

## Using Cover Crops to Boost Profitability in Your Operation

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In the Robison Farm's years of grazing cattle in central and southern Indiana we utilized grazing corn stalks and some stockpiled tall fescue throughout the winter to reduce feed cost. While this proved beneficial most years we ended up with some added compaction in our corn fields (we did not rotationally graze our stalks). While we continued the practice we also utilized "V-Rippers" to break up compaction problems, thus usually reducing or eliminating the feed cost savings. After many years of raising cattle we sold our cow-calf operation in the early 1980's. I believe that if we knew about cover crops, rotational grazing, fescue endophyte issues, etc... that our farm would have had cattle many more years. Our purpose today is to look most specifically at cover crops and how they can boost profitability in your cattle and farming operation so you choose to keep your cattle –and utilize them as a profit center.

In the late 1990's I read about work done by Ed Ballard from the University of Illinois and how he was doing research using cereal grains and turnips to graze cattle throughout the winter in the fertile plains of central Illinois. In the early 2000's I started working with Ed on his project on multiple farms in Illinois, Ohio, and Indiana. Our goal was simple; graze the cattle every day of the year. By combining work done by Dr. Jim Gerrish (U-Missouri) on rotational grazing and Ed's work we were starting to see many benefits in the profitability for beef farmers while not increasing compaction issues.

Ed and I started working with aerial applicators to fly cover crops into standing corn. While for a number of years there was the thought that this practice only could work in southern areas I started working with farmers in Michigan, Northern Indiana, and Northern Ohio that found great success. In the past two years I now have farmers in central Wisconsin that aerially apply their cover crops into their corn and profitably graze cattle until around Christmas on the growing forage/cover crop while feeding little or no hay or grain.

In this presentation I will investigate past and current experiences of what worked and what did not work in my 15 years of experience in this area of cover cropping and grazing. I will also look at what cover crop species work the best as feed and also their benefits as cover crops. Lastly I will look at the potential benefits on crop yields following cover crops without cattle present.

# Using Cover Crops to Boost Profitability in your Operation

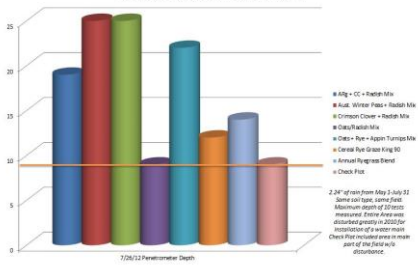
Dave Robison  
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# Top ways for beef producers to increase profitability with cover crops

- ▶ Extend the grazing season with cover crops – 10 ton/acre Cover Crop program
- ▶ Summer Annual Grasses–excellent soil builders and fantastic forage

## Cover Crops help reduce feed cost and compaction

Measuring Soil Compaction After Different Cover Crops  
Robison Farms, Greenwood, Indiana  
Higher Numbers = Greater Depth in inches = Less Compaction



## Stored Feed Costs Southside Stock Farm 1999-2003 Jan 1- April 30

Year	Days	Total \$	Head	Cost/day	Cost/head /day
1999	120	17,631	208	146.92	.70
2000	120	12,532	238	104.43	.43
2001	120	11,437	251	95.30	.37
2002	120	10,188	271	84.90	.31
2003*	120	7,618	288	63.48	.22

\*Gained 3.5#/head/day on Turnips/Oats/Rye

Ballard-U of I Extension



### Cover Crops With Corn Stalks



Annual Ryegrass with Turnips and Crimson Clover  
Central Sands Region Wisconsin  
Cattle Grazed until Christmas 2012



### Appin Forage Turnips



### Radishes for grazing



### Add Fiber to the brassica diet



### Strip graze or rotationally graze



### Grazing Crimson Clover



### Summer Annuals – BMR Sudangrass for ensiling



### BMR Sudangrass is excellent for grazing



### Italian Ryegrass + Brassicas



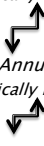
- ▶ Excellent Cover Crop
- ▶ Super High Quality forage
- ▶ Heavy Scavenger of Nutrients
- ▶ Fast to establish

### Turnips + Oats + Rye after cereal grain harvest – 8 weeks growth



## 10 Ton/ac Annual System –10%

- *Triticale/Pea Mix (100–120#/acre)*
  - Mechanically harvest
- *Summer Annual Grasses*
  - Mechanically harvest or Graze
- *Oats/Rye/Turnips (2+1 ½+ 5)*
  - Graze
  - Just Oats if mechanically harvesting



## Triticale/Pea Mixture (or Oats and Peas)

–if starting this spring– Part 1 of Annual Profit System



## Triticale/Pea Mixture



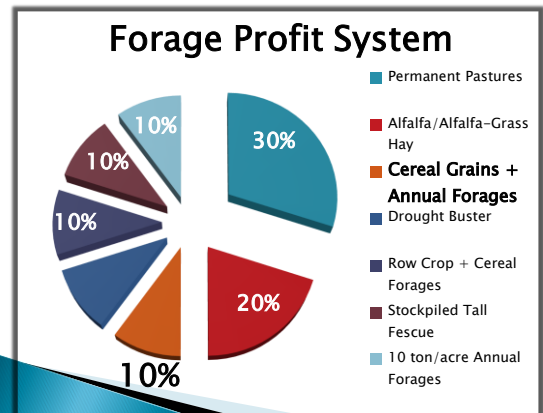
- ▶ Soft leaved Triticale + Forage Peas
  - 50/50 Mix (100–120#/acre)
- ▶ Harvest 60 days after planting

## Triticale/Pea Mixture



- ▶ Can provide 5+ tons/ac DM
- ▶ Harvest when peas are starting to flower
- ▶ Can make outstanding feed

## Triticale/Pea Mixture



### Cereal Grains + Forages -10% -if cereal grain is already planted

- **Grains** (Oats/Wheat/Rye/Barley)
  - Harvest as haylage/ensile (3 bu/acre)
  - Harvest as Grain (2 bu/acre)
- Summer Annual Grasses
  - Mechanically harvest or Graze
- Oats/Rye/Turnips
  - Graze
  - Just Oats if mechanically harvesting (3 bu/acre)

Most reliable option

### Oats and Rye planted in August



- Oats for fall growth (left)
- Cereal Rye for winter and spring growth (right)

### Summer Annual Grasses

-Part two of annual profit system



- ▶ BMR Sudangrass (35-40#/ac)
- ▶ BMR Sorghum-Sudangrass (50#/ac)
- ▶ Pearl Millet (15-25#/ac)
- ▶ Teffgrass (10-12#/ac)
- ▶ Pasja Hybrid Brassica with summer annuals
  - 2-3#/ac with products listed above



### Pasja with Summer annuals



- ▶ Adds high protein
- ▶ Adds excellent tonnage
- ▶ Excellent palatability
- ▶ Very good drought tolerance
- ▶ Improved animal production

### Summer Grazing



### BMR Sudangrass -4 ½ tons DM/ac in 2008 (Peru, IN)



### Sudangrass vs. Sorghum X Sudangrass



### Don't overgraze Summer annuals!



### Teffgrass – best for mechanical harvest



### Grazing Teffgrass



Albany, Ohio late September 2008

### Row Crops + Forages 10%

- Corn or Soybeans
  - Corn taken as Grain or Silage
- Oats/Rye/Turnips
  - Sow around end of August
    - When leaves are dried ½ way up corn stalk
    - When soybeans are dropping leaves
  - Graze with stalks



### When to fly on Oats/Rye/Turnips



### Late Season Grazing



### November 6 growth shown – Sown late August



### You get to choose your method...



### Winter Annuals Appin Turnips

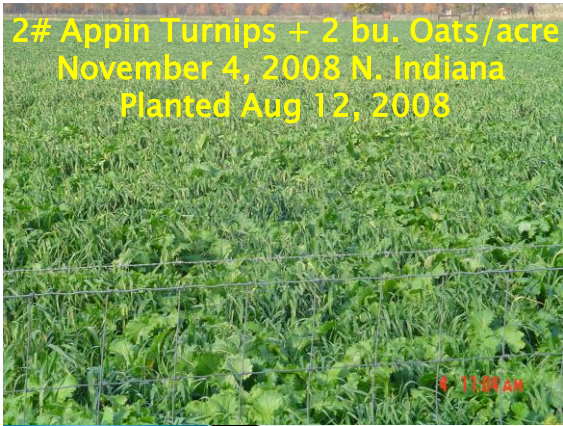


### Winter Annuals



- ▶ Appin Turnips (3–5#/acre)
  - High quality
  - Still growing down to 14° F
  - Cattle will graze through snow
- ▶ Cereal grains
  - Oats for fall grazing (3 bu/ac)
  - Rye/Triticale/Barley for spring grazing (2+ bu/acre)





### Summer planted Oats for fall ensiling



### Review

- ▶ Save \$\$ with grazing Cover Crops
  - While not adding to compaction
- ▶ Utilize cover crops on multiple acres in multiple ways to produce more beef and profitability/acre

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## Questions? Thanks!

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