Welcome to Manure Du Jour – Season II

Serving Pennsylvania’s Best Practices for Animal Ag-, Air- and Water Quality Protection

The Science and Practice in Erosion & Sediment Control for Farm Lanes

Special Welcome – Karl Brown, PA State Conservation Commission
Dave Creamer, Center for Dirt & Gravel Road Studies at Penn State

Moderator: Kristen Saacke Blunk, Penn State Agriculture & Environment Center
Manure Du Jour

February 18, 2010

Karl Brown
State Conservation Commission
Environmentally Sensitive Maintenance for Farm Lanes
Introduction

Dirt and Gravel Road Maintenance Program

Application to “Farm Lanes”

Future Opportunities
EFFECTS OF ROADS

SURFACE DRAINAGE PATTERNS

SUBSURFACE DRAINAGE PATTERNS

Introduction

Dirt and Gravel Road Maintenance Program
www.dirtandgravelroads.org
EFFECTS OF ROADS

SURFACE DRAINAGE PATTERNS

CROSSPIPES

SUBSURFACE DRAINAGE PATTERNS
EFFECTS OF ROADS

• Interrupt natural drainage patterns

• Unstable roads and concentrated runoff lead to accelerated erosion

• Runoff transports excess sediment and chemicals into streams
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Future Opportunities
- Began in 1997
- $4,000,000 per year in grant funding
- Head office in SCC (agriculture)
- Run by County Conservation Districts
- Local road owning entities (municipalities, SGL, PAFBC, etc) apply for grant to District

- GOAL: Long term solutions to reduce stream pollution and maintenance costs from unpaved roads
ESMP PRINCIPLES:

1. Avoid Concentrating Drainage
2. Minimize Flow Volumes
3. Reduce Effects of Concentrated Drainage
4. Prevent Surface Erosion
5. Reduce Cost and Frequency of Road Maintenance

These are the goals a two day training held through the Program.
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Future Opportunities
For Farm lanes, focus on:
- Cost effectiveness
- “Low Tech”
- Easy to install
- Minimal maintenance
Farm Lanes also transport Farm Runoff Sediment & Nutrients
Dirt and Gravel Road Maintenance Program
www.dirtandgravelroads.org

Farm Lane Applications

BEFORE

Stuck Farm
- Raised Road
- Durable Road Surface

AFTER
Dirt and Gravel Road Maintenance Program
www.dirtandgravelroads.org

Stuck Farm
-Raised Road
-Durable Road Surface

BEFORE

AFTER

Farm Lane Applications
Conservation

Innovation

Grant

Stuck Farm
-Raised Road
-Durable Road Surface

BEFORE

www.dirtandgravelroads.org

Farm Lane Applications

AFT

Dirt and Gravel Road Maintenance Program
Snyder Farm
- Shaped road
- Conveyor Belt Diversions

Farm Lane Applications

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Farm Lane Applications

**Snyder Farm**
- Shaped road
- Conveyor Belt Diversions

BEFORE

AFTER
Pruss Farm
-Hardened road
Broad Based Dip
Conservation
Innovation
Grant

Pruss Farm
-Hardened road
-Broad Based Dip

BEFORE

AFTER

Dirt and Gravel Road Maintenance Program
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Farm Lane Applications
Conveyor Belt
Haughwout Farm
Underdrain

Dirt and Gravel Road Maintenance Program
www.dirtandgravelroads.org

Farm Lane Applications
Haughwout Farm
- Shaped and hardened road
- Conveyor Belt Diversions
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Future Opportunities
Established Practices that can be Applied in other funding opportunities.

CIG
Watershed Wide Improvement Grants
EQIP
CBC
Think Outside the Box
Question and Answers

• Questions received in writing will be directed to the speakers by the moderator.
• If your question is not answered during the time remaining, responses to the questions will be posted at www.aec.cas.psu.edu
• Recordings of this session can also be viewed at the URL listed above.
What’s ahead for season II?

• Next week:
    • Special Introduction from Doug Beegle, PSU Crop & Soil Science
    • Feature Speaker – Rick Day, PSU Crop & Soil Science

• Full schedule for the Manure du jour program: http://aec.psu.edu

• CECs available for Mar 4, Mar 11, Mar 18, Apr 15, Apr 22, Apr 29