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AGRO-ECOLOGY, INC.

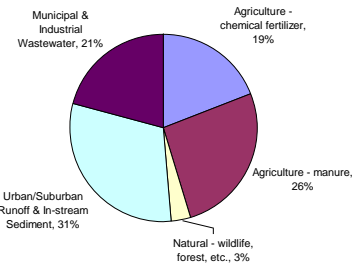
Promoting Viable Farms and Forests

Russ Brinsfield, Executive Director

September 10, 2008

P Loads by Source to Chesapeake Bay  
Source: Chesapeake Bay Program

18 Million lbs P (2007)



## Status of Phosphorus in Agricultural Systems Presentation 2008 Delmarva Poultry Conference

## Current Phosphorus Strategy relies heavily on:

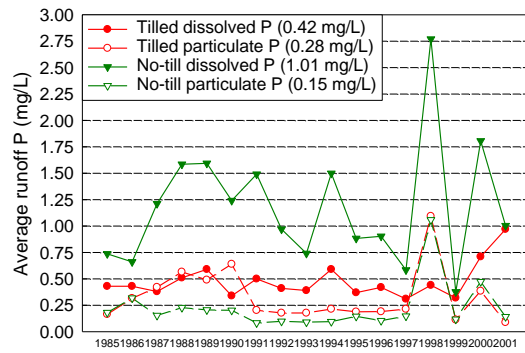
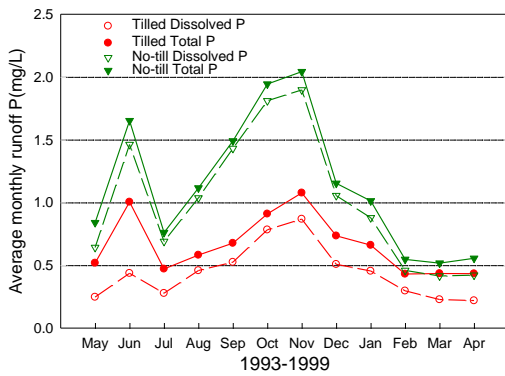
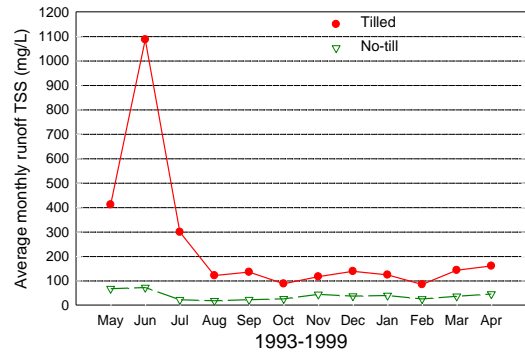
- Soil/water conservation plans
- Conservation tillage (erosion control)
- Animal waste storage
- **Nutrient management plans**
- Phosphorus site index
- Manure transport

## Nutrient Management Plan Requirements

- **Non-animal** agricultural operations
  - N and P based plans in effect by December 2002
- **Animal** agricultural operations
  - N based plans in effect by December 2002
  - N and P based plans in effect by 2005

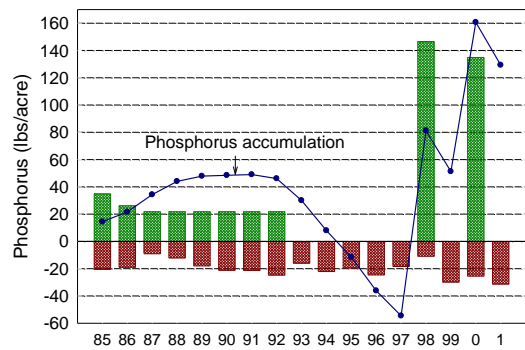
## How well are we doing?

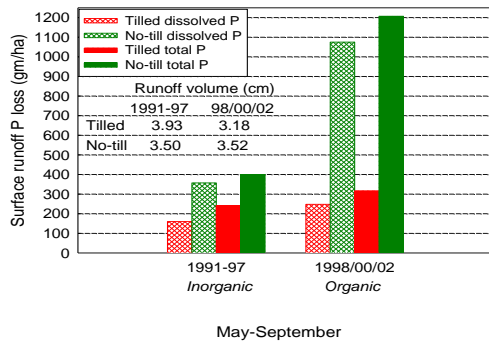
- What are trends in P levels in soil today compared to 1998?
- What are P levels in streams and rivers in ag-dominated areas?
- What are P trends in poultry manure?



## Will the current strategy work?

- Nutrient management planning is important
- Some reductions will eventually occur
- Doubtful we can achieve a 40% reduction in phosphorus
- Particularly difficult with manure/sludge





## Additional Strategies

- Policy
  - Manure/Sludge management
  - Research
  - Regional Phosphorus Budget

## Manure/Sludge Management "Performance Based"

- Policy
  - Incorporate organic waste within 24 hours of application
    - Reduce P losses 4-fold
    - Discourage fall application
    - Promote cover crops
    - Stabilize soil P levels

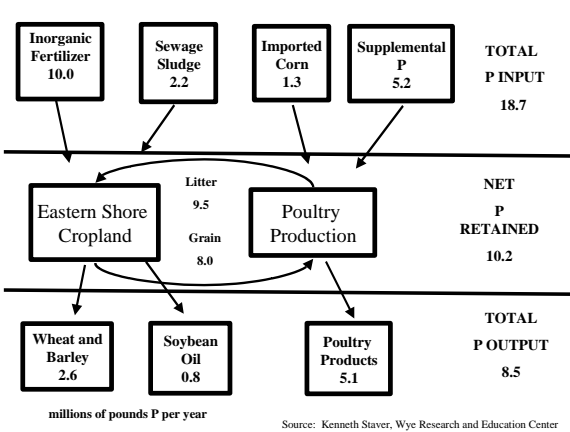
## Research

- Nutrition
  - Poultry Diets
- Application Technologies
  - Injection





# Regional Phosphorus Budget



- ## Conclusions
- Overall**
- Nutrient Management Plans are important
  - Current strategy will not result in meeting N or P goals
- Specifically**
- Cover crops can reduce nitrate leaching by 50% or more
  - Use of tillage for poultry manure application can:
    - Reduce nitrogen runoff losses by 50%
    - Reduce phosphorus runoff losses by 75%
      - Where erosion is low
  - Modified poultry diets can reduce phosphorus in manure by 30%