Cover Crop Management

Different Types, Pluses & Minuses

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Company Overview

- Original company started around 1920; headquartered in La Crosse, WI
- Focus on forage, turf, cover crop seeds and complementary products
- Our primary market is input supply companies (ag retail & seed dealers)
- No different than NRCS/SWCD & other agencies, land-grants, our work includes engaging new users and promoting sound agronomics

Basically, we strive to get it right!

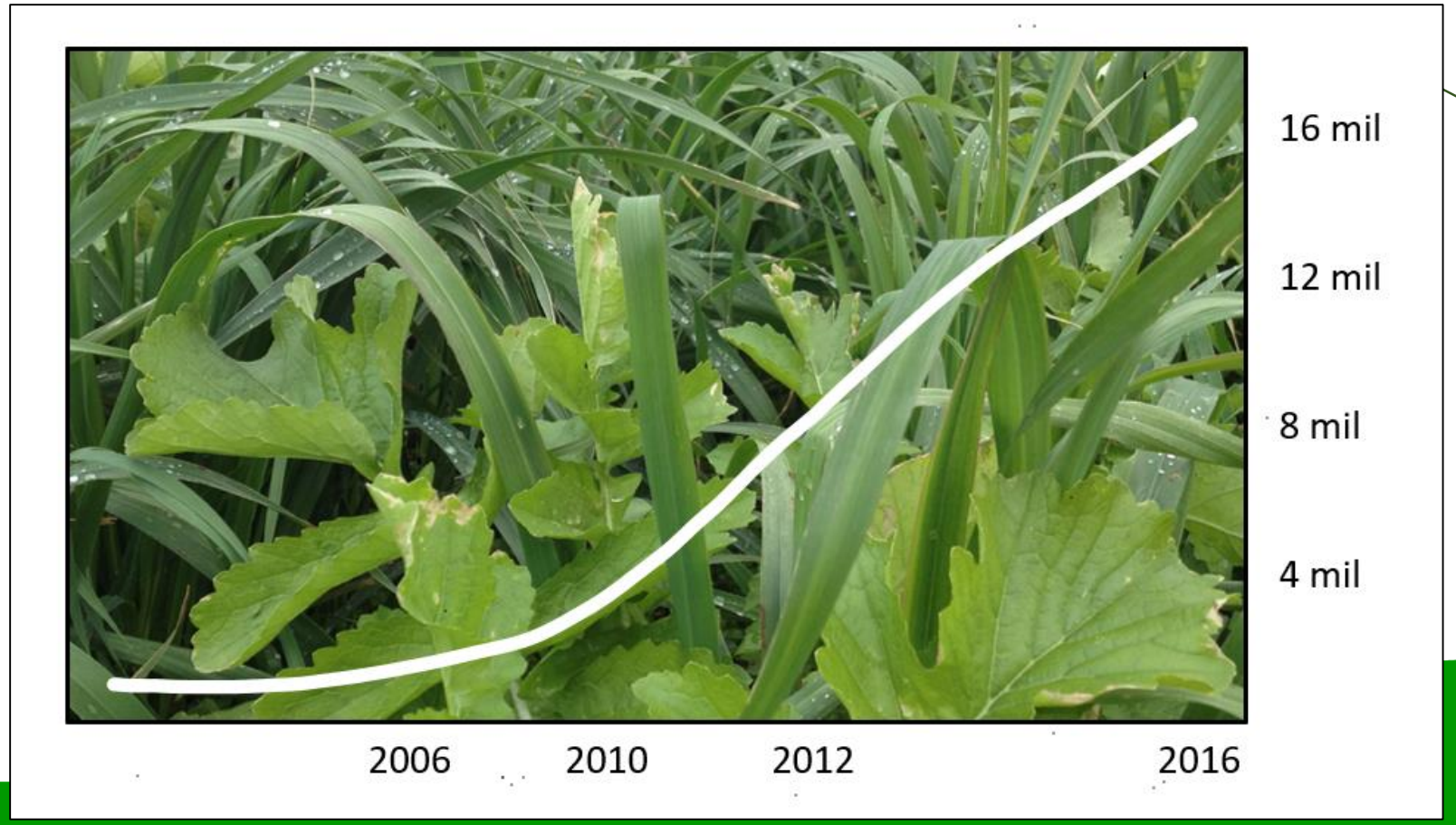
OUR BRANDS = Soil First™ Success starts from the ground up | Tillage Radish® The Original and Only | GUARDIAN™

Our Message

- Cover crop use historically driven more by time (or lack of time) than anything else (versus commodity pricing)
- Farmers / Retail need to PLAN!
  - Procure Seed
  - Allocate Labor & Get Equipment Ready
  - **Plan even earlier next year**
    - Plan out Crop Rotations
    - Arrange for Herbicides Rotations & IPMs
    - Consider Maturities, Drydown Characteristics, etc.

2017 Ag Census

- SARE/CTIC suggests new survey will be 17 million+ acres



4th largest crop

Navigating the Decision

Experience says many factors go into deciding which covers to use, but the main 4 that I see are:

- The goal – what is trying to be accomplished
- How to fit them into my current crop rotation **(INTEGRATION)**
- How to get them planted timely and successfully **(SEEDING SUCCESS)**
- How hard will it be to manage them come next spring **(MANAGEMENT)**

Cover Crop Types

Many different ways to slice it…..

BUYER BEWARE

Grasses

GOOD

- Nutrient sequesters
- Erosion preventers
- Biomass producers
- Forage opportunity
- Weed suppression
- Root structure
- pH flexibility

BAD/WATCHOUTS

- Timing critical for termination
- Winter-hardiness across the board
- Elevated nitrate & tetany risk
- Large water needs at establishment
- Heavy stands may attract pests

- Cereal rye – hardiest of all cereals; but spring growth needs managed
  - Be aware of southern types of rye – example: Elbon
- Barley – drought tolerant, silage value, high pH, salt tolerant, known suppression to root knot nematode, pests control in fruit & vegetable crops; but winter types are very inconsistent – the worst of all cereals
- Triticale – higher levels of digestible energy & crude protein vs. barley; similar to rye in it's spring management
- Annual ryegrass – nothing better for breaking up hardpans, SCN reductions, good on manured acres, good on poor soils; BUT……
  - Termination challenges
  - Inconsistent winter-hardiness and root growth
    - Forage vs. cover crop (Italian types vs. Westerwold types)
    - Over 200 varieties on the market

Legumes

GOOD

- Green manure
- Low C:N ratios – quick to desiccate
- Nitrogen = increased protein for livestock diets
- pH flexibility
- Work great alongside grasses

BAD/WATCHOUTS

- Hard seed
- Heavy stands may attract pests
- Glyphosate alone questionable
- Few options for overwintering
- Inoculation is crucial for maximizing success

- Crimson clover – strong N fixer for the $, good shade tolerance, pollinator option; but heavy stands can attract voles, bloat forming
- Berseem clover – highly nutritious – non-bloat forming, more saline tolerance vs. alfalfa or red clover, tolerates water-logged soil; but it's not winter-hardy
- Winter hairy vetch – typical green manure option, more winter-hardy than many legumes, phosphorus scavenger; but seeds can hurt livestock, high hard seed %, glyphosate alone doesn't work well, SCN detriment
- Winter peas – hardy to USDA Zone 6 (-5 to -10), strong N fixer; but large seed eliminates broadcasting difficult, SCN detriment
- Sunn hemp – warm season option tolerant to drought and heat, huge biomass production in a short time; but frost terminates the stand, seed are toxic to livestock

Broadleaves / Brassicas

GOOD

- Nutrient cycling
- Biomass production
- Below ground alleviation
- “Extend the grazing season”
- Bio-fumigation properties (glucosinolates)
- Weed suppression

BAD/WATCHOUTS

- Crop rotation complexity
- Forage % needs managed
- May attract some non-beneficials
- Overwintering plants can be hard to control

- Radish – different types with different benefits; daikon = tuber with taproots vs. oilseed = lateral taproots, nematode properties
- Turnips – small seed conducive for seeding, more winter-hardy than radish (USDA 7), many different species based on bulb/leaf ratio; but be cognizant when feeding and introduce livestock slowly

- Rapeseed – more grazing cycles than other brassicas, likely to overwinter in USDA Zone 5 & south; but very difficult to control with glyphosate, attracts many non-beneficials
  - Beware! – more and more rapeseed / winter canola coming up from the south

Other considerations…..

- Seeding rate
- Fertility applications
- Planting equipment
- Seed coatings
- Legume inoculant(s)
- Herbicide rotational restrictions
- Varietal differences within species

THANK YOU!

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