



“No P on My Lawn!”

Inducing Behavior Change through Educational Programming



Suzette Walling, MS, Extension Associate, Urban Water Quality
Brad Lee, Ph.D. CPSS, Soil and Water Extension Specialist
Rick Durham, Ph.D., Horticulture Extension Specialist
Gregg Munshaw, Ph.D., Turfgrass Extension Specialist



University of Kentucky
College of Agriculture,
Food and Environment
Cooperative Extension Service

*Funding: Lexington-Fayette Urban County Government
Stormwater Quality Projects Incentive Grant Program*



Overview

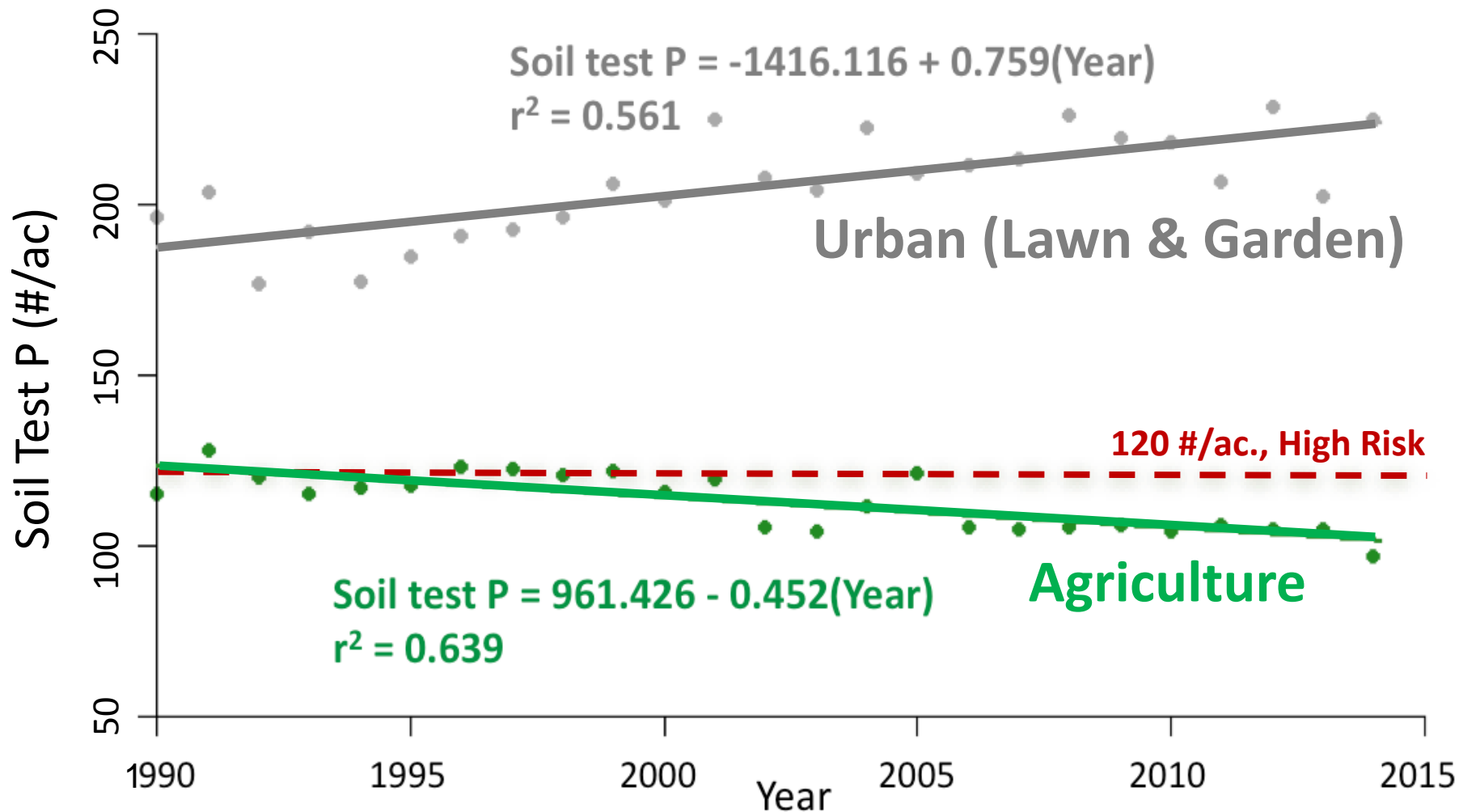
- Program Justification
- Program Plan and Implementation
- Program Outcomes

Nutrients are an Urban Problem

- At levels above 60 mg/kg, P may become soluble (D'Angelo, unpublished data) and at increased risk for mobilization
- Majority of P inputs to watersheds are lost through stormwater runoff (Hobbie et al., 2017)
- Total P loads in urban areas may exceed agricultural runoff (Ghane et al., 2016)

Kentucky Soil Test P

(1 million tests analyzed 1990 – 2014)



Habits of Homeowners



- How are they selecting and applying lawn care products?
- If they employ a contractor, how are they selecting them and engaging with them?



Program Strategy

Soil Tests:

Offer grant funded testing and sample collection assistance for workshop participants

Surveys:

Assess current application practices, knowledge and understanding and behavior change

Sustainable:

Enlist Master Gardeners in a “train-the-trainer” approach (1445 strong in 50 counties, 2016)

Promote:

Disseminate through neighborhood associations and community groups

Partner:

Collaborate with other educational groups

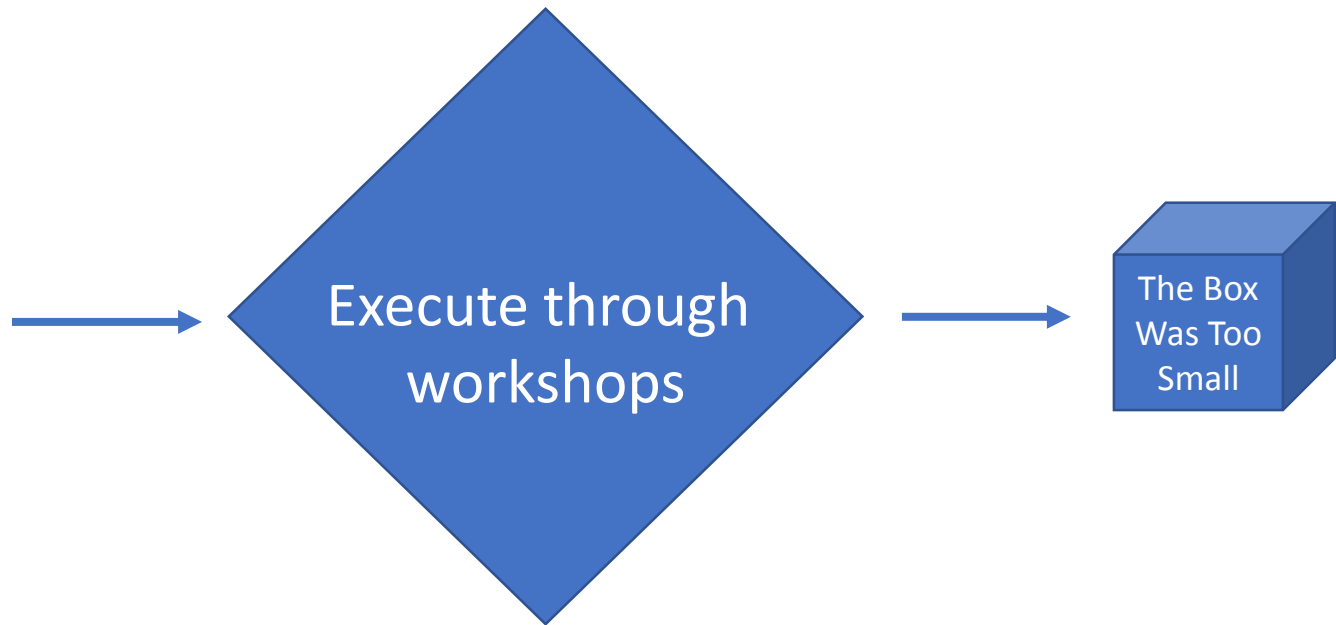


Program Plan and Implementation

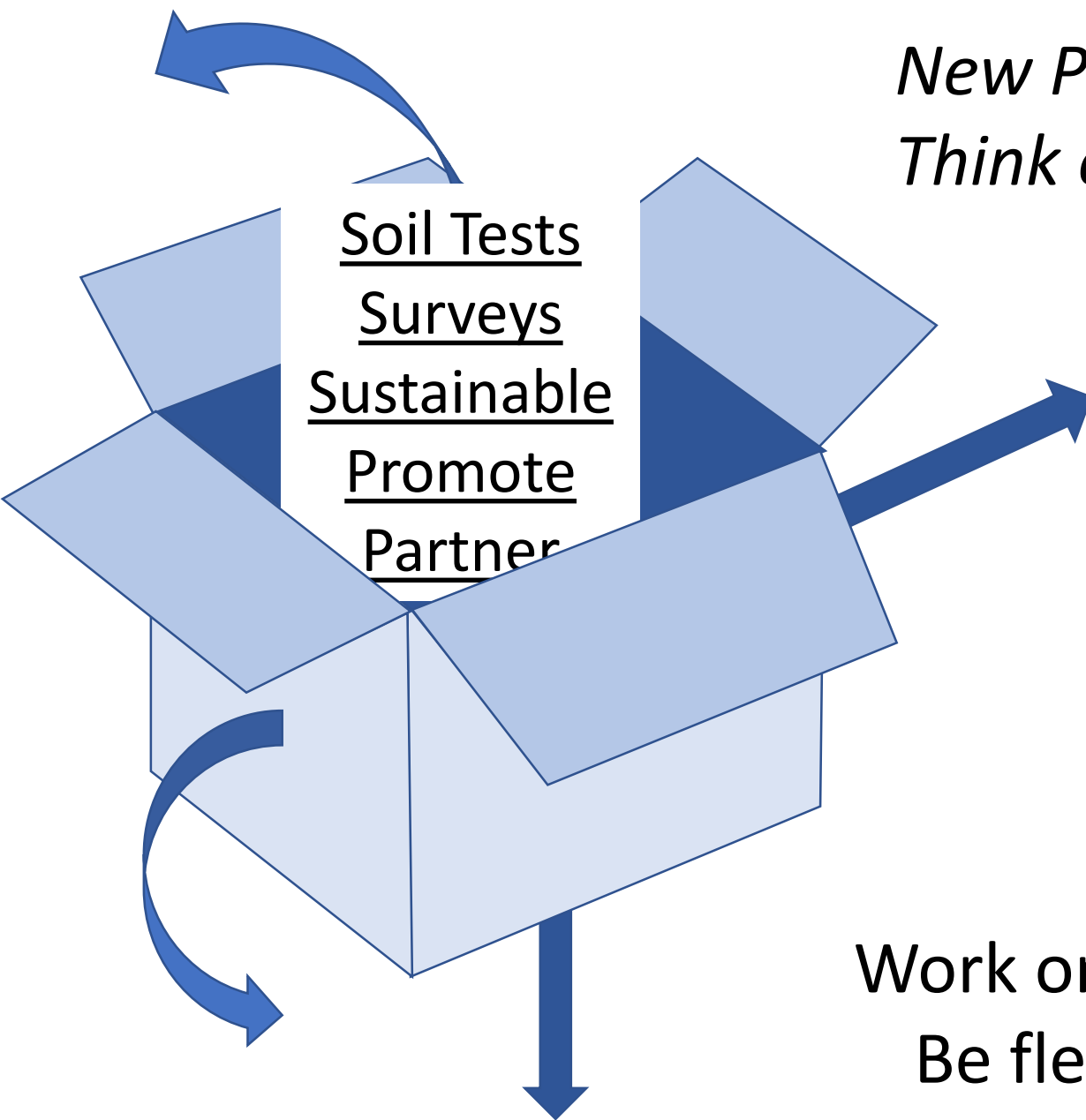
Strategy
key elements

- Soil Tests
- Surveys
- Sustainable
- Promote
- Partner

Original Plan



Linear approach is limiting....



Soil Tests
Surveys
Sustainable
Promote
Partner

New Plan!
Think outside the box....

Work on multiple fronts
Be flexible and agile

Soil Tests: Offer grant funded testing and sample collection assistance for workshop participants

Save Time. Save Money. Save the Environment.

Don't Over-Fertilize

Fayette County soils are so naturally rich in phosphorus, adding more to lawns increases the risk of polluting our waterways.

Do your part.

- Determine nutrient needs with a soil test.
- Carefully apply and use only what you need.
- Fertilize your bluegrass/tall fescue only in the fall to improve drought tolerance and reduce weed growth and mowing frequency.

Free soil tests are being offered to Fayette County residents for a limited time.
Drop off your soils at the Fayette County Extension Office 1140 Harry Sykes Way and mention "No P On My Lawn".
For more information on how to take a soil test, visit our website: <http://water.ca.uky.edu>

Funded by Lexington-Fayette Urban County Government's Stormwater Quality Incentive Grant Program.

 University of Kentucky
College of Agriculture,
Food and Environment
Cooperative Extension Service

- Sample public areas
- Expand the offer via various social media outlets

Outcome

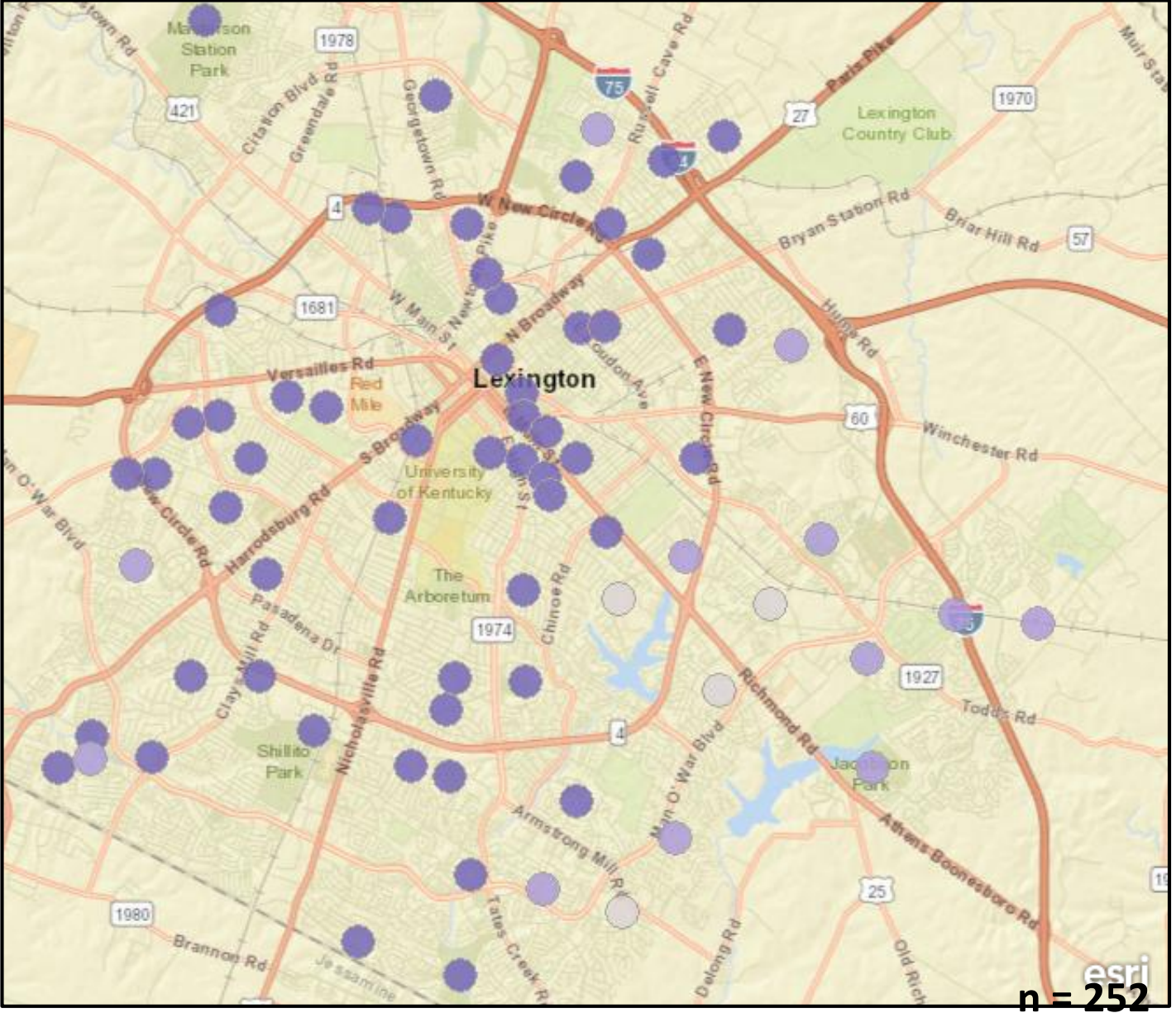
- Share the results
- Confirm assumptions

Public Areas, n=252
Residential samples, n=188

Soil Test P - Public Areas (Parks and Medians)

2017
Fayette County
Average P Results
(lbs/ac)

- >120
- >30 - 120
- 0 - 30



Each sample is a composite of 10 sub-samples

Soil test summary for Fayette County.

1990-2014	Samples (n)	Low (%) <30 #/Ac.	Med (%) 30-60 #/Ac.	High (%) 60-120 #/Ac.	Very High > >120 #/Ac.
Agriculture	12359	6	10	56	28
Urban	16156	3	3	10	84
2017 Parks					
Urban	252	4	3	15	77



No benefit to
plant growth



Maximum
recommended
soil P level



**Water
Quality
Risk**

Surveys:

Assess **current practices**, *knowledge and understanding* and *evaluate behavior change*

- Anyone can complete a **current practices survey**
- *Knowledge and understanding, behavior change pre- & post-workshop*

No P on My Lawn! Participant Survey

Note: Participation in this survey is optional. However, your response provides very valuable feedback for this program. Your responses are anonymous. All data will be aggregated and not be linked to an individual response. PLEASE CHECK ALL THAT APPLY

- 1) When fertilizer or other material such as _____ manure is applied to my yard and/or garden....
 - a) I rely on a _____
 - b) I use a _____
 - c) I do not use _____
 - d) _____
- 2) If you _____

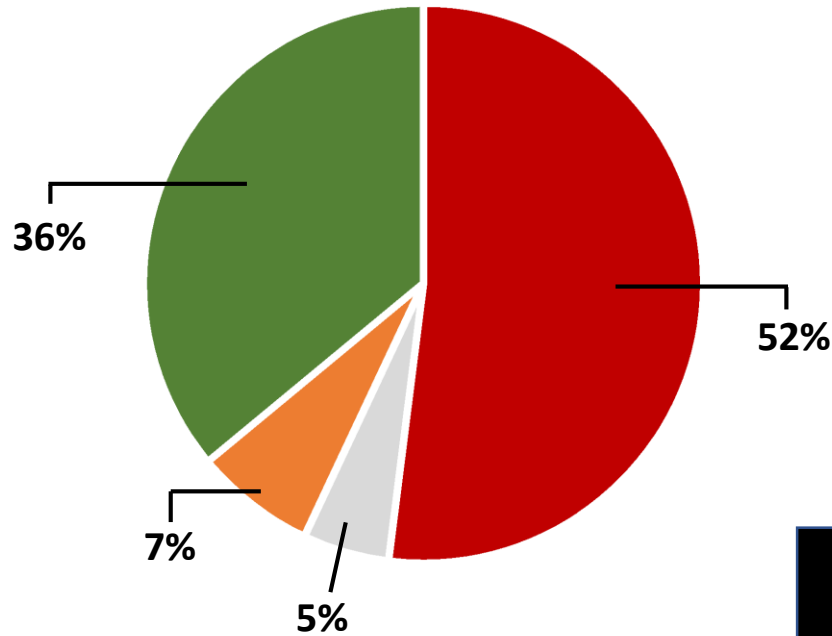
Outcome

Expanded survey to joint meetings, soil test recipients and non-workshop participants

CP survey, n=115

- 5) _____
(Check all that apply, _____
exam, _____
____ Spring _____
____ Winter _____
- 6) If you apply fertilizer _____ your garden?
(Check all that apply, _____ in a number. For
example, 2X Winter)
____ Spring (Mar – May); ____ Summer (June – Aug); ____ Fall (Sept – Nov);
____ Winter (Dec – Feb); ____ NA
- 7) Have you ever conducted a soil test for your lawn or garden? (Y) or (N)

Habits of Fayette County Homeowners



When fertilizer or other material such as compost or manure is applied to my yard and/or garden

- I do it myself
- Both service and self
- I rely on a service
- I rarely apply

2017-2018
"No P On My Lawn"
Current practices
survey
115 respondents

**69 % of respondents
have not conducted a
soil test**

Workshops

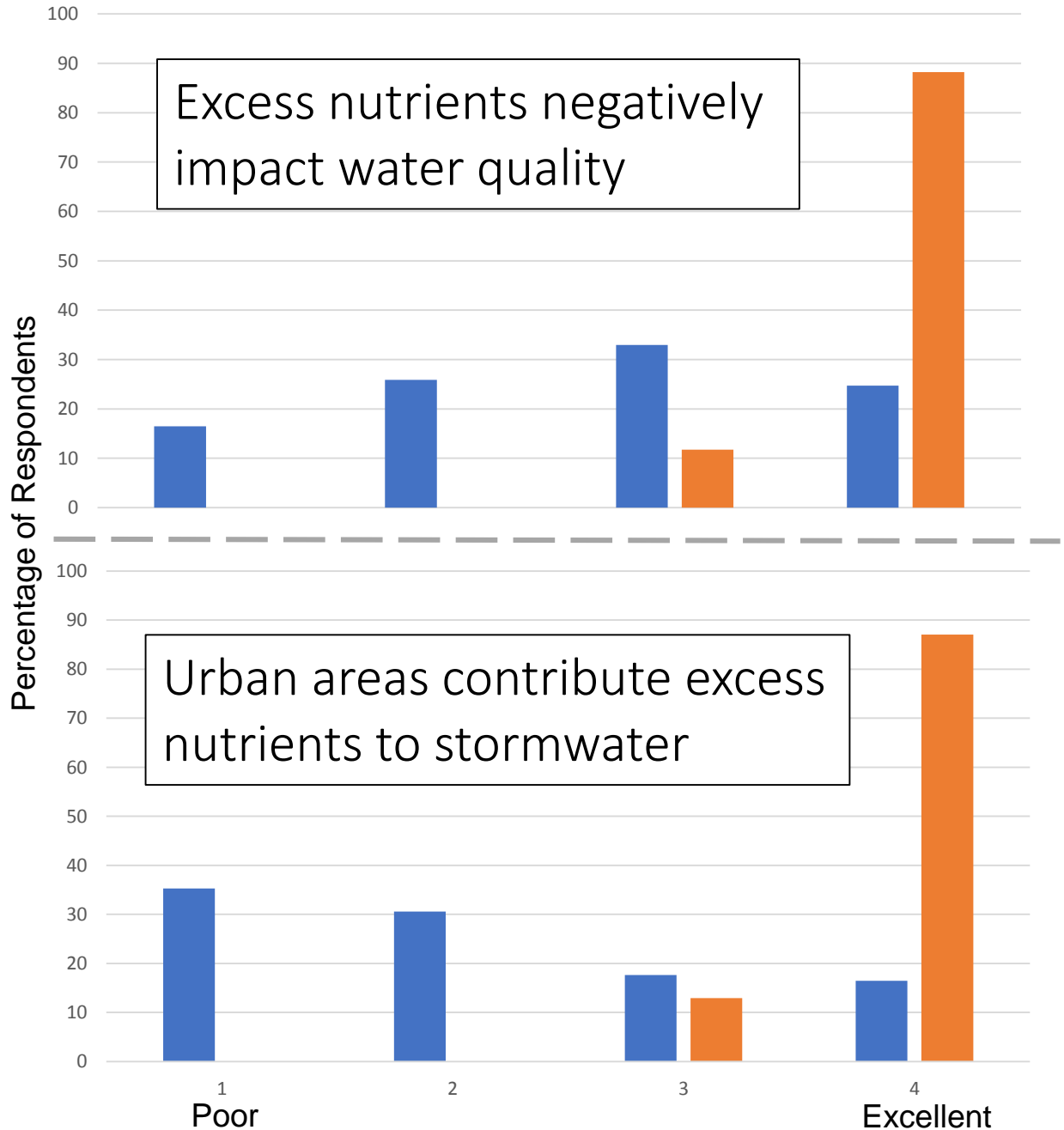
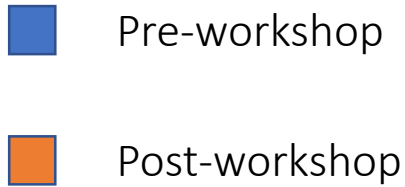


Meet them where they are

More "Aha!" moments

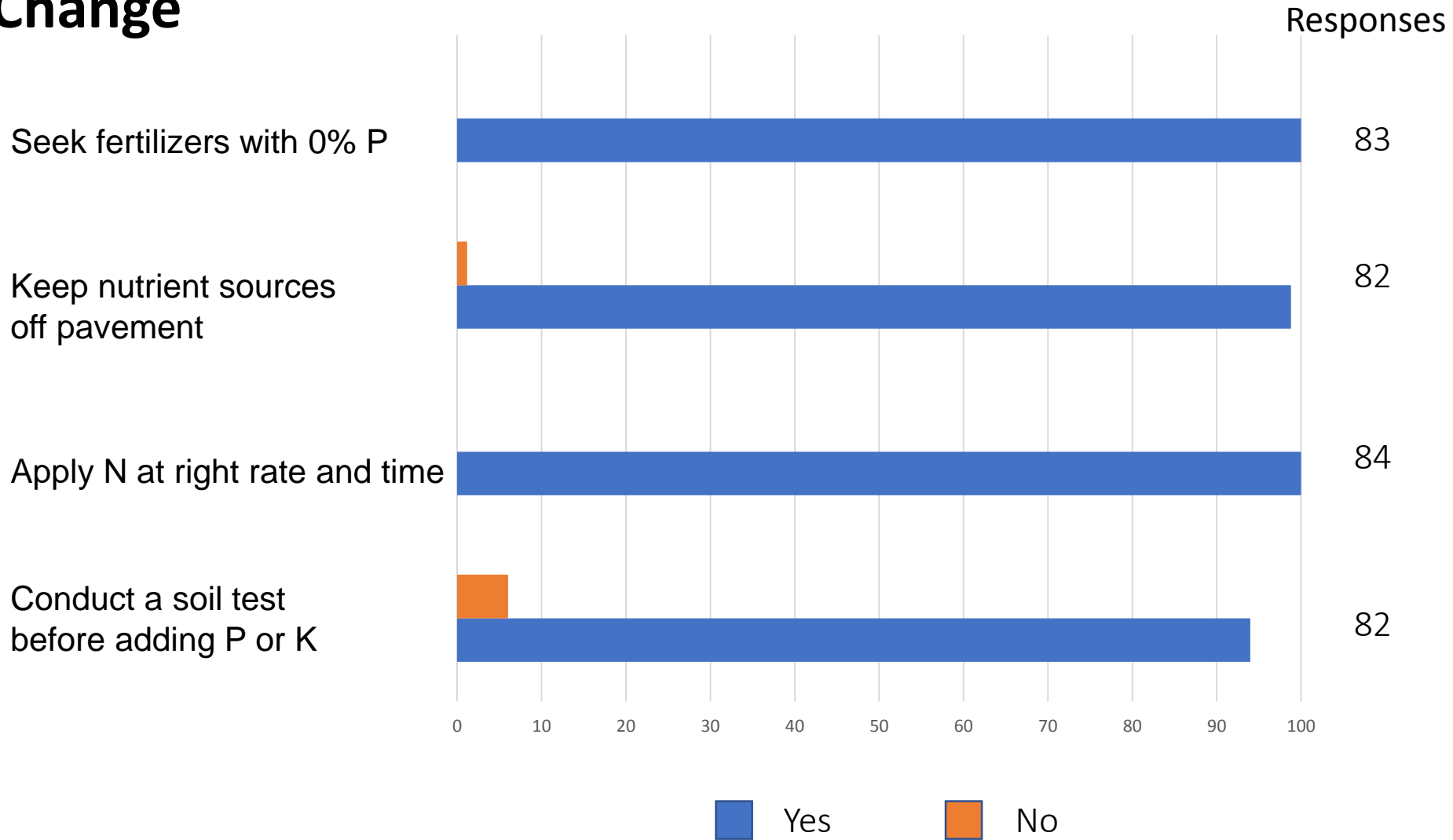
Living Rooms

Surveys: Level of Understanding



Surveys: Intentions

Behavior Change



Sustainable:

Enlist Master Gardeners in a “train the trainer” approach (1445 strong in 50 counties)

- Expand service opportunities
- Identify ambassadors

Outcome

- Extend reach
- More connections
- More samples



Promote:

and

Partner:

Disseminate through neighborhood associations and community groups

Collaborate with other educational groups

Some of the folks we have worked with:



WEST HICKMAN



Offering combination workshops through Dec. 2017

What are your trees telling you?

Outcome

- Increase interest
- Increase engagement
- More fun!

Soil building of your lawn

Contact Suzette Walling (s.walling@uky.edu) for more information.
Program presented by UK's Environmental and Natural Resources Initiative and Urban Forest Initiative.
Funding: LFUCO Stormwater Quality Projects Incentive Grant Program.



Teamwork!



Program Outcomes

Direct Contacts

Workshops, community and professional meetings, soil testing, trainings, personal engagement at events

1,726

Indirect Contacts

Events, articles and publications, website, social media

36,742+

...by the numbers



"I challenged my lawn care company and asked them if they were applying phosphorus"

- Retired Teacher

"I couldn't find no P fertilizer, so I didn't buy any."

- Journalist

...by the fruit

Questions?

*Funding: Lexington-Fayette Urban County Government
Stormwater Quality Projects Incentive Grant Program*

Suzette Walling

Extension Associate, Urban Water Quality
Plant and Soil Sciences Department
University of Kentucky
s.walling@uky.edu

 Cooperative
Extension Service

Image Credit: Kentucky State Parks (parks.ky.gov)