

# Reviewing Biosolids in Beta 3

09132016

Matt Johnston

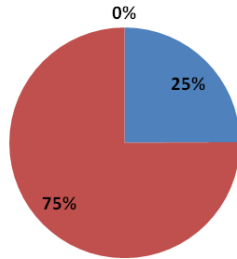
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# Biosolids as % of N Applications in 2012

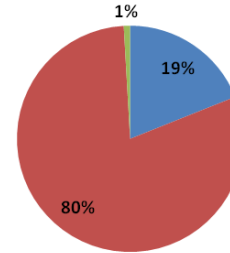
**DE**

■ Manure N ■ Fertilizer N ■ Biosolids N



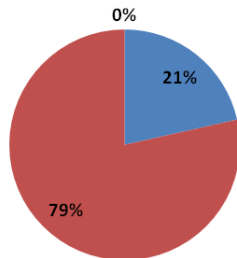
**MD**

■ Manure N ■ Fertilizer N ■ Biosolids N



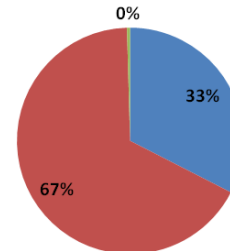
**NY**

■ Manure N ■ Fertilizer N ■ Biosolids N



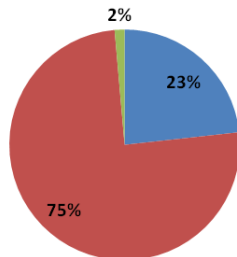
**PA**

■ Manure N ■ Fertilizer N ■ Biosolids N



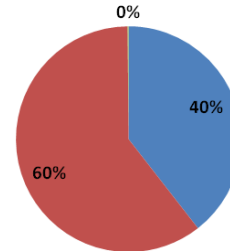
**VA**

■ Manure N ■ Fertilizer N ■ Biosolids N



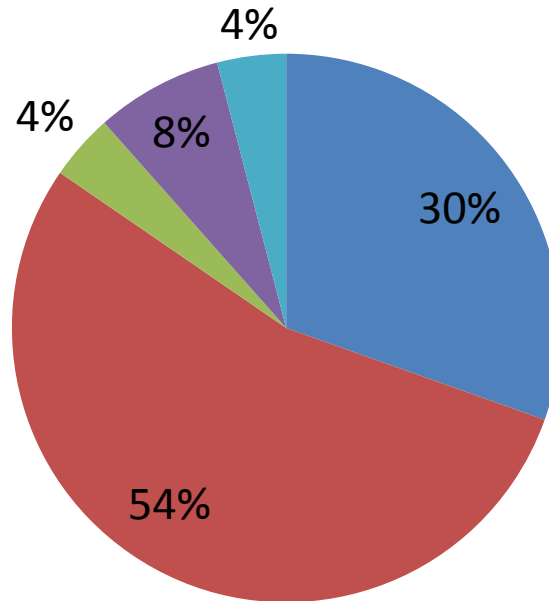
**WV**

■ Manure N ■ Fertilizer N ■ Biosolids N



# What we wanted...

■ Corn ■ Pasture/Hay ■ Small Grain ■ Soybeans ■ Other



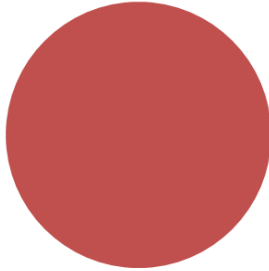
Weighting Factors for Biosolids Applications to Meet Crop Goal

Crop	Percent	Percent/Percent Corn
Corn	30.43	1
Pasture/Hay	54.14	1.7792
Small Grain	3.89	0.1278
Soybeans	7.48	0.2458
Other	4.06	0.1334

# What we got...

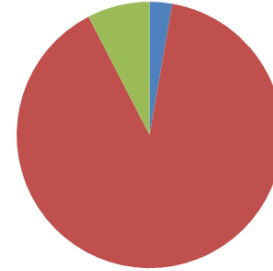
**DE**

■ Corn ■ Hay/Pasture ■ Small Grain/Soybeans



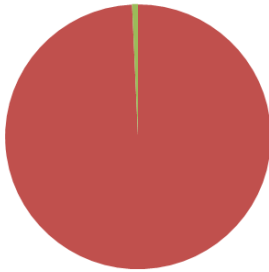
**MD**

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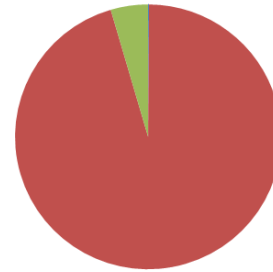
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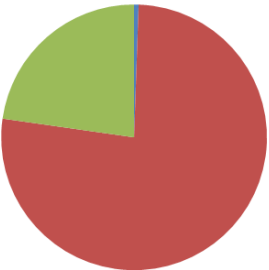
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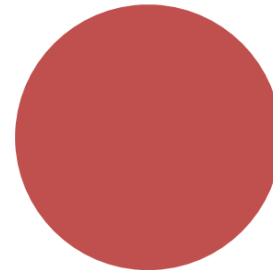
**VA**

■ Corn ■ Hay/Pasture ■ Small Grain/Soybeans



**WV**

■ Corn ■ Hay/Pasture ■ Small Grain/Soybeans



# How do we fix it?

- **Apply biosolids first!**
  - Very few biosolids nutrients compared to manure and fertilizer means manure applications aren't likely to be significantly impacted.
- Still use the relative percentages we were using.
  - Combine “other” with small grains.
- Adjust these based upon relative crop goal (corn goal/acre > pasture goal/acre).

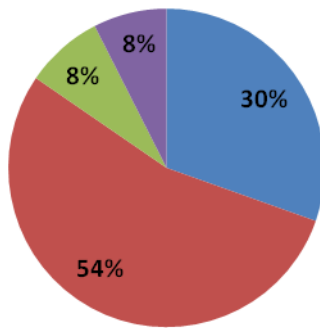
# Same approach, with a few changes

## Developing Proportional Applications

Crop	Fraction Total Application	Average App Goal (2012) Lbs N/acre	% Crop Goal Applied/1 %Corn Goal	Pounds Applied/1% Corn Goal
Corn	0.30	138	1.00	1.38
Pasture/Hay	0.54	18	13.64	2.46
Small Grains	0.08	85	0.42	0.36
Soybeans	0.08	6	5.65	0.34

### Biosolids Application from State Data

■ Corn ■ Pasture/Hay ■ Small Grains ■ Soybeans



### Pounds Applied/1% Corn Goal

■ Corn ■ Pasture/Hay ■ Small Grains ■ Soybeans

