



# Manure Happens

## Pasture Management Seminar

UM-Central Maryland Research and Education Center

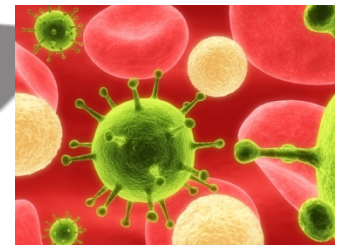
September 8, 2012





# How do you view manure?

- **waste?**
- **nuisance?**
- **nutrient source?**
- **costly disposal issue?**
- **source of disease?**





# Overview

- **background on manure**
- **storing manure**
- **information needed for nutrient management plans**



# Manure

- **feces, urine and bedding**
- **source of many nutrients**
  - **nitrogen**
  - **phosphorus**
- **manure management requires responsible action**
  - **storage**
  - **disposition**



National Geographic



# **Nothing to Worry About!**

- **horse manure is comparable to beef manure in nutrient value**
- **1 horse (1,000 pounds) produces 50 pounds of manure per day**



# Sitting Manure Storage

- **convenient to barns**
- **year-round access**
- **free of stormwater influx**
- **distant from roof runoff, wells, streams**





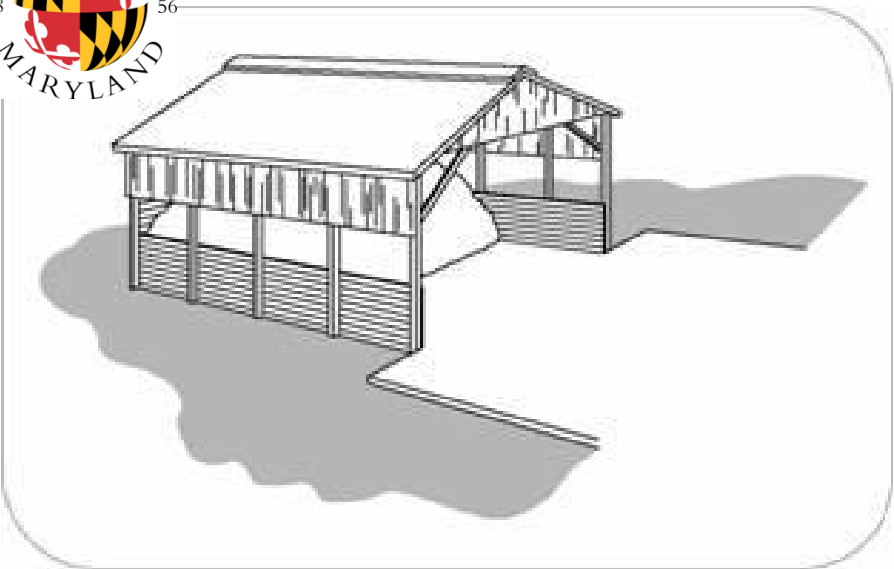
# Outdoor Storage: Poor Conditions





# **How Could Storage Conditions Be Improved?**







# **Overwhelmed Yet? Help is Available!**

- **Soil Conservation District**
  - cost-share for manure storage facility
  - technical assistance
- **Soil Conservation Planners/Equine Specialists (regional)**



# **Does your Operation Require Nutrient Management Plan?**

- **8,000 pounds of live weight of horses?**
- **generate \$2,500 in gross income from your operation?**
- **if either answer is a “yes”, you need a plan**



# **How Can you Acquire a Plan?**

- **contact nutrient management advisor at University of Maryland Extension office in your county**
- **hire a private-sector planner**
- **learn to develop the plan yourself**



# Regardless, You Need Information

- **property**
  - tax account ID
  - acreage managed
- **fields**
  - map
  - pastures, fields, sacrifice areas
- **animals**
  - number and weight
  - amount of time confined vs. pastured





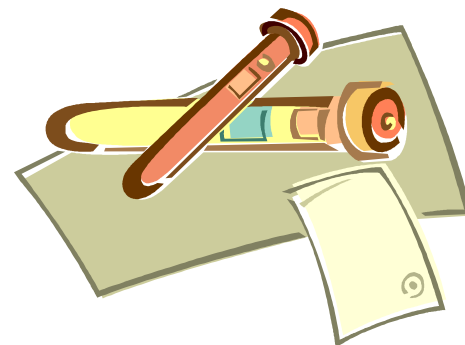
# **Information Gathering Sheets**

- **if you need a plan, pick up a packet at display**
  - **farm information sheet**
  - **field information sheet**
  - **manure information sheet**



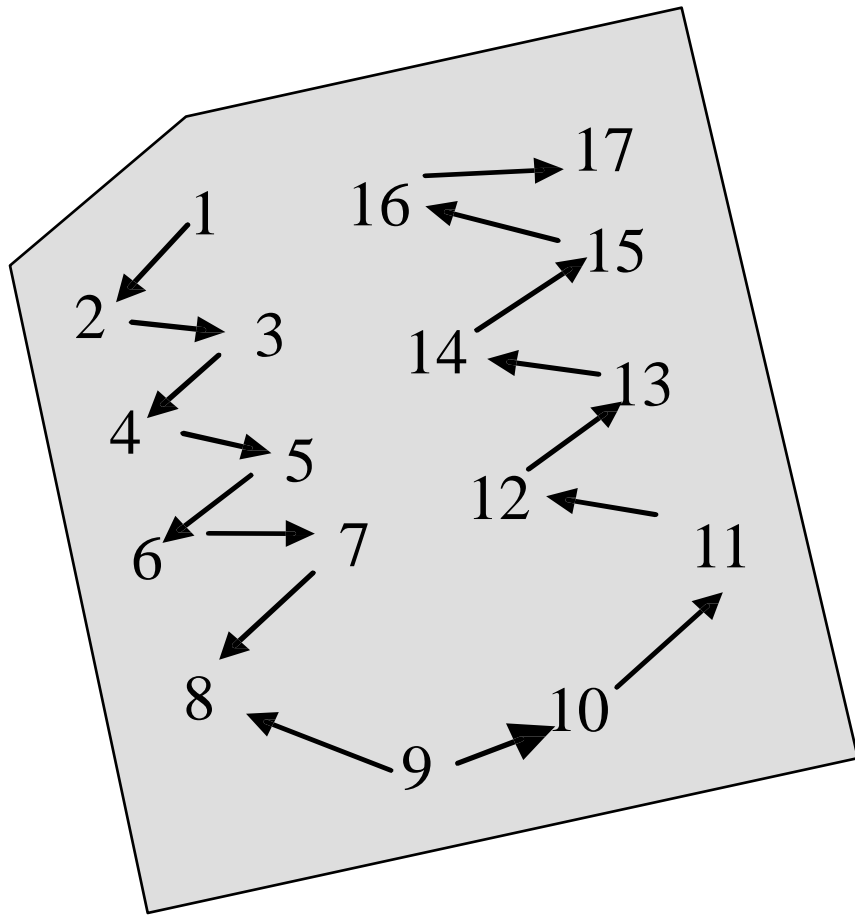
# Soil (and Manure) Samples Needed

- **soil samples for each field and pasture**
- **manure sample, if manure is land-applied on your operation**





# Soil Sampling



**Sample from the entire area of the field**





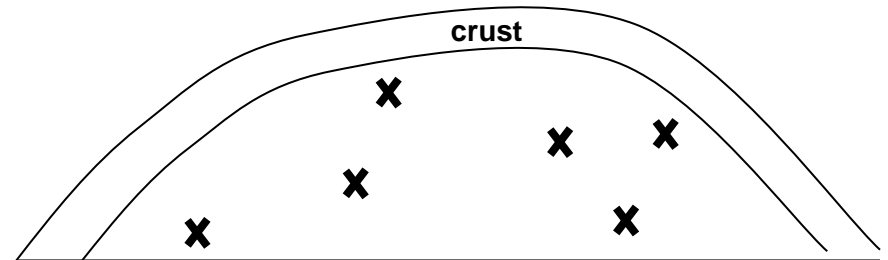
# Sampling Principles

## 1. Collect 10-15 samples.

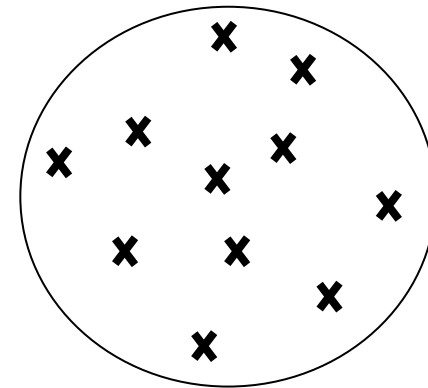
- before application
- from various depths & locations in a pile
- during loading
- during spreading

**NOTE:** Include bedding in the sample to the same extent as it exists in the pile.

Sampling Locations



Side View



Bird's-eye View



# **Sampling Principles (cont.)**

- 2. Mix composite sample VERY WELL.**
- 3. Sub-sample composite.**
- 4. Package and ship to lab.**
  - plastic resealable bags (double bagging recommended)**
  - plastic bottles or jars (never glass)**



# See NM-6 for more information on sampling manure

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ENVIRONMENTAL SCIENCE AND TECHNOLOGY • 0116 SYMONS HALL • COLLEGE PARK, MD 20742  
(301) 405-1319 • FAX (301) 314-7375 • EMAIL: PSTEINHI@UMD.EDU

## **Nutrient Management**

NM-6  
Revised May 2007

**SAMPLING MANURE FOR NUTRIENT CONTENT**



# Land-applying Manure?

- **rate must be based on crop nutrient recommendations, typical yield and manure nutrient content**
- **consult your nutrient management plan**
- **calibrate spreader to recommended rate**





# Resources to Assist in Spreader Calibration

- ***EC-1 Calibration of Manure Spreaders: Uniformity, Spread Patterns and Effective Swath Width***
- ***EC-2 Calibration of a Manure Spreader Using the Weight-area Method***
- ***EC-5 Calibration of a Manure Spreader Using the Load-area Method (with Estimation of Density and Load Weight)***



# Responsible Manure Management

**It's an essential component of animal production.**



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# Questions? Concerns?

For more information, visit the **Agricultural Nutrient Management Program** webpage

**[www.anmp.umd.edu](http://www.anmp.umd.edu)**

**Trish Steinhilber, Program Coordinator**  
**[psteinhi@umd.edu](mailto:psteinhi@umd.edu)**