

Cover Crops for Soil Health

Northeast SARE

Professional Development Workshop

Industry Perspective

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Cover Crop Growth

We have seen 60% growth in acres being covered from 2009 to 2015

Seed sales have increased by 90% in the same period of time.

Interest in cover cropping has spread from Mid Western states to the Northeast.

Cover Crop Growth

Market has declined on sowing monocultures and refocused on mixtures.

Common Monocultures:

Diakon Forage Radish

Cereal Rye

Annual Ryegrass

Crimson Clover

Cover Crop Growth

Current Mixtures provide multiple benefits:

Erosion Control

Nutrient Scavenging

Emergency Forage

Increased Biomass

Cover Crop Growth

Current Mix (2-5 Species) examples

-Austrian Winter Pea & Diakon Radish

Nitrogen Fixation, Nutrient Scavenging, Aerification

-Triticale & Annual Ryegrass

Erosion Control, Emergency Forage, Biomass

-Annual Ryegrass & Crimson Clover

Erosion Control, Nitrogen Fixation, Biomass

-Triticale, Crimson Clover & Diakon Radish

Erosion Control, Nitrogen Fixation, Aerification,
Nutrient Scavenging, Biomass

Cover Crop Issues

- Knowing what is in the bag of seed
- Understanding how to read a Seed Labels and Tags
- Educating growers that “**BIN RUN**” seed is not an option
- Cover Crop Seed should come from reputable seed sources

PERENNIAL PLOT PLUS

1 COMPONENT	2 %PURITY	3 %GERM	4 %HARD	5 %DORM	6 ORIGIN
Alfalfa Clover	29.98	95	2	-	CH
New Zealand White Clover	29.76	94	3	-	S Aust
Puna Chicory	19.40	93	-	-	NZ
Timothy	9.98	90	-	-	PA
Fawn Tall Fescue	9.97	93	-	3	OR
7 Other Crop Seed	0.18%	8 Net Weight: 10lbs. Lot Number: SPAN00305 Date Tested: March 2009		9 Alfalfa/Clover inoculant mixed in - expires 12/05	
Inert Matter	0.42%				
Weed Seed	0.11%				

10 AME 1039

1 COMPONENT

KIND: Commonly accepted name for seed considered to be pure seed, for example Timothy.

VARIETY: Represents a subdivision of a kind genetically developed for a particular growth characteristic, for example Climate Timothy, or Puna Chicory.

2 PURITY

Shows the percent, by weight, of pure seed of each component in the mixture. Percentages of 1 & 7 must equal 100%.

3 GERMINATION

Is the percentage of that seed expected to grow under favorable conditions. For most seeds it should be above 85%. High quality legumes have a germination rate 90% or greater.

4 HARD SEED

This is the percentage of seeds that remain hard at the end of the test period because they have not absorbed water due to an impermeable seed coat. Legumes are best known for hard seeds.

5 DORMANT SEED

This is the percentage of viable seed that fail to germinate when provided with acceptable growing conditions.

6 ORIGIN

Indicates the state (or country outside the US where seed was grown).

7 OTHER INGREDIENTS

OTHER CROP SEED: Seeds collected other than the kinds listed on the component label.

INERT MATTER: Describes the material in the bag other than seed. This may be soil, plant material, etc.

WEED SEED: Any seed not included in component or other crop seed, this should never make up more than 1% of the seed bag.

8 USEFUL INFORMATION

LOT NUMBER: Indicates where product was produced, year of production, and sequence of blend. Lot number can be traced to original component tests and history.

DATE TESTED: The date the germination was determined for that lot. This date should be within the last eighteen months to insure a high quality seed.

9 INOCULATED SEED

Shows if seed has been treated with a microbial product commonly used on legumes to enable the plant to fix nitrogen properly. Be aware of the expiration date.

10 AME (Agricultural Marketing Extension)

This is a tracking code to see who packages the product.

Cover Crop Issues

Bin Run Seed

Seed that is harvested on the farm and used to reseed on the farm and/or sold to neighboring farms for less cost than certified seed.

Potential issues:

Poor Germination

Spread of Noxious Weeds (Palmer Amaranth)

Genetics harvested can be less than 100%

Cover Crop Incentives

Monetary Support from State and Federal Government

Increase in support has been positive and is helping to get more acreage planted.

Protocols need to be tighter for reimbursement of seed.

Some locations only require one Seed Tag

Growers are purchasing one bag and using Bin Run material for the remainder of their needs. So their cost of seed is much lower than what the actual cost should be. And the quality is being compromised.

Cover Crop Incentives

Agencies need to strictly enforce all Seed Laws pertaining to their State.

Growers must adhere to using certified seed.

Cover Crop Issues

How to get the seed in the ground at the appropriate time:

This is a major issue in the Northeast. With adaption of equipment and researching what works best for each situation, opportunity to use cover crops are increasing.

Samples of Cover Crop Equipment to follow:

InterSeeder Technologies 6 Row Planter



Benefits of InterSeeder Fria Annual Ryegrass



InterSeeder Technologies 12 row



Great Plains Turbo Till





Planting into Cereal Rye



Seeding Corn into Cereal Rye



Munro Farms



Aerial Application



Cover Crop Growth

Looking outside the **BOX!**

There are several species that are gaining interest in the Cover Crop market:

Sunn Hemp (*Crotalaria juncea*)

- Tropical Legume that performs like a Summer Annual
- High Nitrogen Fixation(up to 100 pounds)
- Produces Biomass (5000 pounds)
- Suppress Nematodes

Cover Crop Growth

Looking outside the **BOX!**

Sunn Hemp for grazing. Forage quality that is released states the leaves can contain NDF and ADF levels similar to crimson clover, and protein to be in the high 20's. Alkaloids are present in the seed and caution needs to be applied in managing the crop to graze the animals prior to seed emergence. In most areas, seed emergence will not take place since Sunn Hemp has a very late maturity and will die when temperatures reach 25-28 degrees Fahrenheit.

Cover Crop Growth

Looking outside the **BOX!**

Sunn Hemp also can be cut for dry hay. Management is critical and needs to be timely. Depending on location, harvesting will vary between 4-7 weeks. Ideally, you want to see the plant at approximately 3-4 feet tall prior to harvest. Sunn-hemp can grow to 10 foot, which will not only be very difficult to harvest, but quality will be very low.

Sunn Hemp (Tropical Legume)



Sunn Hemp



Thanks



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