

- Reduce soil erosion
- Enhance infiltration
- Limit soil compaction
- Uptake nutrients from manure
- Increase soil organic matter
- Increase crop yield

Each field was planted into a different cover crop mix. After wheat harvest, manure was applied and cover crops broadcast, followed by one pass of vertical tillage. Cover crops were terminated in the fall with Glyphosate and Dicamba.



Nodules on field pea root system

Difference in aboveground and belowground biomass between pea, oat and radish

Radish and Oat
5.5 lbs/ac tillage radish
20 lbs/ac oat

Oat and Peas
5.5 lbs/ac tillage radish
20 lbs/ac oat
20 lbs/ac peas

Residue remaining in the spring

Radish, Oat and Sunflower
5.5 lbs/ac tillage radish
20 lbs/ac oat
3 lbs/ac sunflower

Field Peas
- Grow well in cool conditions
- Terminated by hard frost
- Nitrogen fixer
- Decompose quickly
- Soil builder
- Weed suppression

Sunflowers
- Establish quickly
- Frost terminated
- Fibrous taproots can scavenge nutrients deep in the soil
- High biomass
- Pollinator habitat

Oats
- Establish quickly
- Frost terminated
- Nitrogen scavenger
- High biomass
- Limit soil erosion
- Weed suppression

Cereal Rye
- Overwintering
- Nitrogen scavenger
- High biomass
- Limits soil erosion
- Weed suppression
- Grazing and forage value

Radishes
- Establish quickly
- Frost terminated
- Nitrogen scavenger
- Deep taproots can help alleviate soil compaction
- Weed suppression
- Nematode suppression

Fall 2018 cereal rye and sunflowers were surface broadcast on soybean acres not going into wheat.

For more information:

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UPPER THAMES RIVER CONSERVATION AUTHORITY