



# Phosphorus Trends in New England Soils

Katie Campbell-Nelson

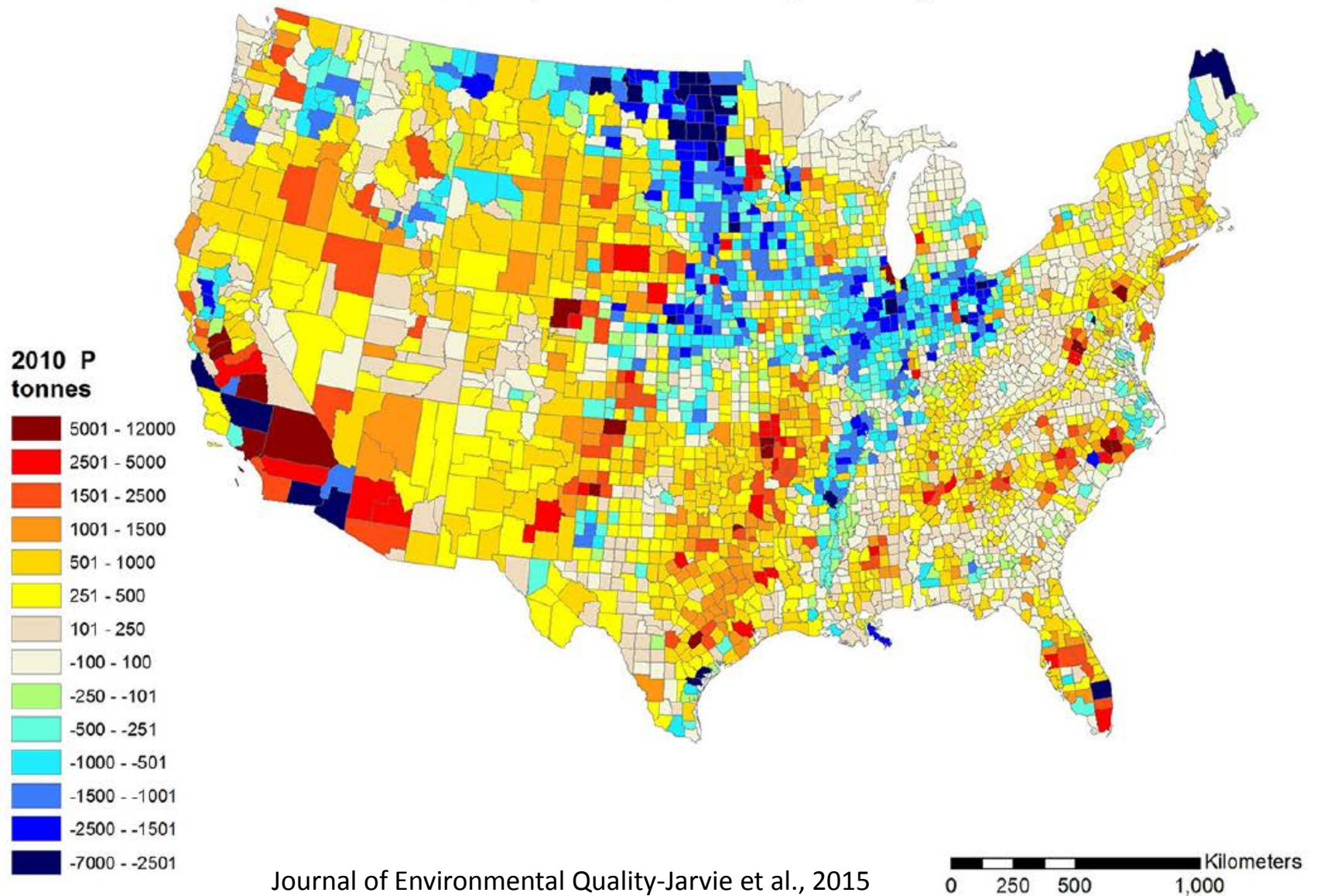
*UMass Extension*

*Vegetable Specialist*

*[kcampbel@umass.edu](mailto:kcampbel@umass.edu)*

*413-545-1051*

# Phosphorus Produced (human and manure) Minus Phosphorus Demand (fertilizer)





Bruce Hoskins



Analytical Lab and Soil Testing Service

Dawn Pettinelli



# Thank you!

Tracy Allen



Joel Tilley



The University of Vermont

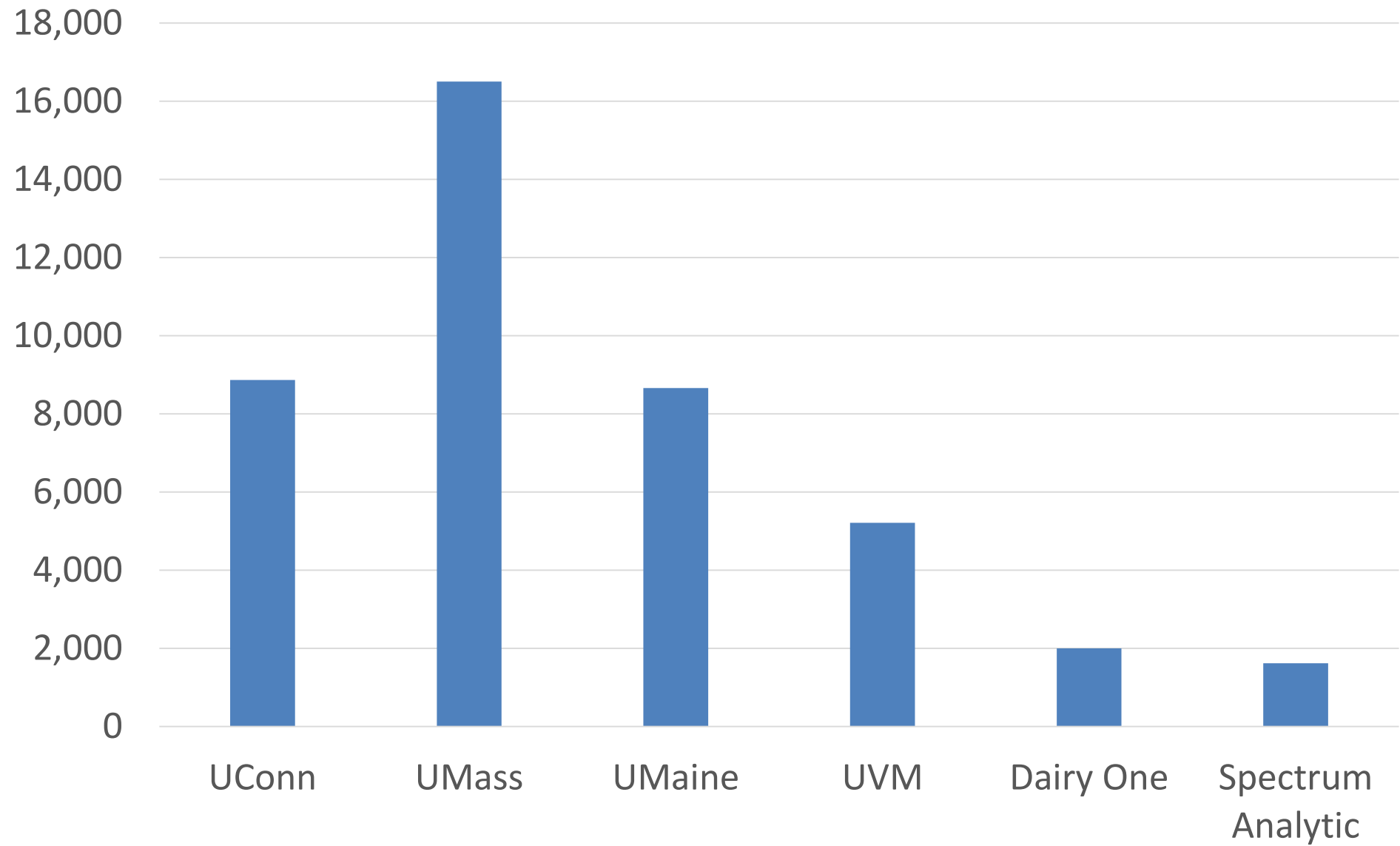


United States Department of Agriculture

THE COLLEGE OF NATURAL SCIENCES



# # of Modified Morgan samples by lab in 2015



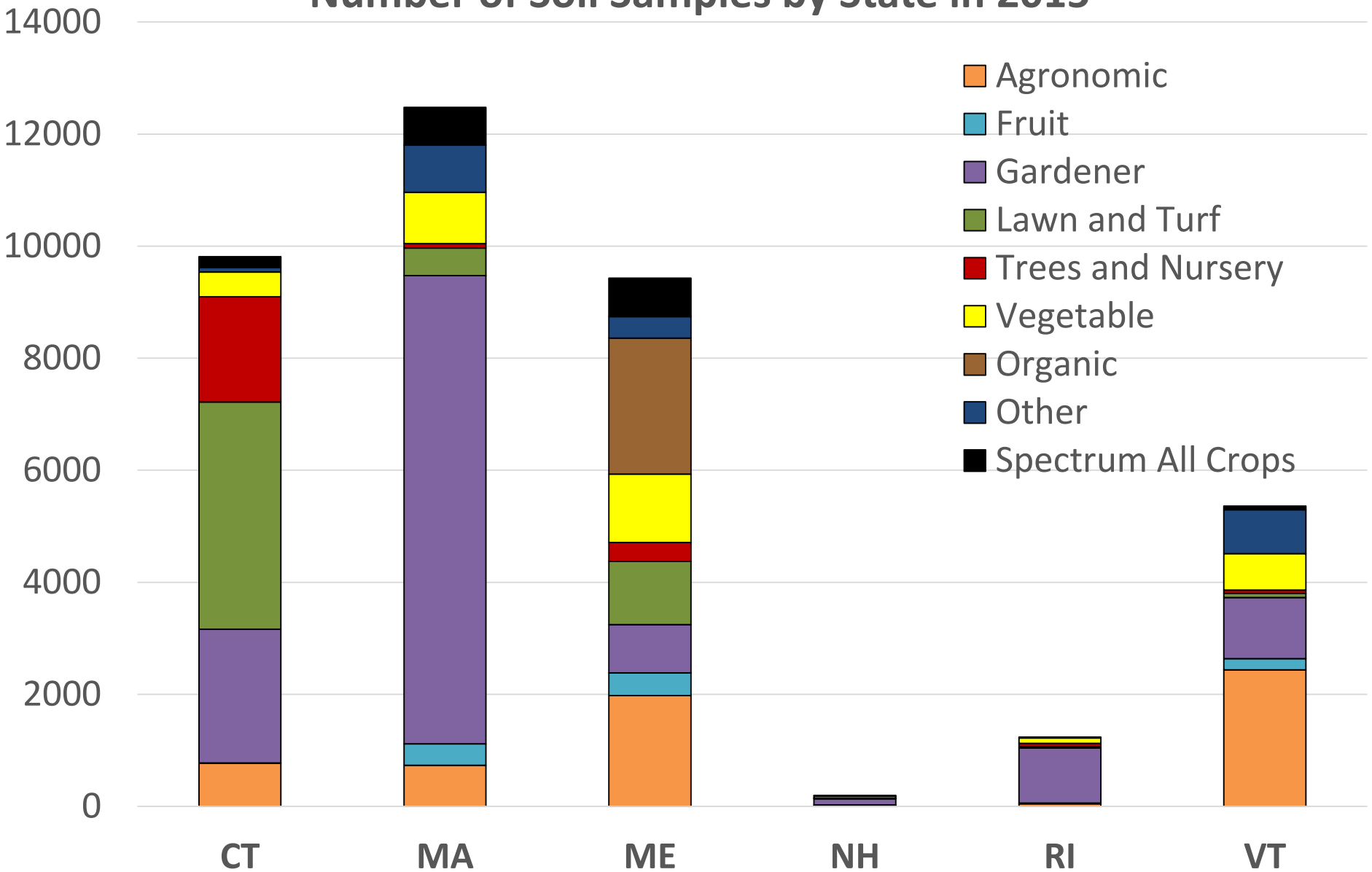


# P interpretations for Modified Morgan (mg/kg or ppm)

	Very Low	Low/ Below Optimum	Medium	Optimum	Above Optimum	Excessive
MA all crops	0-2	2-4		4-14	14-40	> 40
CT Agronomic Crops		0-6.5		9-10	10-17.5	> 17.5
VT all crops		0-1.9	2-3.9	4-7.9	8-39.9	>40
ME established lawn		0-1.75	1.75-3.5	3.5-5	>5	
ME potatoes		0-1.75	1.75-5	5-25	>25	
SARE 'Building Soils for Better Crops'	0-2	2-4		4-7	7-20	

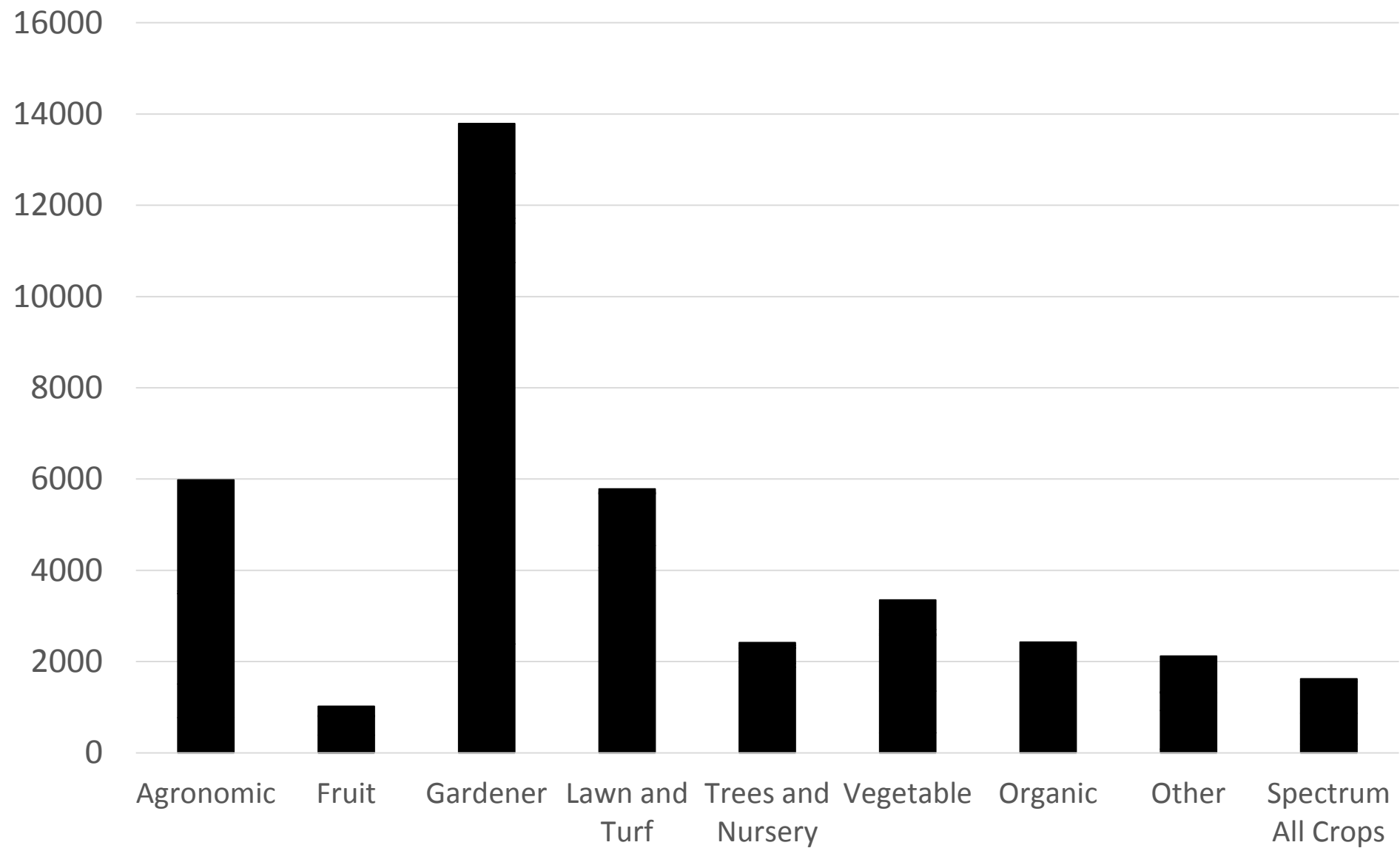


# Number of Soil Samples by State in 2015

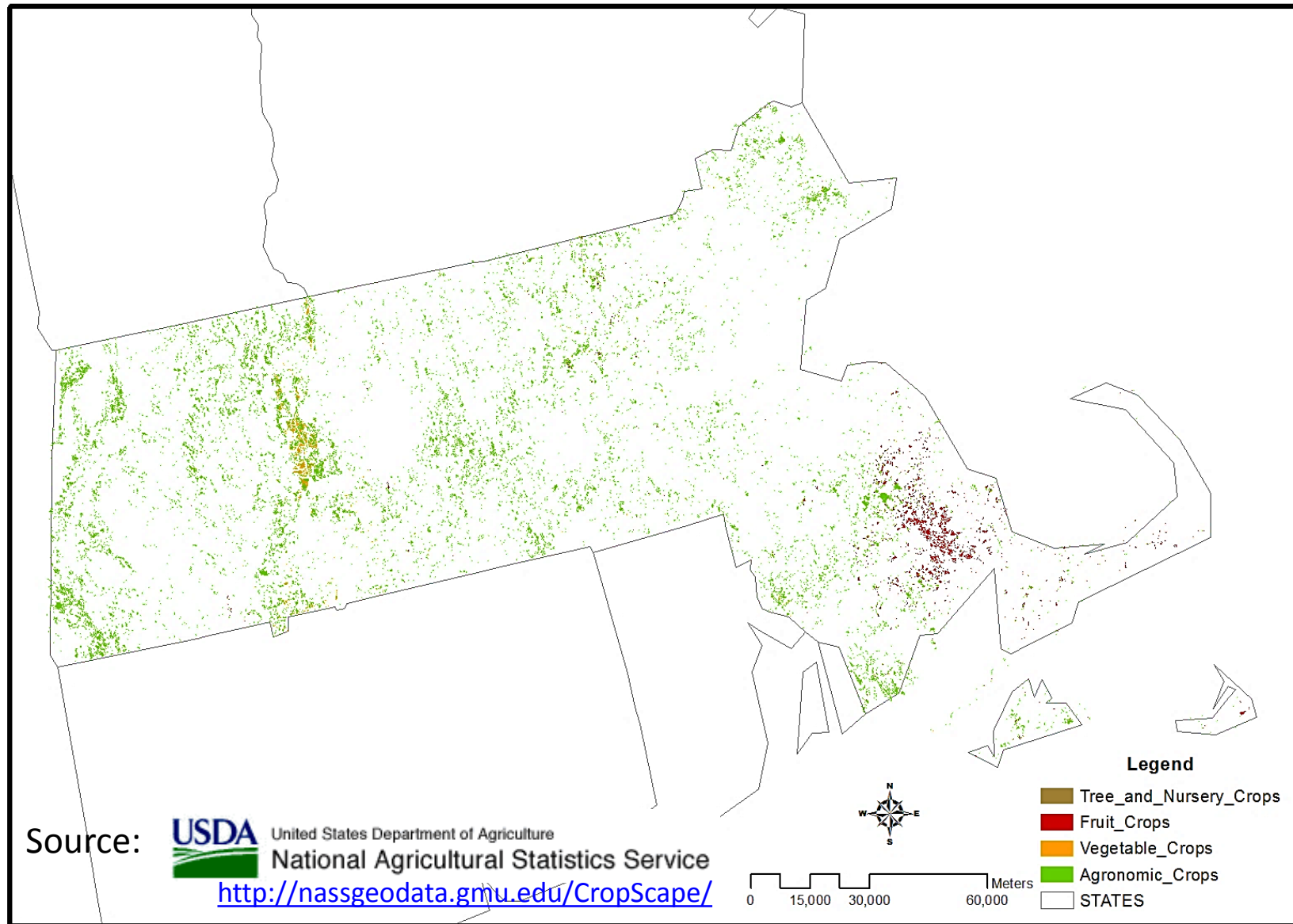




# Number of Soil Samples by Crop ID in 2015



# Nursery/Tree, Fruit, Vegetable, and Agronomic Crop Types



Source:  United States Department of Agriculture  
National Agricultural Statistics Service  
<http://nassgeodata.gmu.edu/CropScape/>

Thank you!  
Ben Warner  
Postdoc Researcher,  
UMass Geosciences

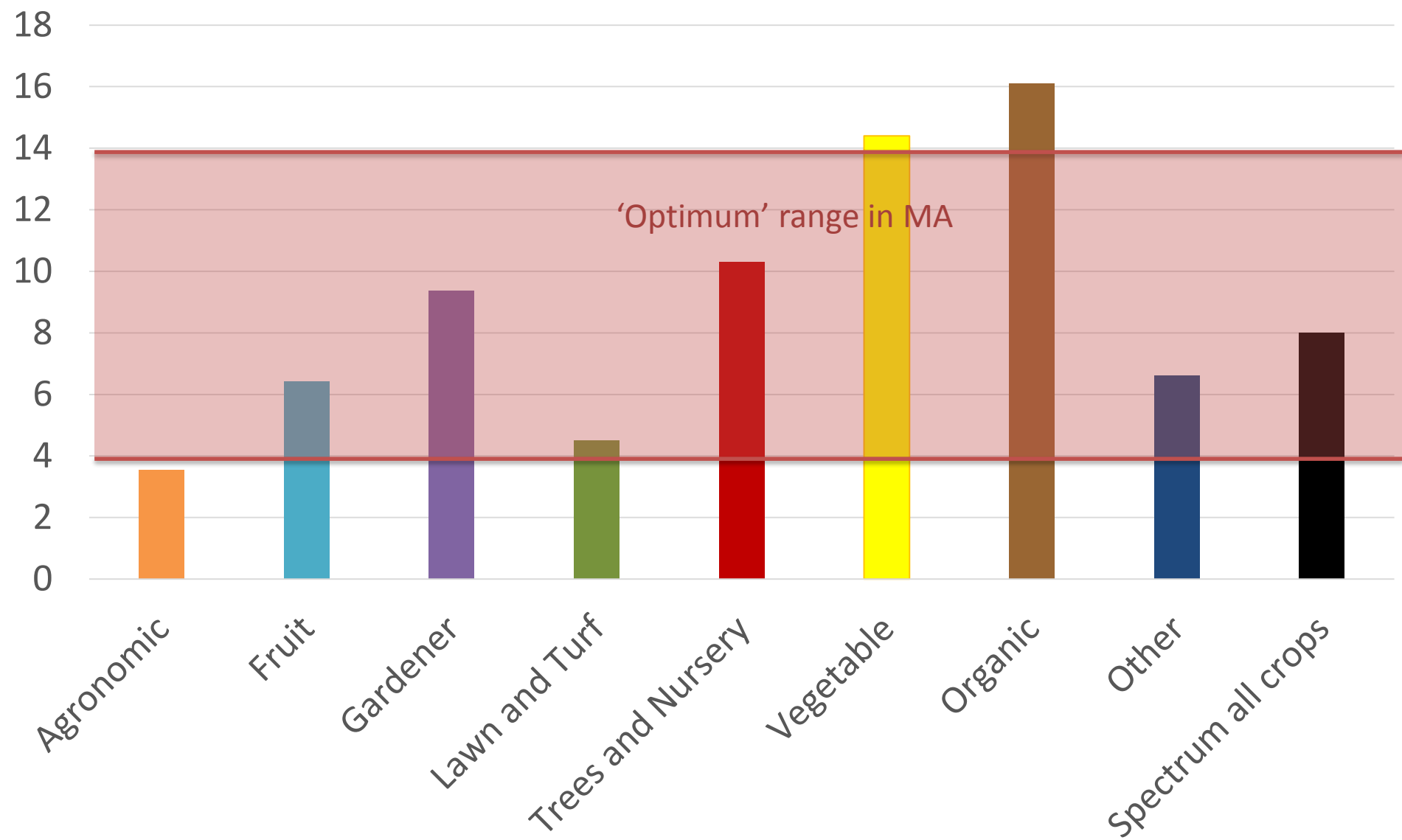






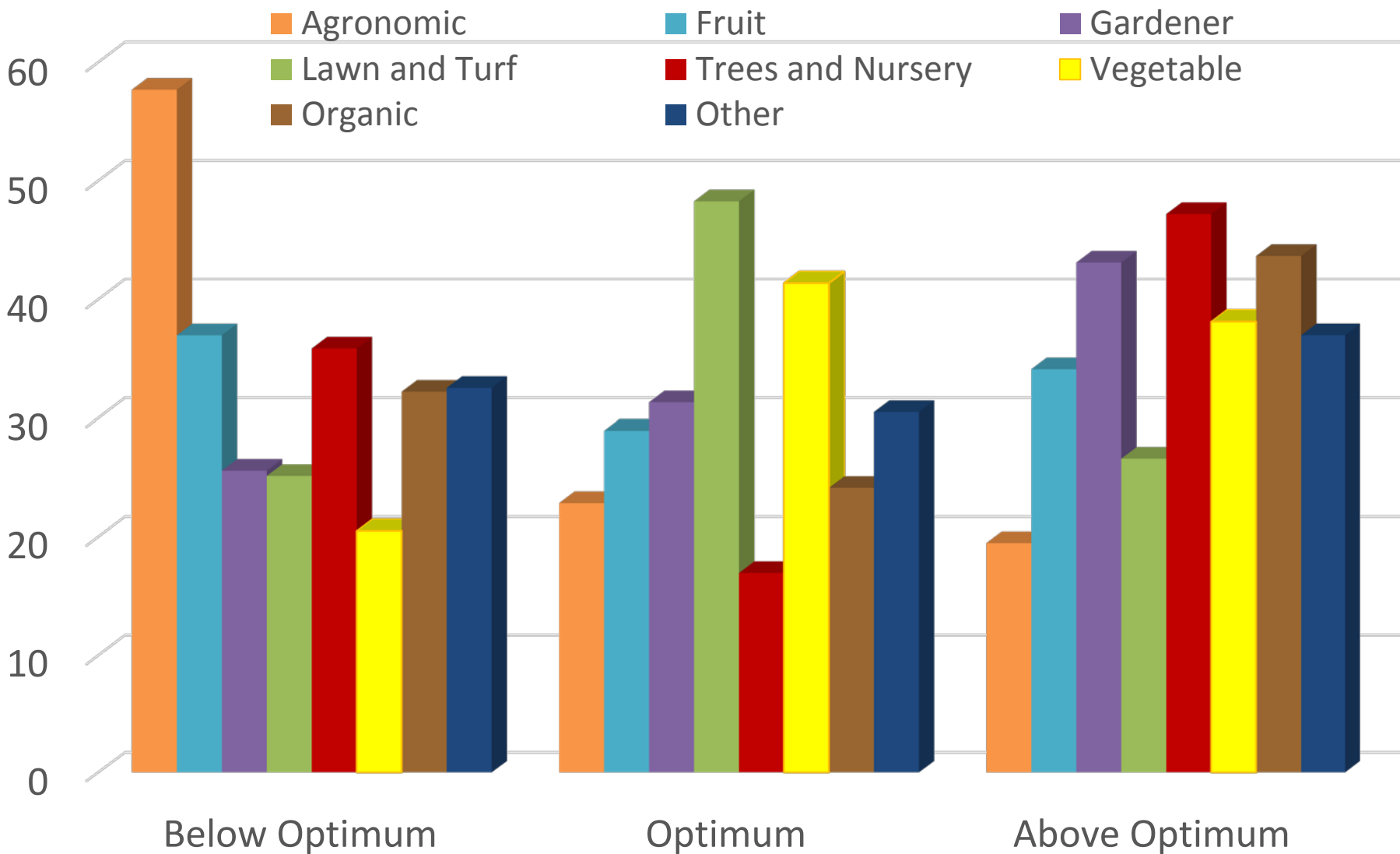


# Median P ppm



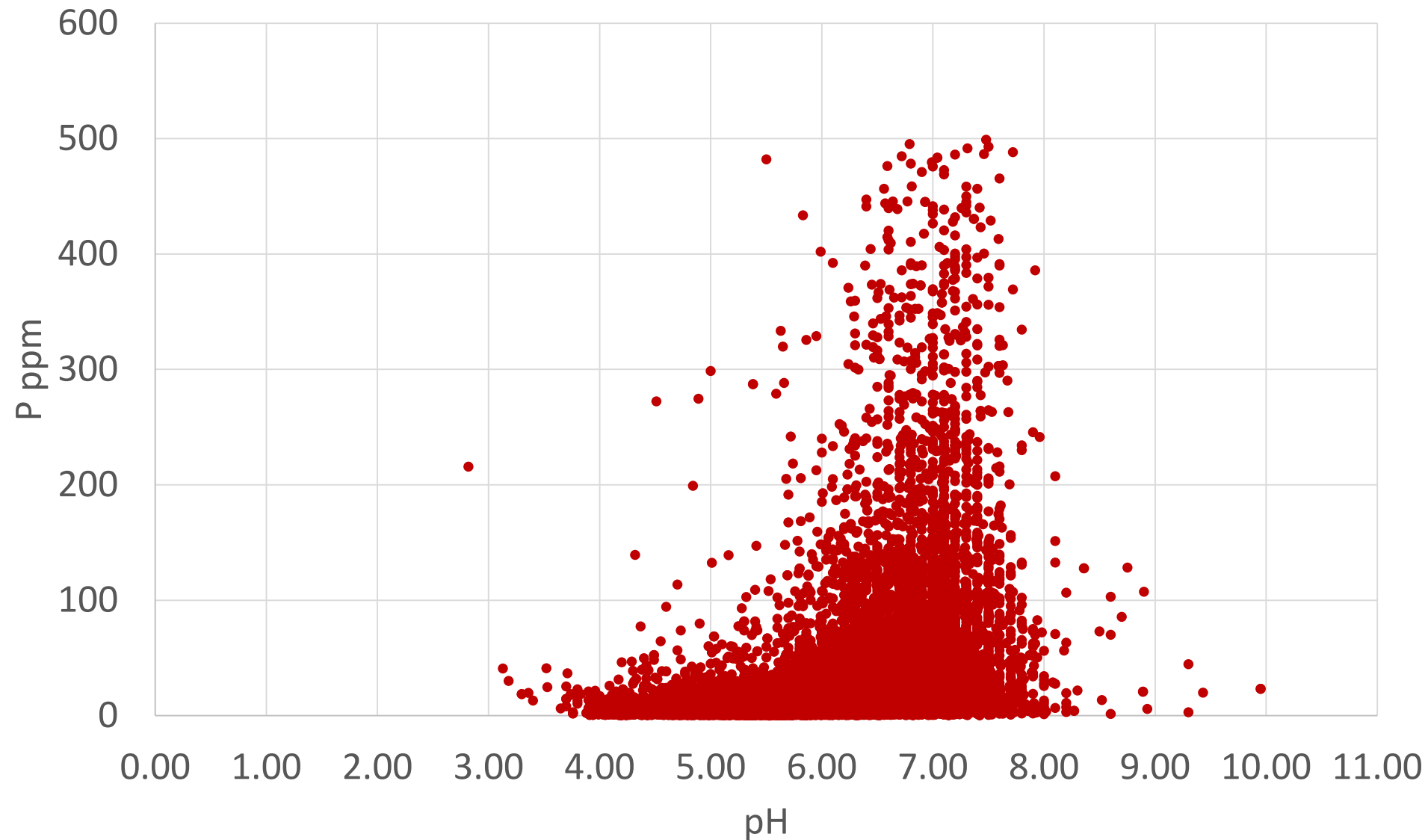


# % of samples in 3 P levels





# Modified Morgan extracted P ppm in relation to pH



# Summary / Questions

- Gardeners have 'above Optimum' P and are the largest potential audience for education, but we don't know how much acreage they represent.
- Agronomic crops make up the largest acreage, but why are the P levels lower than other crops?
- Vegetable and Organic crops have higher P; why?
- What does the soil test P level have to do with environmental risk?