

# Bedford County Conservation District

Cover Crop Assistance Program  
(2010-2015)

Equipment Rental Program

# How The Program Works:

- BCCD makes no-till drills available to county producers at no cost.
  - Normal cost for drill rental is \$12/acre +\$30 delivery and set-up fee (reduced rate for cover crop planting)
  - Maximum of 50 or 100 acres per farm depending on year
  - Have sign up date then rank enrolled farms
  - If acres are unaccounted for they are distributed on a first come-first served basis.
- Farmer covers all other associated costs (seed, fuel, etc...)
- BCCD submits total acres for reimbursement.

# How The Program Works

- Cover crops that were accepted included wheat, rye, barley, triticale, or mixed species crops that were winter hardy (rye grass, vetch, crimson clover, etc...)
- All cover crops had to be planted early enough to establish growth before winter.
  - Barley October 1<sup>st</sup>
  - Wheat October 15<sup>th</sup>
  - Rye/Triticale November 1<sup>st</sup>
- Cover crops must be maintained through April 15<sup>th</sup> of the following year. However, they may be chemically terminated at an earlier date as long as residue is not plowed under.

# Acres

Year	Number of Participants	Total Acres Planted	CBP Funding
2010	24	1328	\$16,656
2011	35	1772	\$22,314
2012	26	930	\$11,940
2013	31	1380	\$17,490
2014	0	0	\$0
2015	48	2315	\$29,920

Using the Bay Model this gives a total Nitrogen savings of 43,171 pounds

# BCCD No-till Equipment Rental Program

# History of the Program

- Started in 1984 by leasing 3 John Deere corn planters.
- In 1985 a no-till drill was added using grant funds and a loan.
- In 1989 the program was combined with the E & S Technician position.
- In 1991 the program was combined with Chesapeake Bay Technician duties

# Program Growth

- 3 John Deere corn planters added in 1988
- 2 Liquid manure tanks added in 1995
- 2 Stoltzfus damp lime spreaders added in 2004
- BCCD has compiled a list of over 400 farmers that utilize the equipment program
- 3 Full time staff (NM Tech, CB Tech, ACT) and 1 part time staff responsible for running the program

# No-Till Grain Drills

- 9 Drills total (4 Haybuster, 5 Great Plains, 1 John Deere)
- All have a 10 foot planting width
- 7 or 7.5 inch row spacing
- Plant a variety of grain and hay seed including, but not limited to: Oats, Rye, Wheat, Barley, Triticale, Soybean, Sorghum, Sudan/Sudex, Alfalfa, Orchard Grass, Timothy, Clovers, Ryegrass, Reed Canary Grass, Brome Grass, Switchgrass, and pasture mixes.

# No-Till Grain Drills

- 4 Haybuster drills
  - Plants 7 inch rows rather than the standard 7.5
  - Lighter, can be used with a 40 hp tractor
  - 3 separate boxes that can plant seed
  - Can plant seed at different depths simultaneously
- Drawbacks
  - Can be time consuming to change row unit down pressure/seed depth.



# No-Till Grain Drills

- 5 Great Plains Drills
  - Easy depth and down pressure adjustments
  - Has no-till coulters that run in front of double disk openers
  - Small seed box drops seed directly in front of depth wheel allowing for easier planting of seeds at different depths.
- Drawbacks
  - Has end wheels making total drill width ~12.5 feet. Making it more difficult to pull down roads and take through tighter areas



# No-Till Grain Drills

- 1 John Deere drill
  - Single disk seed furrow opener
  - Depth gauge wheels allow for accurate seed depth placement
  - Rows can be blocked off allowing for 15 inch rows to be planted
- Drawbacks
  - Heavy drill, can require upwards of 75 hp tractor
  - Long drill, making it more difficult to turn
  - Both seed boxes empty at the same point in the seed furrow
  - Time consuming and expensive maintenance



# No-Till Corn Planters

- 9 John Deere model 1750 corn planters
- All 4 row planters
- Planting row width of 30 (8) or 36 (1) inches
- Dry (6) or liquid (3) starter fertilizer
- One planter equipped with ZRX Cover Crop Roller
- 2 sets of soybean and sorghum cups if needed

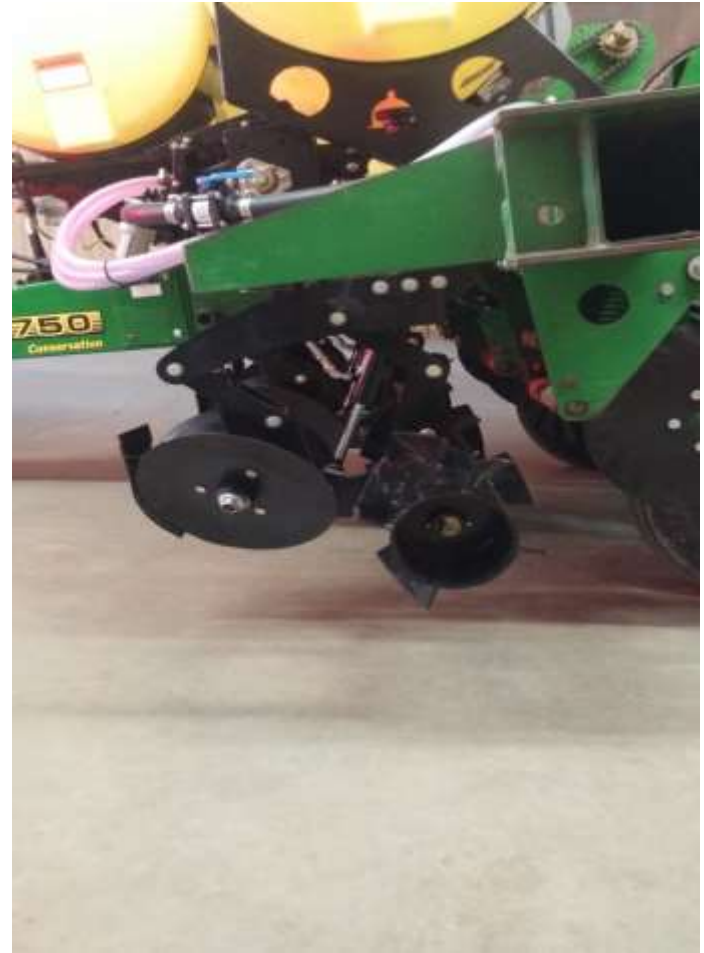


# ZRX Cover Crop Roller

- Purchased from Dawn Equipment in 2015 using Chesapeake Bay Special Project funding.
- Subsidized by equipment program
- Installed in November of 2015 by Cumberland Planter in Shippensburg
- Ready for use in 2016



# ZRX Cover Crop Roller



# ZRX Cover Crop Roller

## Environmental Benefits

- Less herbicide use (pre-plant not necessary)
- More cover crop growth
  - More nutrient uptake
  - Less runoff potential
  - More organic matter on ground surface
  - Larger root mass for better water infiltration
- Fewer in field passes (less compaction)

## Farmer Benefits

- Less herbicide use
- More cover crop growth
  - More nutrient uptake
  - Residue mat left by cover crop shades out competition and leaves green growth for slugs so they don't cause as much damage to corn
  - Increases soil organic matter
- Fewer in field passes
  - Saves money/time
  - Lessens compaction
- Can be used by organic farms who want to try no-till

# Damp Lime Spreaders

- Five Stoltzfus Damp Lime Spreaders
  - 3 eight ton capacity
  - 2 five ton capacity
- Can be used for lime or poultry manure
- Spreads at rates of  $\frac{1}{2}$  ton per acre --> 2 tons per acre



# Liquid Manure Spreader

- One 4,300 gallon liquid manure tank
- Housed at farm in county
  - Farmer handles scheduling and maintenance
  - Users report loads spread to BCCD for billing
  - Users must pick up and return spreader using their own tractor
- Being phased out because of liability and maintenance cost.



# Equipment Use Rates

- Grain Drills
  - Less than 12 acres \$16/acre
  - 12-25 acres \$14/acre
  - More than 25 Acres \$13/acre
  - Fall Cover Crop \$12/acre
- Corn Planters
  - Less than 15 acres \$16/acre
  - More than 15 acres \$13/acre
- Lime Spreaders
  - Lime \$3.50/ton
  - Poultry Manure \$5.00/ton
- Manure Tank
  - \$6.00 per load
- \$30 delivery and set up fee
- Minimum charge of \$100 for any equipment use

# Annual Acreages

Year	Corn Acres (users)	Spring Grain Acres	Fall Seeding Acres	Lime Spreader tons (users)
2008			3964	3960 (53)
2009	2481 (74)	1465	3003	3625 (58)
2010	2277 (74)		3165	4032 (61)
2011	2171 (69)	1119	2870	2328 (25)
2012	2328 (70)	1854	3586	4714 (59)
2013	2313 (86)	1850	2833	2811 (38)
2014	2387 (79)	2021	3313	1751 (29)
2015	1931 (77)	1800	3970	4163 (57)
Totals	15,888	10,109	26,704	27,384
Averages/Year	2269 (76)	1684	3338	3423 (47)

# What Makes the Program Successful?

- Supportive Board of Directors
- Good rapport within the agricultural community
- Dedicated staff
- Knowledgeable staff
- Funding assistance

# Contact Information

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