Using Cover Crops to Boost Profitability in Your Operation

Dave Robison, Forage and Cover Crop Manager
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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.
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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

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

<table>
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<tr>
<th>Year</th>
<th>Days</th>
<th>Total $</th>
<th>Head</th>
<th>Cost/day</th>
<th>Cost/Head/day</th>
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<tr>
<td>1999</td>
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<td>2002</td>
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<td>10,188</td>
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<td>84.90</td>
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<tr>
<td>2003*</td>
<td>120</td>
<td>7,618</td>
<td>288</td>
<td>63.48</td>
<td>.22</td>
</tr>
</tbody>
</table>

*Gained 3.5#/head/day on Turnips/Oats/Rye – Ballard-U of I Extension

Winter Feed like this...

Or...Enjoy the benefits of additional fall/winter grazing – after cereal grain
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
BMR Sudangrass is excellent for grazing

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

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

Italian Ryegrass + Brassicas

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

Forage Profit System

- Permanent Pastures
- alfalfa/alfalfa-grass hay
- cereal grains + annual forages
- drought buster
- row crop + cereal forages
- stockpiled tall fescue
- 10 ton/acre annual forages
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)

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)
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

November 6 growth shown – Sown late August

Late Season Grazing

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)
2# Appin Turnips + 2 bu. Oats/acre
November 4, 2008 N. Indiana
Planted Aug 12, 2008

Oats and Turnips ensiled
Chilton, WI area late October

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

www.plantcovercrops.com

Questions?
Thanks!

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