The Benefits of Cover Crops –

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The CISCO Companies

Why Cover Crops?

• Reduce Erosion
• Build Soil Tilth
• Produce and scavenge Nitrogen
• Increase Earthworm Populations
• Reduce Compaction

Increase Earthworm populations

• Enhance soil aeration
• Enhance nutrient recycling
• Enhance percolation

Earthworm activity increases greatly with use of cover crops...the goal...
8+ worms/shovel full

The benefits of Cover Crops-
Erosion Control

The benefits of Cover Crops-
Nutrient Sequestration
Ohio Data on Nitrogen content of Radishes – fall 2011

Radish (planted with Rye w/ manure)
- Tops = 130# N/ac
- Tubers = 95# N/ac
- Total = 225# N/ac

Radish (planted with Oats w/ manure)
- Tops = 82# N/ac
- Tubers = 86# N/ac
- Total = 168# N/ac

Indiana Data on Nitrogen content of Radishes – fall 2011

Growing with peas -with watery dairy manure applied (plowed ground)
- Tops = 58# N
- Tubers = 45.5# N
- Total = 103.5 # N (Average of 4 samples)

Growing with crimson clover in dry fall-no manure (no-till)
- Tops = 35.67# N
- Tubers = 14# N
- Total = 49.67 (Average of 3 samples)

The benefits of Cover Crops - Community learning

The benefits of Cover Crops - Increase Soil Aeration and Percolation

Soil Aeration and Percolation is greatly improved with cover crops

Soil Aeration and Percolation is Improved with Radishes (29” deep tap root)
Cover Crops Provide Nitrogen Production

Crimson Clover + Radish Mixture

Crimson Clover

GroundHog Radish

N-Producers...for instance...

Crimson Clover

**Advantages**

- Has produced up to 144 units of N/acre within 90 days following wheat (Kladivko data 2010)
- Earthworm “Heaven”
- Easy to kill

May 2010 Lebanon, IN area

Roots + Nutrients + Worms = Healthier Soils

Cover Crops Build Soil Organic Matter
Crimson Clover roots...found 34” deep spring 2011 (in sandy loam soil)  

Roots from Annual Ryegrass and Cereal Rye spring 2011 (56” deep)

Healthy Cover Crops = Healthier Soils

Cover Crops provide LOTS of “coffee-shop” conversation topics

What they are saying at the coffee shop...“wow, that’s good corn!”

As of last week... “wow, that’s the best corn around here!”
More coffee shop talk...
“he’s doin’ what?”

Lebanon, IN area

Holding Nitrogen from Manure...
Effects from Annual Ryegrass

Manure w/o cover crop
Manure w/ cover crop

June 21 (above)
Early June (above)

Pulaski County, IN August 2010

Better yields...better silage!

Holding Nutrients from manure-2

Manure w/o cover crop
Ave. 5 ½ - 4”
Manure w/ cover crop
Ave. 7 ½”

No good deals on cheap seed...

Farmer “saved” 5¢/# on cheap seed {50¢/acre} (left) and now has a “disaster” on his hands!
Good radishes cost a bit more but have the tubers farmers want.
What Will Work For **You**?

- How are you going to manage fertility?
- What crop are you following?
- What is your subsequent crop?
- What are your soils like?
- What are your goals?

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