

# The Benefits of Cover Crops –



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## 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



## N-Producers...for instance... Crimson Clover



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)



Pulaski County, IN April 2011

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



Lake County, IN April 2011

Healthy Cover Crops = Healthier Soils



Cover Crops provide LOTS of "coffee-shop" conversation topics



Rockford, OH area  
Corn planted into  
Groundbreaker Mix  
& volunteer wheat



Yielded ~ 215 bu./a  
in 2011

What they are saying at the coffee  
shop..."wow, that's good corn!"



Rockford, OH area

As of last week... "wow, that's the best  
corn around here!"



Rockford, OH area

## More coffee shop talk... "he's doin' what?"



Lebanon, IN area



Early June (above)



June 21 (above)



## Holding Nitrogen from Manure... Effects from Annual Ryegrass



Manure w/o cover crop



Manure w/ cover crop

## Holding Nutrients from manure-2



Manure w/o cover crop  
Ave. 5 1/2 - 6"



Manure w/ cover crop  
Ave. 7 1/2"

## Better yields...better silage!



Pulaski County, IN August 2010

## No good deals on cheap seed...

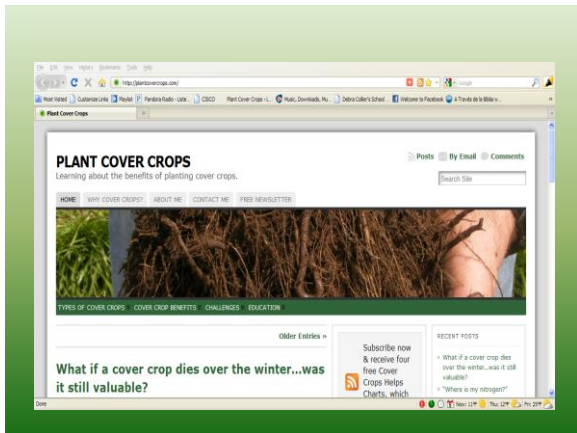


Farmer "saved" 5¢/# on cheap seed {50¢/acre} (left) and now has a "disaster" on his hands!  
Good radishes on right cost a bit more but have the tubers farmers want.



## 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?



## N-Vest™ Cover Crops

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