Manure Slurry Seeding of Forage and Cover Crops

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And
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Goal

- Develop an integrated process that incorporates
  - low-disturbance tillage
  - manure application
  - and seeding of cover crops
- in one efficient operation
Manure slurry-enriched seeding of cover crops
Small grain cover after corn silage

October 4
Small grain cover crop after corn silage

Slurry-seeded rye  Drilled rye

April 14

9/5/2017
Manure slurry-enriched seeding of cover crops
Seed placement and emergence

- Aeration tillage creates cracks and fissures that are filled with seed-laden slurry.
Manure slurry-enriched seeding of cover crops
Seed placement and emergence

- Variable depth of emergence from near surface to 3 or 4 inches.

9/5/2017
Manure slurry-enriched seeding of cover crops
Manure and cover crops: Great companions
Fewer plants, greater biomass

Daikon radish

Forage turnip

Slurry, 3.6 ton/ac

Slurry, 2.8 ton/acre

Drilled, 1.2 ton/ac

Seeded 09/01

Drilled, 1.2 ton/ac

Harvested 12/05
Late season/stockpile grazing

9/5/2017

Drilled + 50 lb/ac N  Slurry-seeded
Pasture improvement
Pasture improvement

Slurry Seed RC

Frost Seed RC

9/5/2017
Orchardgrass/Red Clover in Brome grass sod.

- No-till and slurry-seeded RC yield signif. greater.
Slurry-enriched seeding is environmentally sensitive

- **Environmental benefits**
  - Conserves crop residue and improves infiltration, reduces over land flow.
  - Stabilize soil and contaminants, recycles nutrients.

- **Crop protection**
  - Natural pest suppression, reduction in pesticides.

- **Soil quality benefits**
  - Reduce tillage and traffic, organic inputs, sequester carbon, increase soil organic matter.

- **Resource efficiency**
  - Aeration tillage, manure application and cover crop seeding in one pass. Saves 2 gal/acre fuel, 0.35 h/acre labor.

9/5/2017