

# Ethanol: More N Losses, More P Losses??

Jim Pease  
Professor  
Agricultural & Applied Economics  
Virginia Tech

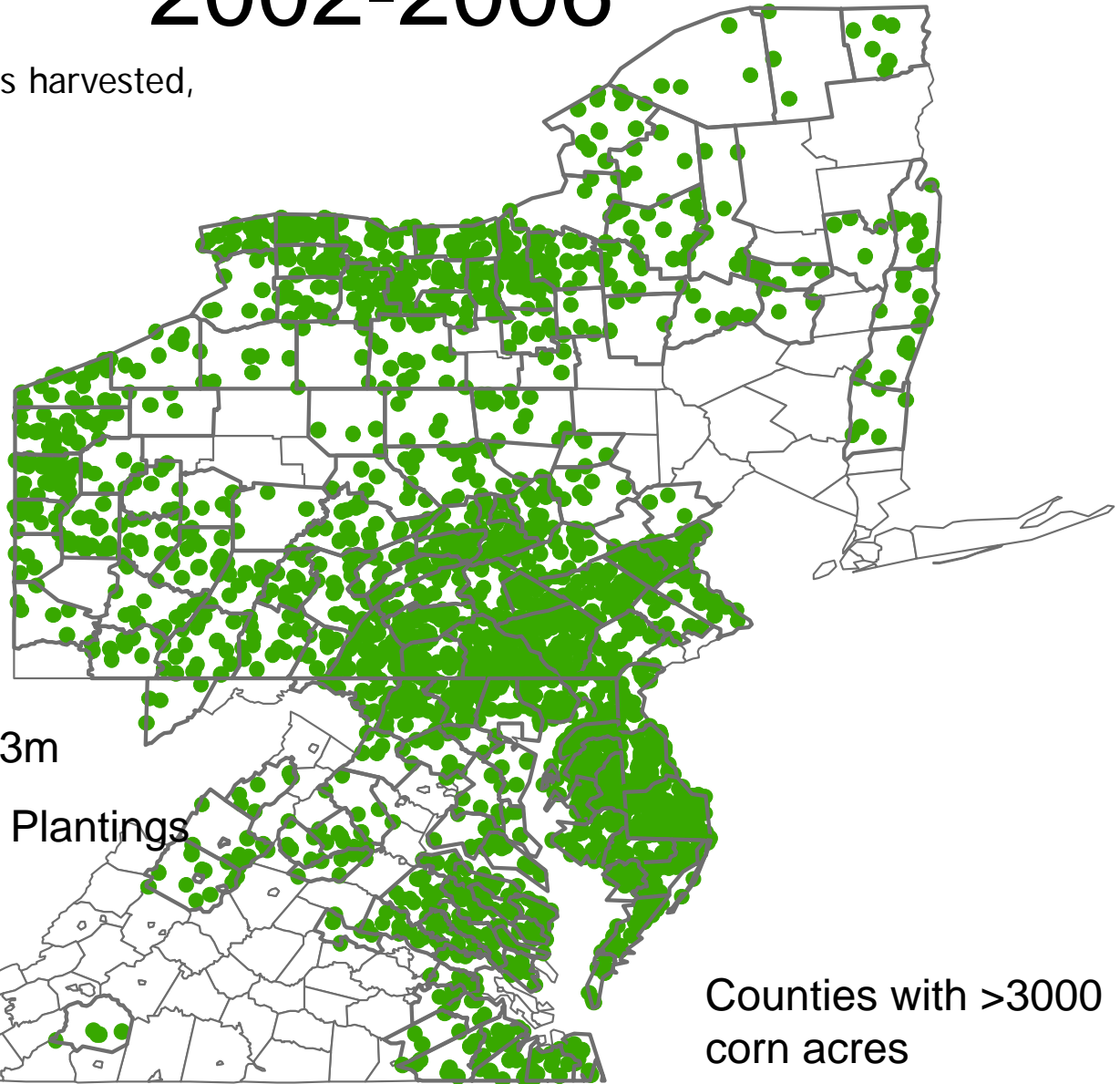
Biofuels and Water Quality Conference  
Beltsville, MD  
April 4-5, 2007

Corn is a Leaky Crop

# Average Corn Grain Acres, 2002-2006

Average corn acres harvested,  
2002 - 2006

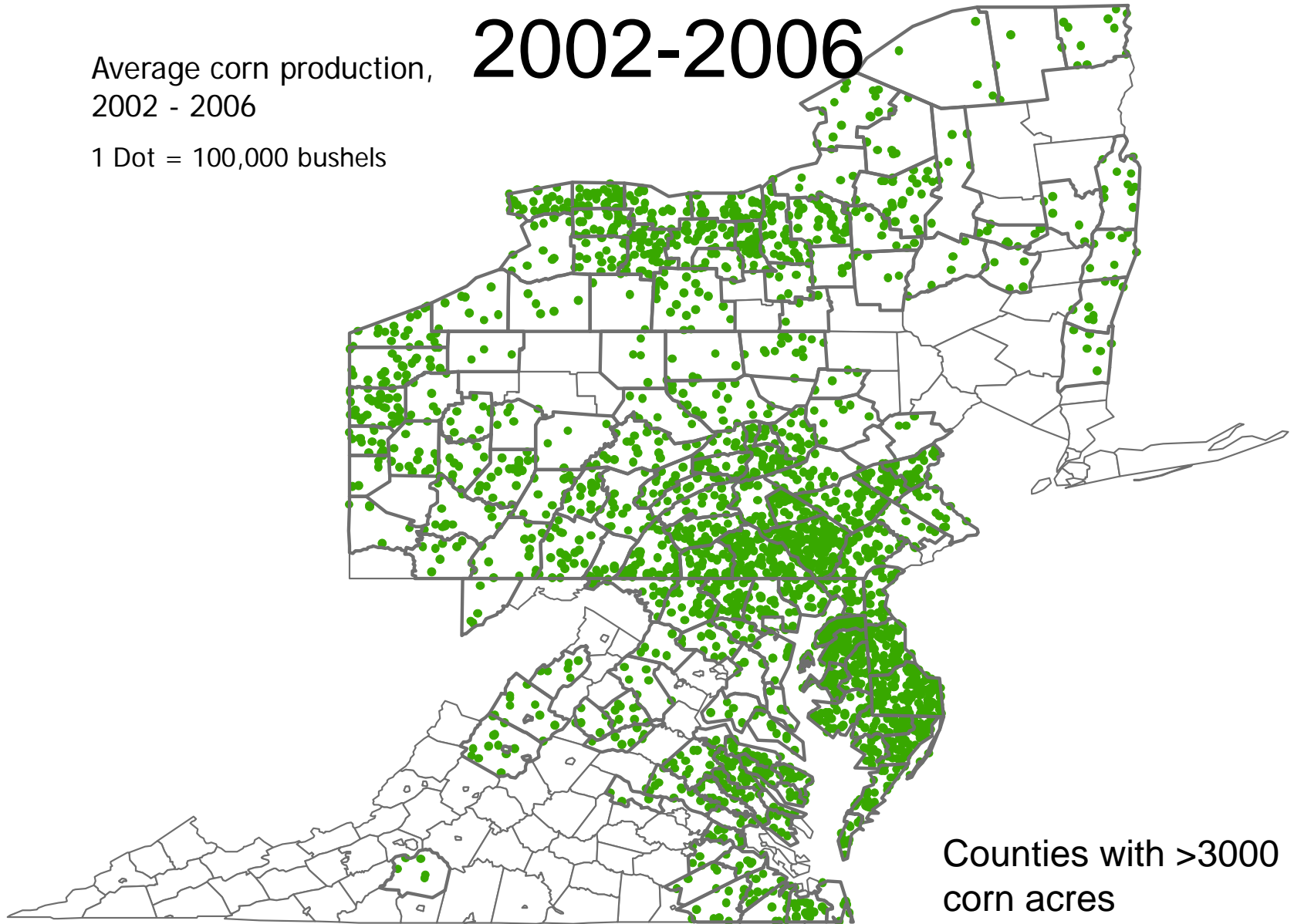
1 Dot = 1,000 acres



# Average Corn Grain Production, 2002-2006

Average corn production,  
2002 - 2006

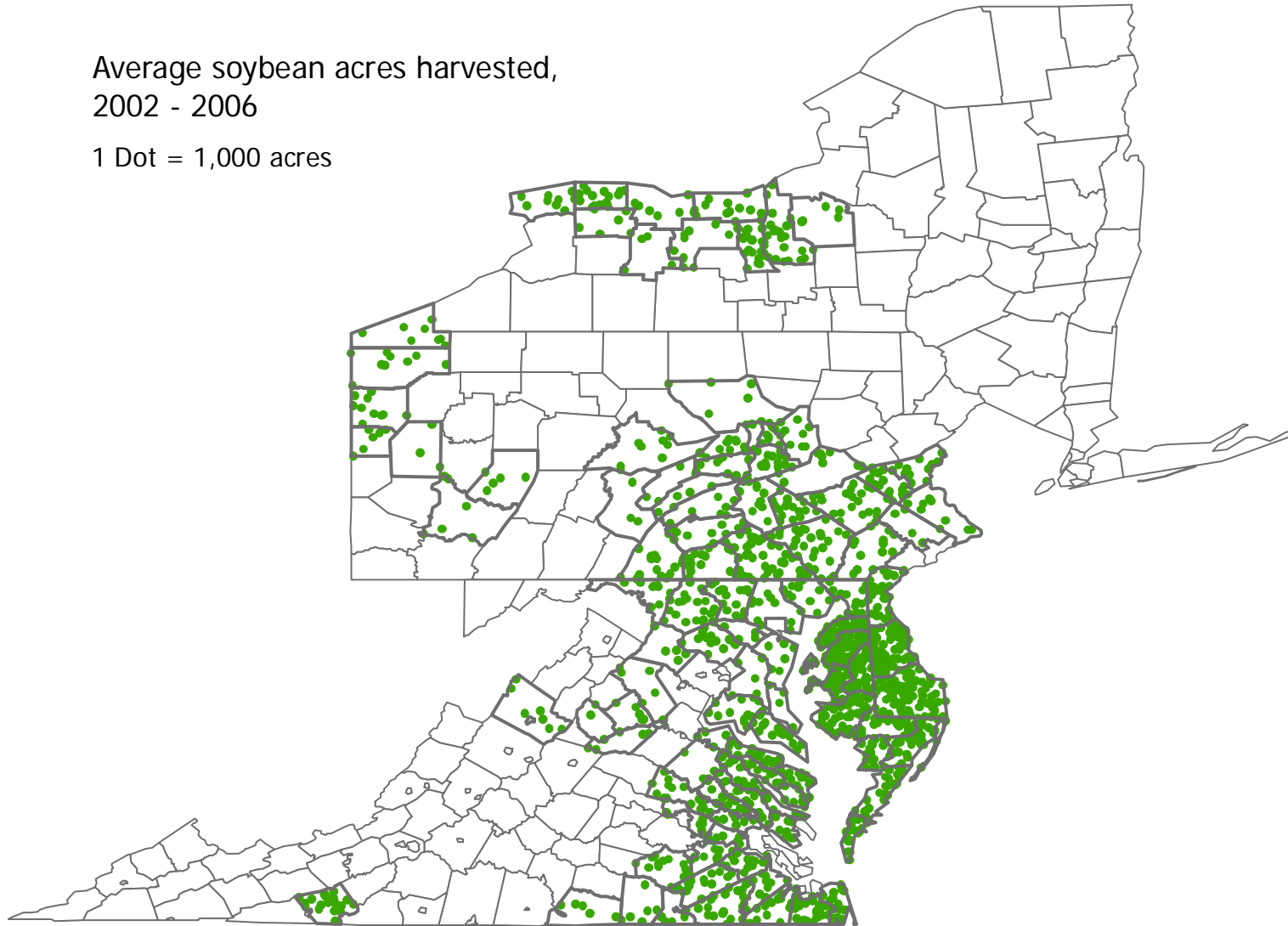
1 Dot = 100,000 bushels



# Average Soybean Acres 2002-2006

Average soybean acres harvested,  
2002 - 2006

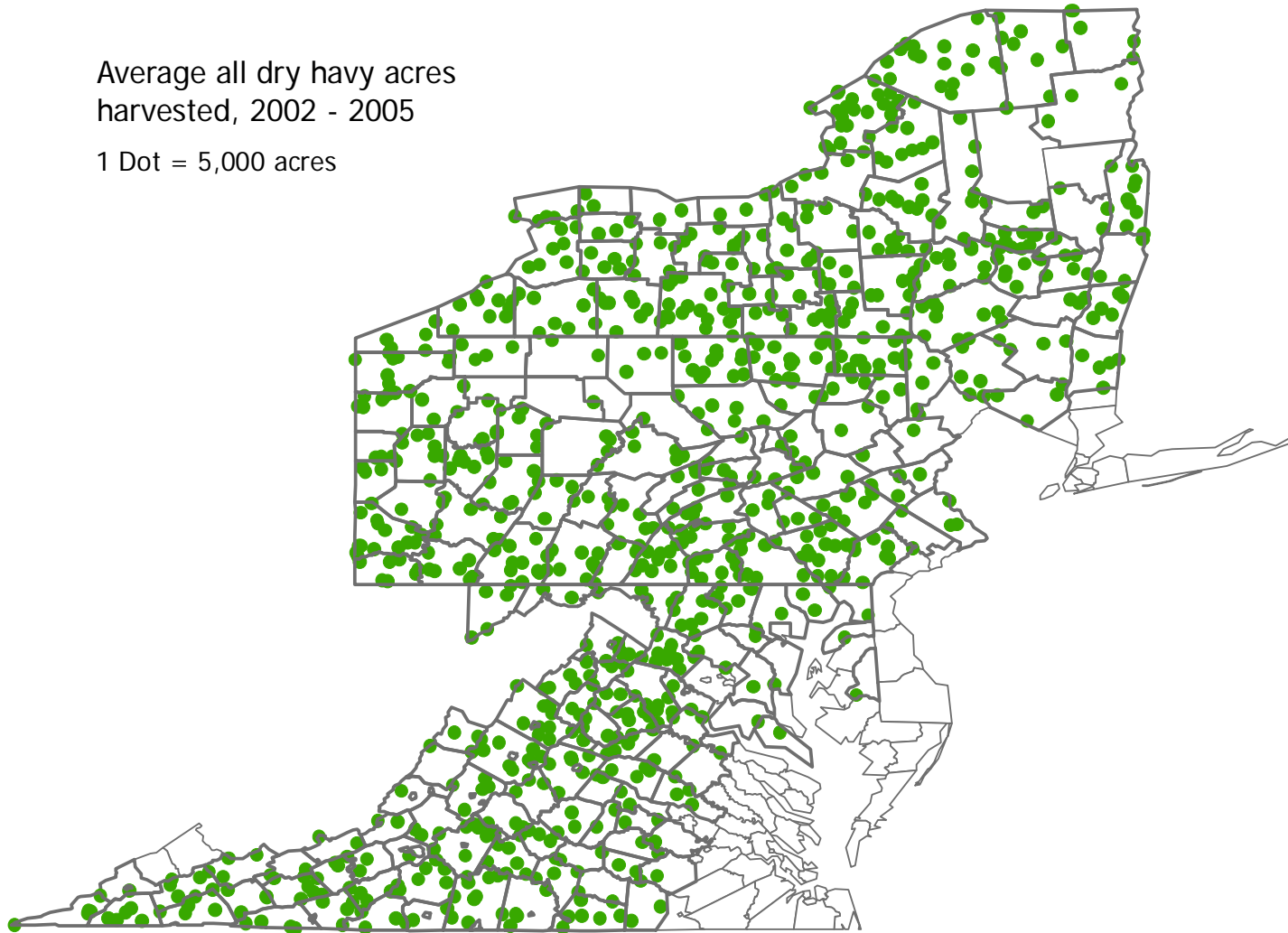
1 Dot = 1,000 acres



# Average Dry Hay Acres, 2002-2006

Average all dry hay acres  
harvested, 2002 - 2005

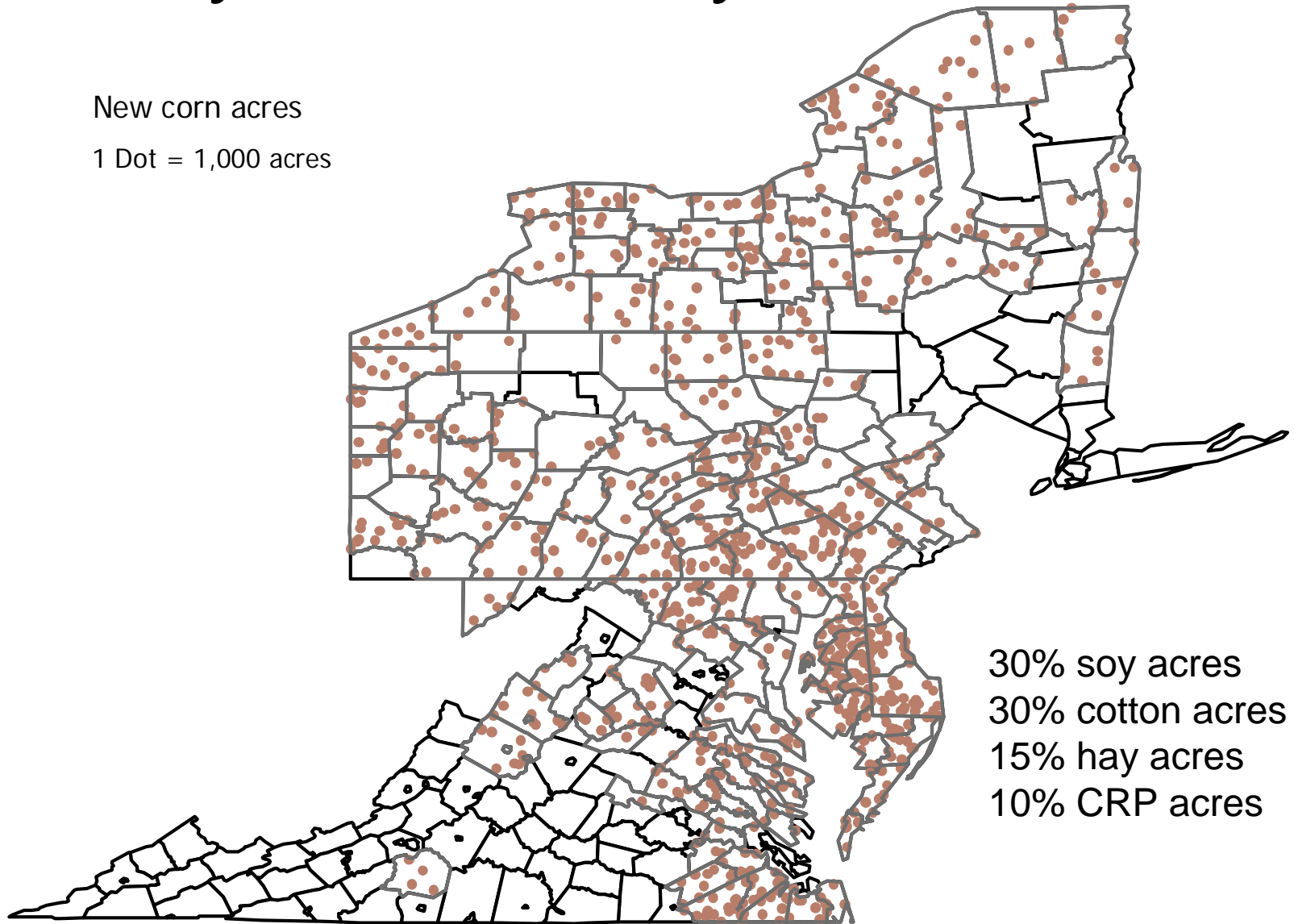
1 Dot = 5,000 acres



# If 1m New Corn Grain Acres from Soy, Cotton, Hay, CRP Acres

New corn acres

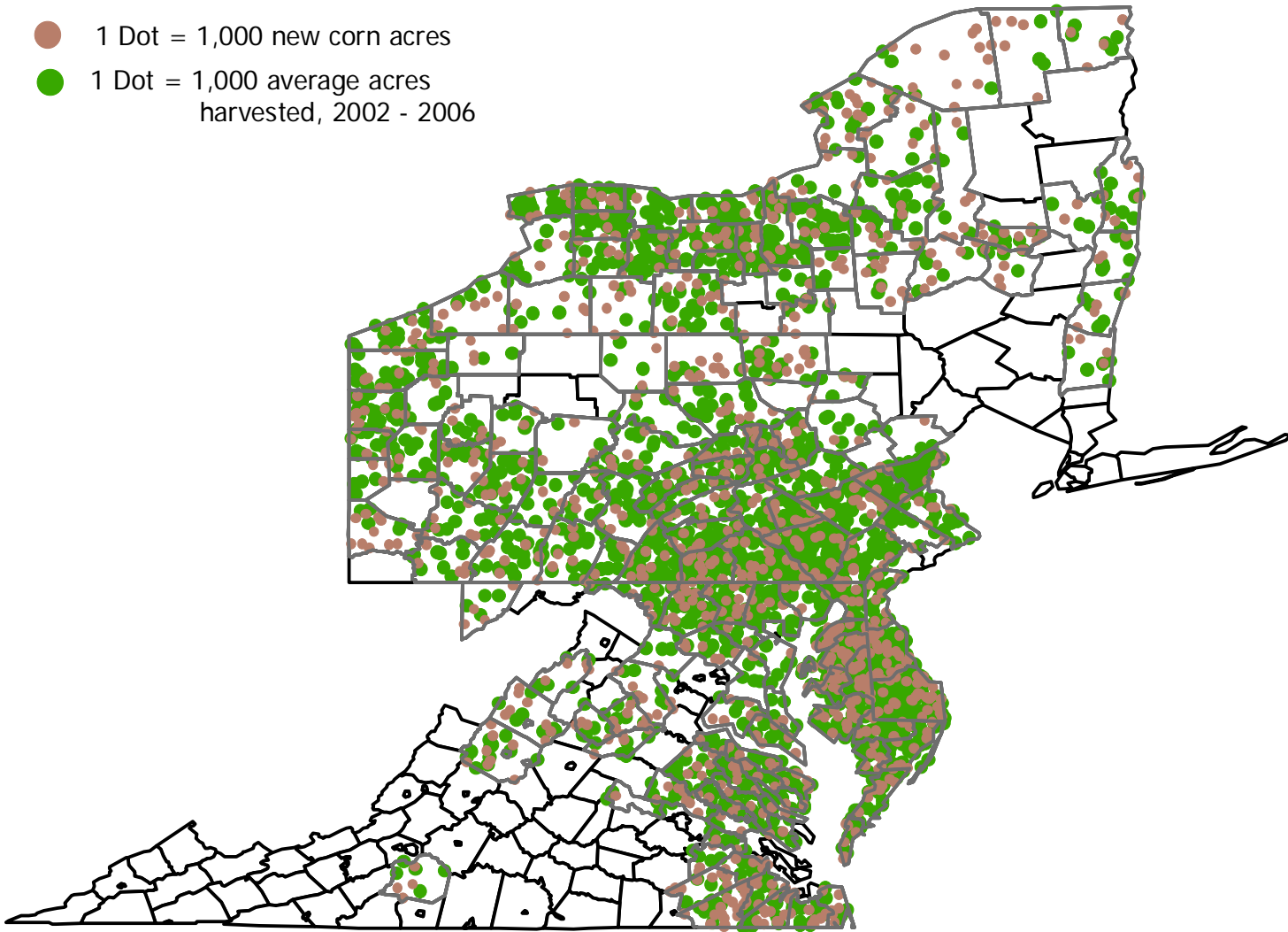
1 Dot = 1,000 acres



# Average Corn Grain Acres and 1m New Corn Acres

Average corn acres harvested,  
2002 - 2006  
and new corn acres

- 1 Dot = 1,000 new corn acres
- 1 Dot = 1,000 average acres  
harvested, 2002 - 2006



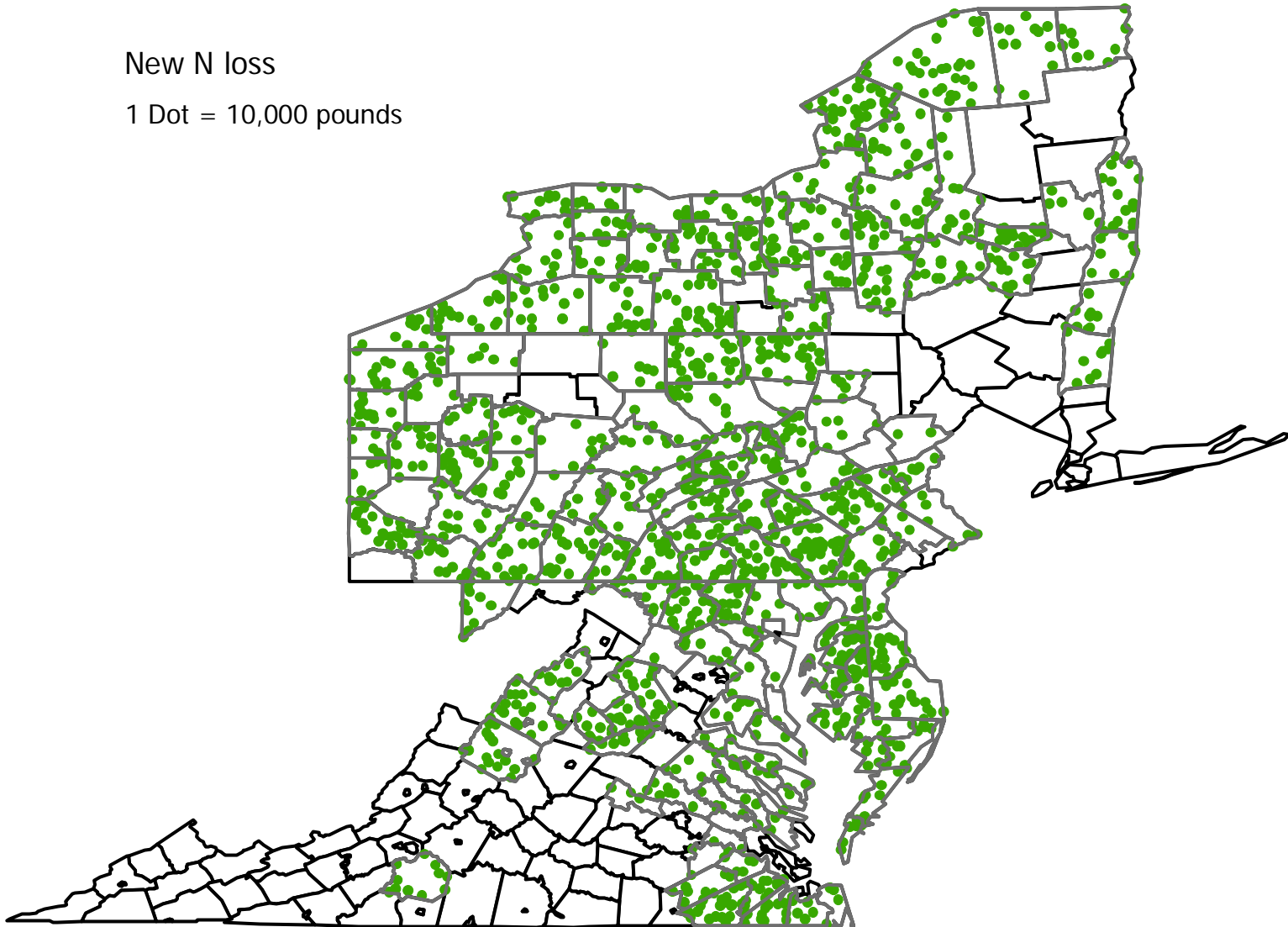
# Potential N losses from 1 million new corn acres in VA, MD, DE, PA, and NY

<b>Cropping Changes</b>	<b>Acreage</b>	<b>Expected N Loss (lbs/ac)</b>	<b>Increased N Loss (m. lbs)</b>
<b>New corn acres</b>	<b>1.03 m</b>	<b>30</b>	<b>+30.9</b>
<b>Soybeans</b>	<b>472 th</b>	<b>22.5</b>	<b>-10.6</b>
<b>Cotton</b>	<b>22 th</b>	<b>14.25</b>	<b>-0.3</b>
<b>CRP</b>	<b>32 th</b>	<b>3</b>	<b>-0.1</b>
<b>Hay</b>	<b>503 th</b>	<b>6</b>	<b>-3.0</b>
<b>Potential N Loss Increase (m. lbs)</b>			<b>16.9</b>

# Potential New N Loss from 1m New Corn Acres

New N loss

1 Dot = 10,000 pounds

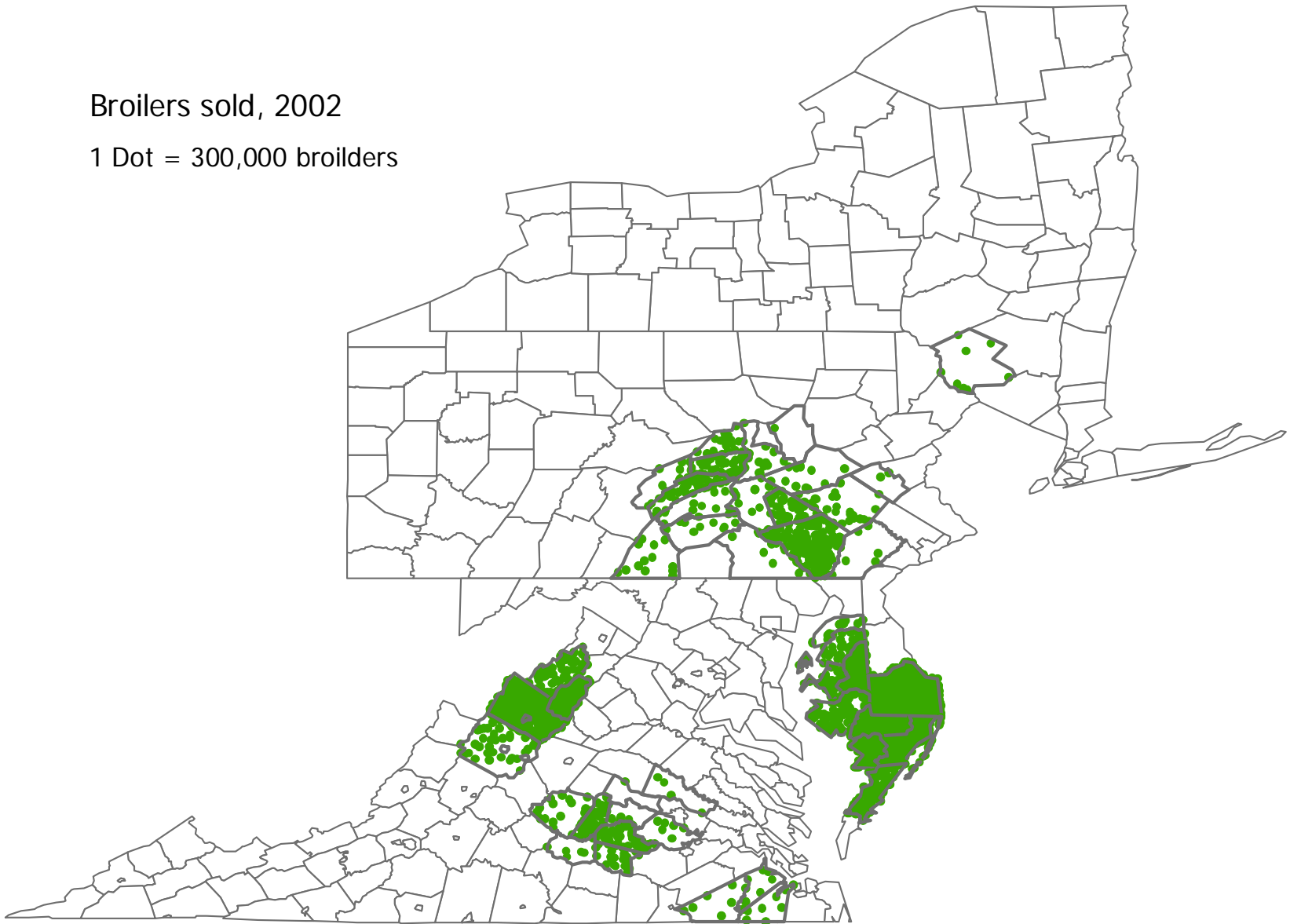


Distiller's Grain is High in  
Soluble Phosphate

# Broilers Sold, 2002

Broilers sold, 2002

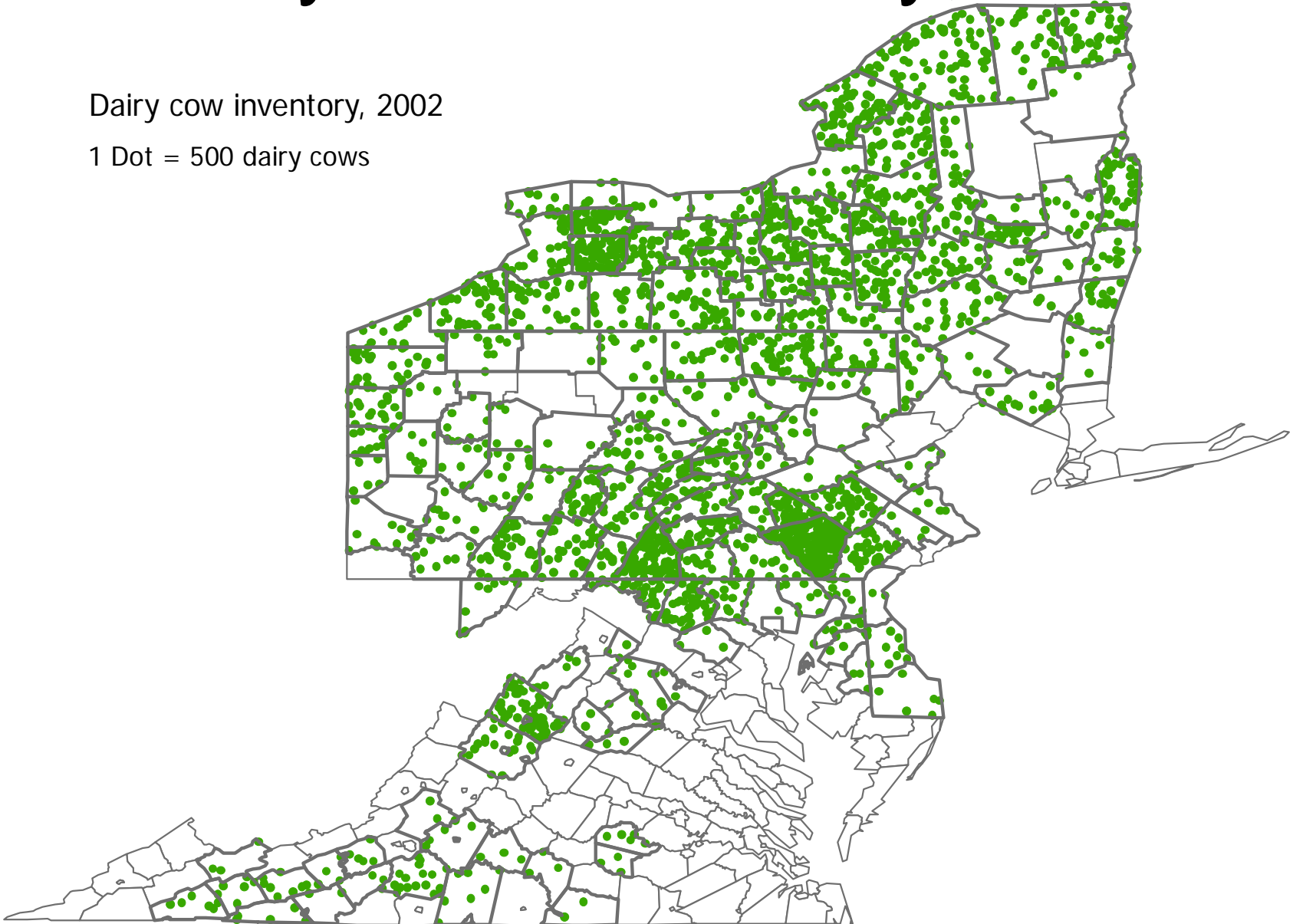
1 Dot = 300,000 broilers



# Dairy Cow Inventory, 2002

Dairy cow inventory, 2002

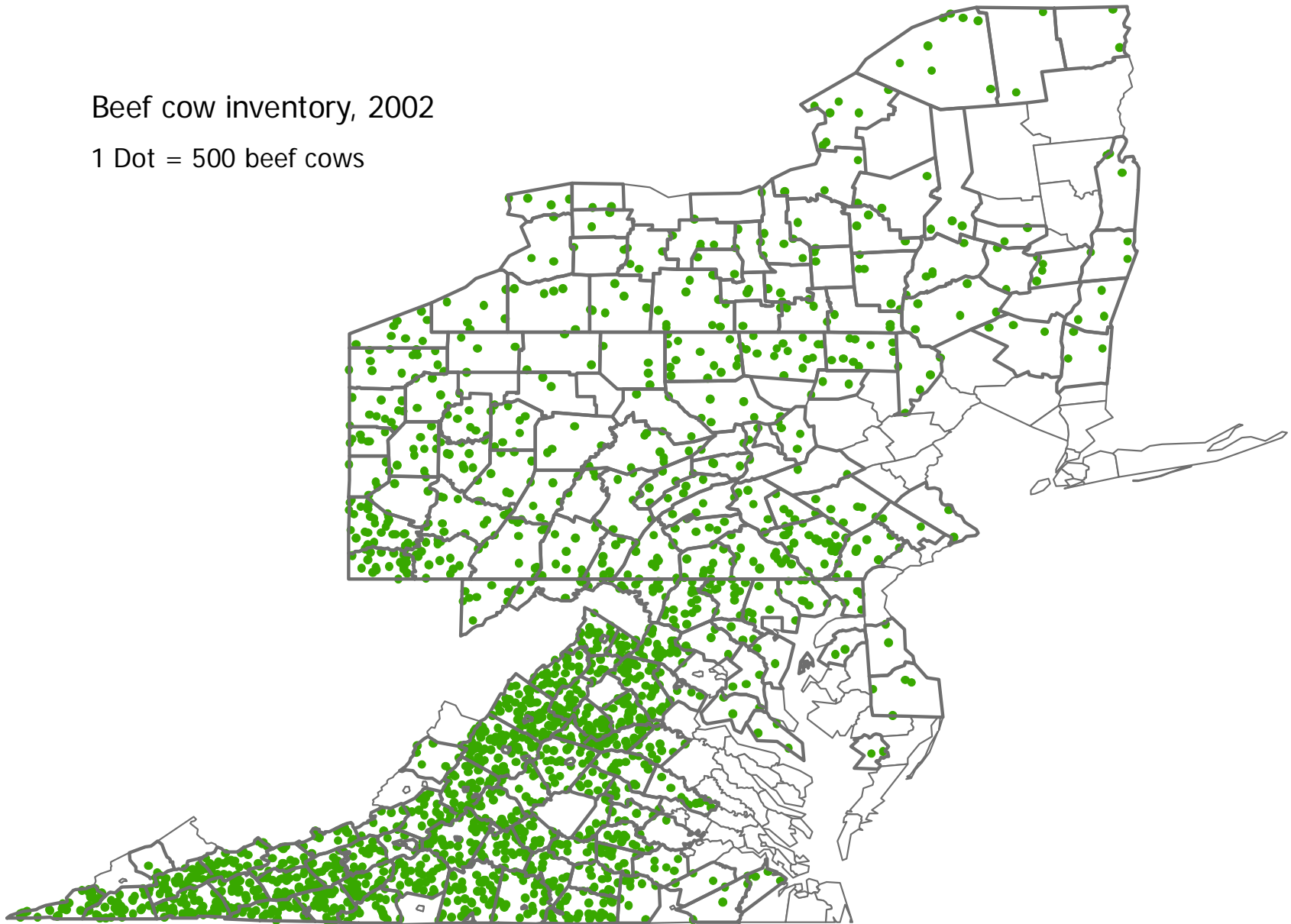
1 Dot = 500 dairy cows



# Beef Cow Inventory, 2002

Beef cow inventory, 2002

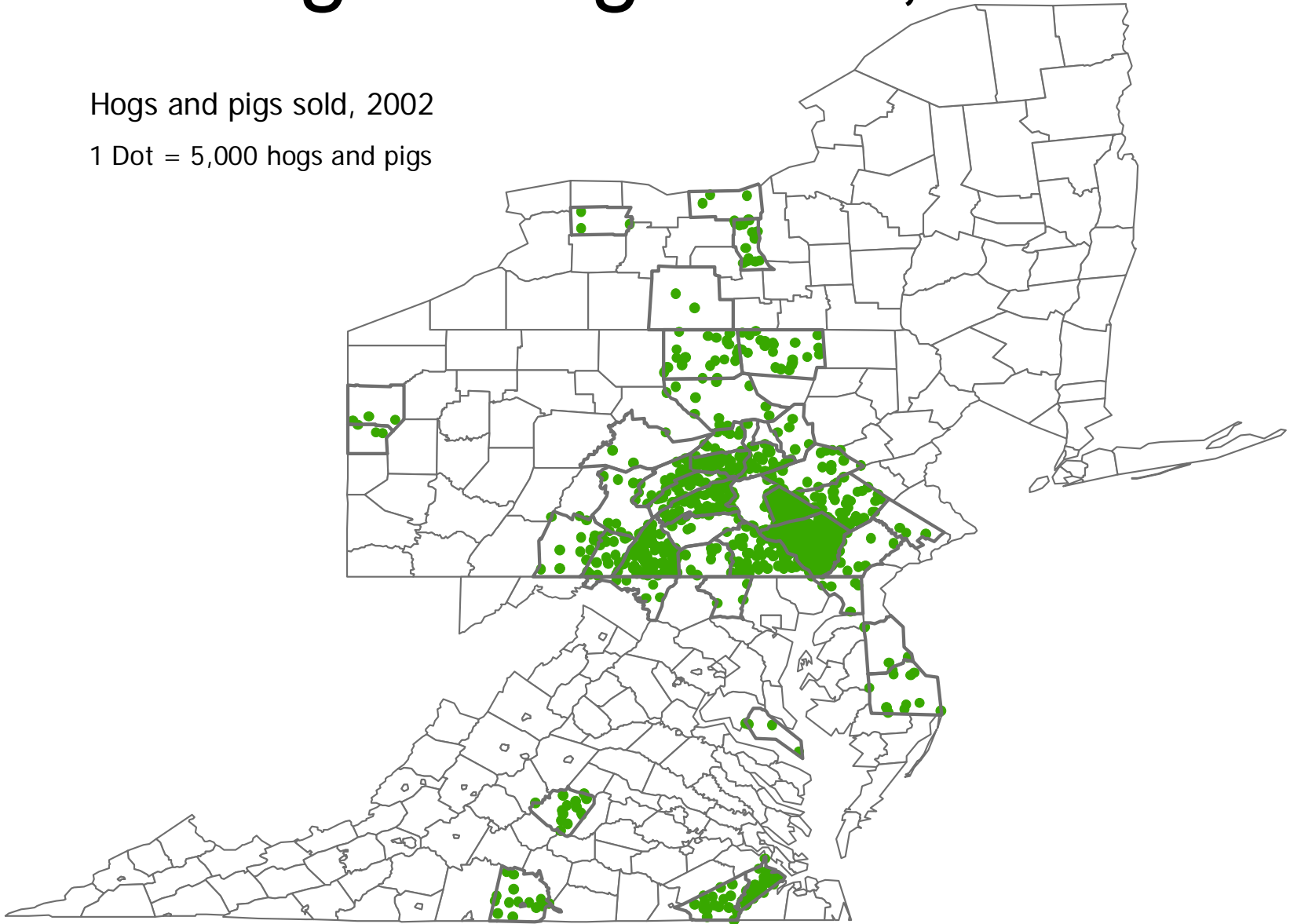
1 Dot = 500 beef cows



# Hogs & Pigs Sold, 2002

Hogs and pigs sold, 2002

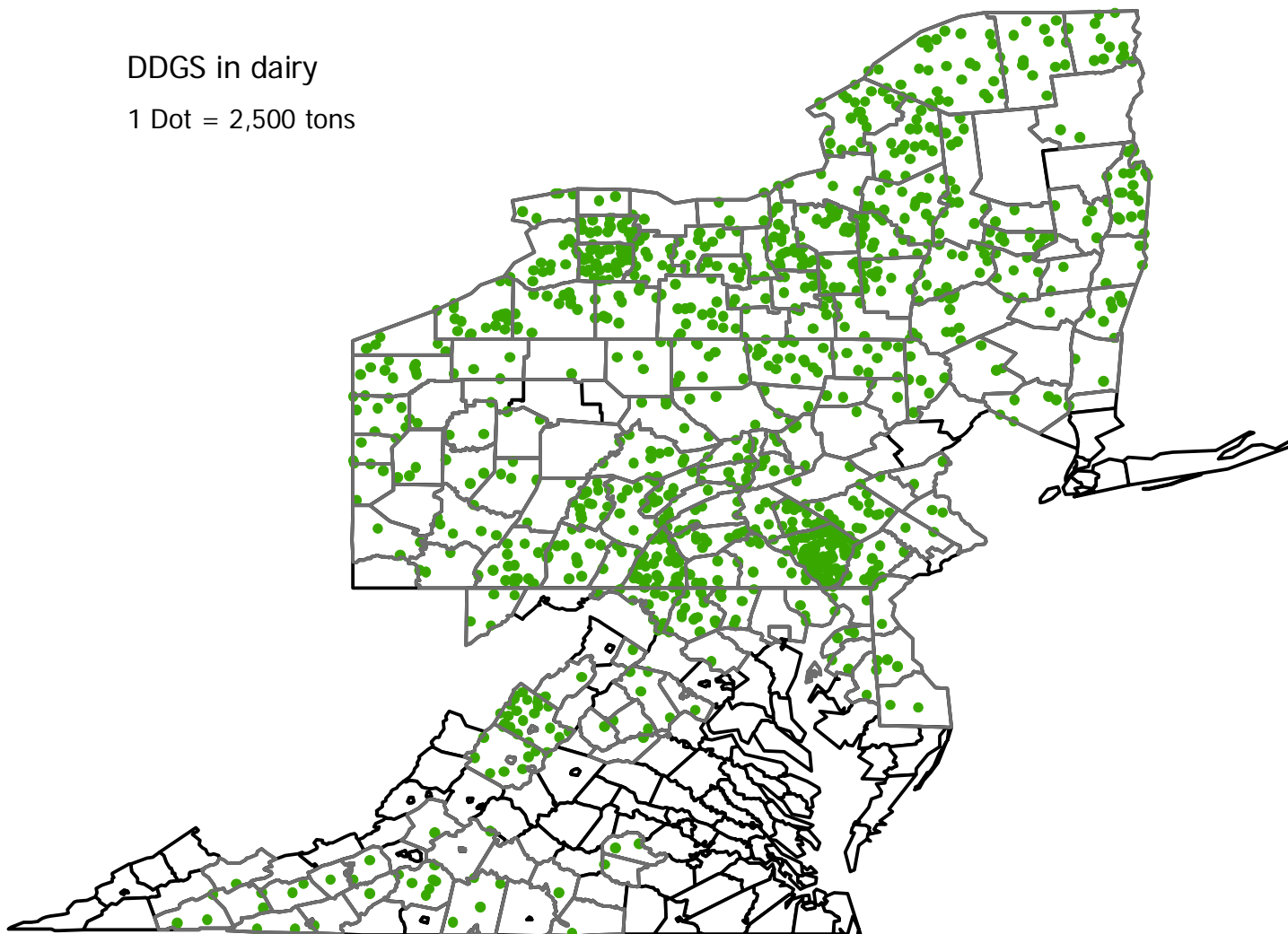
1 Dot = 5,000 hogs and pigs



# DDGS Potential in Dairy Rations @20%DM

DDGS in dairy

1 Dot = 2,500 tons





# Distiller's Grain Impact on Mid-Atlantic Livestock

- Unclear impact on livestock rations. More opportunity for DDGS in dairy and beef, less clear on swine and poultry.
- DDGS mean more soluble phosphate in ration, better absorption in livestock. If less soluble feed sources are replaced in ration, impacts on manure nutrient loss are unclear
- Largest impact of ethanol on Mid-Atlantic livestock is on feed costs, relative cost of production compared to competitive regions

# Questions??

[www.duiops.net/seresvivos](http://www.duiops.net/seresvivos)

