Manure Slurry Seeding of Forage and Cover Crops

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Portions of this work were funded by the Great Lakes Basin Program for Soil Erosion and Sediment Control And NCR-SARE

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

The archived presentation is available at:
http://www.extension.org/pages/Manure_Nutrients,_Cover_Crops,_and_Slurry_Seeding
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Seed placement and emergence

- Aeration tillage creates cracks and fissures that are filled with seed-laden slurry.

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

Fewer plants, greater biomass

Daikon radish
Forage turnip

Drilled, 1.2 ton/ac
Seeded 09/01/09

Harvested 12/05/09

Slurry, 3.6 ton/ac
Slurry, 2.8 ton/acre
Drilled, 1.2 ton/ac

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Small grain cover after corn silage

October 4

Small grain cover crop after corn silage

April 14

Suitable for several crops

Slurry-seeded rye
Drilled rye

Slurry
No-till

Oil seed radish
Annual rye grass

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Pasture improvement

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Pasture improvement

Slurry Seed RC  Frost Seed RC

Orchardgrass/Red Clover in Brome grass sod

No-till and slurry-seeded RC yield signif. greater.

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Late season/stockpile grazing

Drilled + 50 lb/ac N Slurry-seeded

Late season/stockpile grazing

Manure N and RC on wheat

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Little damage, equal yields

August 8-9, wheat stubble

August 18-19, wheat stubble

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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.

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