

Report on FOCUS GROUP 1

July 28, 2014 7:00pm

Demographics:

1 Caucasian woman (over the age of 60), 7 Caucasian men (all over the age of 60), 2 African American men (one under the age of 40, one between 40-60), 1 Hispanic man (between 20-30)

What is it that you enjoy most about your lawn?

Most participants seemed to agree that a *green* lawn was ideal and a priority, whether green grass or green weeds. Additionally, many of the participants brought up third party perceived perceptions, such as children having a space to play or neighbors coveting their lawn. There was a general consensus that other people admired or envied their beautiful lawns.

- Even though there are weeds my neighbors still think it looks nice, all green weeds. I cut out the white and yellow ones, but keep the green.
- I have really sandy soil but I pledged to myself that if I ever had my own place I would have a nice lawn because I didn't have one growing up. I worked hard for my lawn.
- I enjoy the results I get when I cut it, how neat and green it is.
- My kids are always picking flowers.
- Personal satisfaction of doing something and seeing something come back. Instead of paying a lawn company, I want to do it myself to see feedback. (This participant lives right on the river.)
- When the neighbors come over to get the mail, they say 'that's just like a golf green.'
- I enjoy my lawn because it's green and a good place for my kids to run around.
- Nice lawn for my grandkids to come and play, I like to get rid of the Bermuda grass.
- I have 2 acres of land and it's very visible, it's a lot of grass to mow. I love the green.
- I take care of 4 lawns: mine, and my family's, I just enjoy taking care of lawns.
- What I love about my lawn is that I do nothing to it [myself.] I have a company that comes twice a week.

- I feel like a Chicago cub fan ‘this will be the year it will look good, but it never does.’ I used to live in the woods and never had grass, now I have irrigation and I set a goal to have a good-looking lawn.

How do you fertilize? Use a company? Do yourself by hand or with spreader?

Most participants were personally involved in deciding how to fertilize and how much to use. Only two people used a lawn care company.

- Multiple people in the group use push spreaders.
- 1 response for a liquid sprayer with a 20 gallon tank
- 2 respondents have someone who cuts their lawns but they fertilize themselves
- 1 participant sometimes hand spreads when the spreader is too wide for some places on lawn

How do you know how much to spread?

A majority of the participants said they use the internet or advice from others when considering how much to apply. Marketing plays a huge role, though, as one participant admitted to increasing his fertilizer use after seeing Scott’s ads suggesting 4 applications. Only 3 participants have used soil tests, meaning the other homeowners are assuming that their grass needs fertilizer.

- Follow the package directions
- Internet searches: multiple participants agreed to using the internet when deciding how much and when to apply lawn fertilizer
- A tip off to me was the Scotts 4 application process, I was using 3 and when I saw a bigger company like Scotts put that out I started doing it 4 times and it does look better. I recently saw a company that recommends 5 times, but uses more gentle applications.
- On the golf course, less is more. More applications with smaller amounts. I go by experience on my lawn. [This participant was a former groundskeeper for a golf course and interjected “expert” opinion about the science of fertilizing which unfortunately influenced the dynamic of the group discussion. Other participants deferred to his opinions.]
- I apply fertilizer at the same time golf courses do. I don’t apply the same amount, but I watch them do it and follow them. 3 -4 times a year.
- It made sense to me to have a pre-emergence at the beginning of the season and fertilize again at the end of the season, so 2 times a year.

- I fertilize once a year- in the springtime and that will last till winter.

One participant has used the local agricultural extension services to take soil tests:

- [By testing,] I found out that I had too much lime and I had never even applied it. I think it behooves many of us that if we are going to use fertilizer, we should test our soil.
- Only 2 other participants had done a soil test.

Do you think you fertilize more or less than your neighbors?

Most of the participants agreed that they generally fertilize more than their neighbors. Everyone agreed that none of them live in a neighborhood where there is a real expectation to have perfect lawns, they just enjoy taking care their lawns.

Weeds and “green” were another theme in this conversation, even though, for most people, weeds were not a primary factor for fertilizer use.

- I mainly do it for weeds. My neighbors on either side are weed factories.
- My neighbors yard: yuck. My yard is beautiful.
- [A nice lawn is] not important to my neighbors. They will come to me and ask how I keep my lawn so green.
- The grass tells me when it needs to be feed. The weather conditions tell me what to do and when to do it. In respect to soil analysis, most of us need it but we don't do it because it is difficult to get all the samples. Even if you send the same samples to the same lab, you may get different results because the soil may dry out or whatever.
- Organizations have spent millions to prove that golf courses pollute waters, and in every case, [they are wrong.] That's because they [the golf courses] use the right amounts of nutrients. The plant utilizes what you're putting on. [This from the golf course “expert.”]

One participant had stopped using lawn fertilizer but mentioned that his lawn is still green and perfect. He reflected that his perfect lawn may be a result of over-fertilizing in the past: “I think I always overdid it because I want my lawn to be perfect. I always applied more than what was recommended on the bag. “

This last comment reflected opinions we discovered in the personal interviews. Many respondents admitted to always adding a little more than what the bag instructed.

What are the benefits of using lawn fertilizer?

Participants were asked to make a list as a group of what they thought were the primary benefits to using lawn fertilizer. After the list was complete the participants voted for their top two choices. The numbers in bold after each statement reflect how many participants voted for that benefit.

- Personal satisfaction-**6**
- It's a guys thing, working on a lawn
- The beauty of it, a green lawn- **2**
- The smell (ambiance)
- The better the lawn, the fewer the weeds.
- Dog satisfaction- **2**
- Family activities- no muddy spots or bare ground- **5**
- Improves the look of the entire property and home
- Reflection of personal values of the homeowner- **8**
- Property value -**2**
- A good lawn helps purify and get rid of Co2 in air, it lowers air temperature and helps lessen global warming impacts-**1**
- Bragging rights

Why do you think some people don't fertilize?

Most participants agreed that they have been told at some point or have heard that they should not use fertilizer. Their explanations for why some people don't fertilize included:

- They are not educated, they are basing that on opinion not fact
- They don't want to pollute
- Many are concerned because people have read about runoff polluting the water
- Laziness
- Cost, or they buy the cheap stuff and it's not right and it runs off or it doesn't work
- People are satisfied with whatever grows. Crab grass is green but they don't know the different values of what you get from a lawn versus weeds. As long as it's green, people think it looks good.
- A combination: they are uneducated and therefore lazy.

Lack of education was a common theme from the group even though most of our participants were not particularly educated themselves about fertilizer use. Some even took notes on advice being given to the group by the "expert" and other participants. The "laziness" comment seemed to be a direct reflection on the critics' perception of themselves as industrious for maintaining a green lawn.

No one brought up other negatives of lawn fertilizing, so the moderator suggested the issues of health and water quality.

Is there any relationship between lawn fertilizer and water quality?

Most of the participants seemed to agree there was some relationship, but they personally were not contributing to it since they think they are applying fertilizer correctly. Only one participant thought seriously about his actions and whether or not they affected water quality. Even after his revelation, the others still insisted that they were applying fertilizer correctly so they were not contributing to water pollution.

- Depends on how its applied
- Depends on the soil
- I fertilize and I also fish. Our ponds have scum and it clogs the ponds and they have to try and clean it up. I am probably contributing to it, I don't know, but I know farmers are also contributing. I have a ditch and a sediment pond in my neighborhood. If that overflows then it will go to the stream and pond. I wonder... when I fertilize, what is the time frame? Is it running off right when I fertilize, or is it running off all year long?
- I don't put fertilizer down right before it rains so that it doesn't wash off.
- [from the "expert":] It depends on the type of fertilizer you use. If you use chemical fertilizer- you should not do it before it rains. If you use an organic fertilizer- it will not effect run off, but you should not do it before a heavy rain. (One participant wrote down this advice and the fertilizer product mentioned.)
- I watch carefully that when I do it I check to make sure its not going to be a heavy rain. I don't want to waste money – environmental reasons too. I try and stay away from culverts and the river as well.
- Don't get mad at me. We have our own runoff plant. Our runoff does not go anywhere but our treatment plant. So I know that when it rains, it doesn't go in storm drains.

At this point there was a discussion on what is actually in fertilizer. There was a clear confusion on phosphorus and nitrogen. One analogy used was "cheap vitamins pass thru you, natural ones work."

Has anyone ever considered health effects from lawn fertilizer?

- I never knew fertilizer had any effect on water or health. I always thought it was just big companies that pollute, like Perdue. Does fertilizer have these warnings on the bag?

- I've seen the signs, 'keep pets off lawn.' But, they don't want the pet to burn their paws because the fertilizer is hot. It's just the type of product used. It's a chemical burn. That's cheap fertilizer.
- When we talk about lawn fertilizer- there are new rules that dictate what can be in it. In the old days we would buy fertilizer outside of the state with different regulations and bring it back for the whole neighborhood because it was stronger and banned in our state. I have seen those dog signs; it implies something- it must mean something. I would be hard pressed to say that there is no effect.
- I think if a lot of people who are well intentioned but maybe are ignorant started hearing all these things about how bad fertilizer is, then we will grow with it. Ignorance, misinformation, and laziness is a terrible combination. I think we can get around that and change a bit if we were given the right info. I don't think we're all out to ruin the world.

What messages would you use to try and get someone to stop using lawn fertilizer?

- If I saw a really nice article in Nat Geo that says we are killing ourselves if we continue to do this. [That is] a group that has nothing to gain other than sharing the truth. I would listen to them over Scotts. Base it on science and real examples. [An aside, added to this report by Elle O'Brien: There have been articles in National Geographic directly discussing lawn fertilizer impacts. NASA did a study that shows turf is the single largest irrigated crop in our country and that fertilizer contributed to a dead zone the size of New Jersey in the Gulf of Mexico.]
- To what extent are lawn fertilizers contributing to pollution? It must be a significant amount if we are having a focus group, right?
- It needs to be on a news program, it needs publicity.
- Am I a large part or am I small part in comparison to the agricultural land? I look at the farms in this area and they have to be contributing much more to the issue, to the bay. The focus should be on the farming [community.] We should be doing something there. If I was [sic] shown significant percentages of how much I contribute compared to agriculture, I would change.
- I have been in agriculture, specifically dairy. There are a lot of misconceptions. The number one goal is the health of that animal. My number one goal is to have a very healthy lawn and take care of my environment. We don't know what the other side is doing so we draw these conclusions and assume they are applying in excess, but in reality they probably are not because they don't want to throw away money. Just like me, because I am fertilizing does not mean I am polluting. [Using] third party credible resources and research is paramount to educating in general. There are always different perspectives, there are resources where you can find it but it's not

readily available to us. I think it's a combination of so many factors; it's not just lawn fertilizer.

- Educate us on the percentage, where is the real source of pollution come from?
- If I buy a bag of fertilizer and it says "if used incorrectly, you will kill the blue crabs"- that will get me. If it's just a .01 percent of me effecting something though, I wouldn't care.
- Well we now know about second hand smoke- that could be a good analogy.
- I'm not very environmentally conscious. As long as it looks good, I don't care.
- If I knew for sure that fertilizer was doing it, then I would stop, but they can't accurately prove that, so I'm gonna keep doing it.
- Six years down the road if your lawn looks like shit, you wouldn't use lawn fertilizer to increase your property value? (This question was asked by a young participant of another older man who had said he would stop fertilizing for the health of the bay. After the question, the older man eventually said he would start using fertilizer again.)
- If there was [sic] an alternative method that didn't pollute, I would do it.
- If we had the proper education on how to treat our lawn properly, I think we would all try to adhere to that method.
- Everyone has different challenges though, different soils, different seasons, we need a lot of scientists telling us what we can and can't do. If you can do it for 80 dollars a month instead of 120, and be environmentally friendly, most people would join.

Moderator broke up the group into teams of three people and asked them to develop a slogan or message that would be effective in reducing lawn fertilizer use.

- Make [the messaging] demographically targeted. If you are looking at Scotts, it's different than local. Target our geographic area and create a sense of ownership for local creeks and rivers.
- Target health effects. Have [sick] kids saying 'I'm going to be like this the rest of my life' on TV. Show gruesome photos, like with the anti-smoking ads. It's good to have a positive message too- "Get green and be green"- But you have 3 people here who are going to quit fertilizing over our dead bodies.
- Educate people- "Make a smart decision"

- “Change our environment, one lawn at a time” [This slogan was well-received by the rest of the group.]
- I personally don’t think we will reach anybody until we completely ban fertilizer in this area. You need to scare the hell out of people. Scare them so bad that they stop. There would need to be a series of commercials saying you did not clean the bay up in time, so we are enacting a law banning fertilizer. When a job doesn’t get done, then the government has to step in for the greater good. Shame them into compliance. [This comment from the one environmentally minded participant.] A few participants debated this suggestion saying “That won’t work at all.”
- Show two lawns side by side- one using fertilizer, the other using an alternative method [that looks good.]
- I relate a lot of things to my kids. If you tell a kid no, they will do it. If you tell them no with some explanation to it, that works better. As a residential consumer, tell me why I can’t do it and give me alternatives. I don’t know the various alternatives.
- Say to me: Here’s how you are impacting the bay, not: Hey, you’re hurting the bay. Then tell me some ways to lessen my impacts.

One participant agreed with this idea and suggested adding cost as well: “Not only will you save x amount, but you will also have healthy rivers and healthy families.”

- Our children today haven’t seen what we saw 50 years ago and think about what their children will see. Is your green lawn worth this? Make some changes and make them now. Use history and a timeline. Give it to people straight. [the environmentalist]
- Use testimonials; use someone who was once a hard-core fertilizer saying how and why he switched his ways.

Only 3 or 4 participants had heard of the new law in Maryland banning phosphorus and setting application restrictions for lawn fertilizer.

Conclusion:

This group was composed, with one exception, of fairly hard-core believers in lawn fertilizing. They were opinionated about the value of their fertilizing practices and were mostly independent-minded people who took personal satisfaction in their lawns. They believed their green lawns reflected their values as proud homeowners. The one environmentally minded person in the group who suggested people should stop using fertilizer drew edgy responses such as “That will never work” and “You can’t tell me not to do something.”

The group seemed more responsive to the idea of reducing use or to the value of proper use if they could be convinced of the rationale behind it. Participants claimed that education influences behavior, implying that with persuasive facts, they might be inclined to change their practices. However, the pervasive attitude that a green, perfect lawn is a “good” lawn and a reflection of a “good” homeowner would be a challenging one to battle.

These participants, for the most part, thought they knew what they were doing with their fertilizing practices and were proud of them, despite their clear misconceptions and lack of knowledge about the science behind fertilizer use. Appealing to the pride of this type of homeowner with messages about the good sense and good science behind reducing fertilizer use, may be more successful than convincing them to give up fertilizing altogether.

Moderator’s notes on potential messaging:

- Your lawn fertilizer is polluting our rivers and here is the science to explain it.
- You are wasting your money when you over fertilize and here is the science to explain it.
- You can reduce the polluting effects of your lawn fertilizer use by doing this: quantity, seasonality, rain events, etc.
- You can still have a green lawn and not contribute to water pollution. Here is how. [Organic, quantities, etc]
- Did you know Maryland passed a law restricting lawn fertilizer use? Educate yourself to be responsible about fertilizing.
- Your lawn should reflect your pride in your home AND in our waterways. Reduce lawn fertilizer that is polluting our rivers and bay.
- It’s not just agriculture. Fertilized lawns contribute x% of the nutrient pollution to our rivers and bay. End or reduce your fertilizer use.
- Show your pride in your Eastern Shore home: don’t fertilize your lawn.

Report on FOCUS GROUP 2

August 27, 2014 7:00 pm

Demographics

6 Caucasian females (1 under 40, 3 over 40, 2 over 50 years old), 1 African-American female (over 50 years old). 2 African-American males (one under 40, one over 40 years old) and 2 Caucasian males (over 50 years old).

Let's begin by sharing something about your lawn that brings you enjoyment.

As with the first focus group, most participants enjoy a *neat* and *presentable* lawn that their neighbors can admire. Again *green* and *freshly cut* were key words to describe an ideal lawn. Multiple participants were dog owners and pet health versus lawn appearance remained a topic throughout the session.

- My husband keeps it nice and green so we can entertain outside.
- I like the way my lawn looks when it is freshly cut, its neat and it makes my house look neat.
- I like gardening and pulling weeds so it looks nice and presentable.
- I'm into landscaping and I like to keep it nice and presentable.
- My lawn is easy to maintain, it's not too big its not too small.
- I like that my lawn is green and I like that I don't do much to keep it that way.
- I wish my lawn looked better. I'm always working hard to keep it neat and tidy. I have lots of dogs so I am always filling in holes and patching grass holes. I'm hoping to learn a little something tonight too.
- I have dogs as well, dirt diggers. So I'm either filling in holes or killing fleas.
- I like watching wildlife like deer in my backyard.
- I have really nice flowerbeds, but it's not technically a lawn.
- I like the compliments I get from my neighbors about my lawn and how it's kept up.

Tell us about your fertilizer use: how and when do you fertilize your lawn?

None of the participants used a lawn care company to fertilize their lawn and participants fertilize throughout the year, excluding winter. Eight participants apply fertilizer by hand and three use a spreader. Combo fertilizer and weed killer was brought up as it was in the first focus group.

- I do it twice a year, before springtime and usually end of the summer.
- I fertilize a little in the fall, and rake the thatch out. Not the just the leaves on top. I fertilize heavy in the spring.
- I do it in the summer because I'm trying to kill my crab grass at the same time. I don't know, but I've heard it benefits more to apply in the fall than in the spring. A farmer told me to do it at the end of summer so the ground soaks it up.
- I agree that I've heard the end of summer too.

How do you decide how much fertilizer to spread on your lawn? What sources of information do you trust?

Answers were very similar to first focus group.

- Got advice from Robins Nest, a local garden store
- Google
- Golf course experts
- Soil samples
- Word of mouth

How do you decide which fertilizer to buy?

Two of the male participants spoke about the science behind fertilizer and were passionate about lawn care. They believed they were applying fertilizer properly. The rest of the participants were less educated on their fertilizer choices and chose their brands by habit.

- Slow release in fall so you don't compete with other grass. You look at the numbers on the bag, low nitrogen number in the fall and higher nitrogen in the spring for newer grass.
- I used to look into all that (referring to previous comment) but it became too much.
- Higher nitrogen in spring, low nitrogen in fall. Different type of fertilizer depending on the season.
- My husband usually gets organic, and the high nitrogen is important because of our sandy soil.
- I have really good soil so I just buy year round fertilizer.
- Sometimes I buy fertilizer and weed killer together so I only have to do it once.

Do you fertilize more or less than your neighbors? Is there an expectation in your neighborhood or community about what kind of a lawn you will have?

Almost every participant agreed that there was a sense of competition in their neighborhood to maintain a perfect lawn and they often noticed when other homeowners were out fertilizing their lawns. In the previous focus group participants did not feel a sense of duty to have a perfect lawn, rather they were mostly leaders in their community with respect to the time and care they put into their lawns. In this focus group, it seemed like participants were maintaining their lawns more for their neighbors to see than their own enjoyment.

- I live on an old farm so I have a lot of land, 2.5 acres. I probably fertilizer less than I should. It's a lot of land.
- Most of the people around us have pretty nice lawns.
- We probably fertilize more than most to keep ours green. We have a lot of clover, more than most in our community so we have to do a bit more in our lawn. There is an expectation to have a green lawn in our community. We live across from a TrueGreen Lawn and they are always out there fixing their lawn. My husband feels like he is in competition. Especially if you have a huge front lawn and huge backyard. Everyone is looking and competing for who is out there taking care of their lawn.
- I think neighbors have a lot to do with it. I feel like I have to keep up. I know flowerbeds are bigger deal in my neighborhood, but I only have one and my neighbors have many.
- Especially if you have a larger front lawn. Everyone is looking out and competing to see who has a larger front lawn.

What would you say are the most important benefits of fertilizing your lawn? Let's prioritize your responses.

- aesthetics (5)
- neighborly competition (3)
- good grass retards weeds (1)
- easier to maintain (2)
- contributes to air quality (2)
- thicken up the grass so its more cushion under your feet (3)
- for us, it's a lot cleaner (regarding tracking dirt into the house) when we have grass instead of dirt and weeds (5)
- Pride in a green lawn (1)
- property value – makes your home more sellable

Have you ever heard anyone say that you should not fertilize? What do you think of what they said? Where and from what source did you hear this?

Only one person brought up runoff and a connection to bay health. Multiple women were focused on pet health, but did not raise the idea of not using fertilizer on their lawn. In the previous focus group “laziness” and “lack education” were frequently used to describe non-fertilizer users, but neither were mentioned in this group. In general these participants seemed less knowledgeable about proper fertilizer application. “I think...”, “I’ve heard”, and “maybe it’s a myth” were said in conjunction with application statements.

- I think if you have sod maybe you shouldn’t fertilize. The sod is maybe already fertilized. But maybe that is a myth.
- In terms of run off, it being washed away and going into the storm drains and being washed into the bay.
- You should fertilize after it rains so it doesn’t run off.
- My husband complains that he has to mow the lawn more after I fertilize; that could be a reason to stop.
- Some types of fertilizer can hurt your pets or kids.
- I have heard that because I have pets it could make them sick if they dig it up.
- I’ll just fertilize my lawn in stages because of my animals. To be on the safe side.

List reasons not to fertilize on white board. Let’s prioritize these responses.

As mentioned before, laziness and lack of education were answers given in the first focus group, but were not mentioned in this session.

- pet health (8)
- run off to sewers to bay (5)
- fresh sod
- over fertilization can damage lawn (3)
- time (1)
- cost (5)
- smell

Of all the ideas we have discussed, what would inspire you to fertilize less or not at all? What messages would convince you to stop fertilizing?

A discussion broke out over whether it was good or bad that fertilizer dissolves quickly and participants couldn't come up with a clear answer. There was an obvious lack of knowledge about how fertilizer actually works. Agricultural pollution and farming was brought up, similar to the first focus group. Participants named farmers as the biggest polluters in the Bay region, but did not recognize that their fertilizer use could have the same effects.

- As far as pet health and over fertilization and cost: my mom raises horses. If someone were worried about the chemicals in the fertilizer hurting my pets I'd get a pile of horse manure and throw it on the lawn instead.
- There are so many farms out here anyways who use all the fertilizer. And there are so many pesticides they spray too. Try tasting the tap water.
- It depends on the fertilizer. Some you can put on the ground and it will stay for three days, some will stay for months. You can buy strong like the farms do, but you can go to Lowes and buy the cheap stuff.

Have any of you heard about any relationship between water quality and fertilizer?

Only one male participant was outspoken about his knowledge on the connection between fertilizer and water quality. Unlike other conversation topics, this comment did not guide conversation or facilitate group discussions.

- I'm a seafood lover. I have some buddies who do fishing and they said the crabs are stressed this year, I'm paying more for crabs. A lot of it has to do with hurricanes, but there is run off and pollution in the bay. There is something going on. I'm not saying it's all from fertilizer, but I know it's a part of it.

If you heard scientific information that convinced you that lawn fertilizer has negative affects on water quality, would that make a difference in your fertilizing practices? How much, if any, scientific info should be included in messaging about the harmful effects of lawn fertilizing? Where should that information come from?

Participants stated that scientific evidence would make a difference in how much they fertilized. In both focus groups participants said that statistics and numerical data would influence their decisions. Participants also noted that along with evidence that fertilizer was harming the environment, they needed information on alternative lawn treatments. Trusted informational sources included government agencies and environmental groups involved in the Bay.

- Sample tests from the city to know what's in your lawn
- The fact that MD has the highest cancer rates in the entire country.

- Info would need to come from EPA, agriculture resources, non-profits, the people who work to protect the Bay. News articles, WBOC piece.
- I don't think the Chesapeake Bay Foundation would be enough for me. I pay a \$15 monthly fee to the town of Easton in my water bill to help the Bay and I don't see where that money goes, no data, no statistics to tell you where that money goes to.
- I'd like to see alternative suggestions to using fertilizer.
- Give me a seasonal recommendation, give me an alternative.
- Organic fertilizer.
- There is a green license you can get and you can take classes on run off. Just bring awareness through education.

Group broken into smaller groups of 3 people and were asked to act as an ad agency and develop their own anti-fertilizing message.

Team 1 – *Get rid of the fertilizer*, help the ground become decontaminated. On Bay St. there is a bad smell from the nitrogen. Reducing air pollution to gain control of the ground solution. Not fertilizing will help air quality and decontaminate the ground.

Team 2 – *Environment*. It's clear cut. We were going to say something about kids. Don't fertilize, or you could catch cancer and die. You care about your kids, but fertilizer is killing them. Children and pet health. Most of the chemicals they use get into our water and then you use that water to feed your family and pets. If people see a picture of their pets dying because of fertilizer that would make them stop. Children too, but people think pets are more fragile.

Team 3 – Show a correlation to your health or your animals' health. Highlight that you could get sick and die. Your pets have more contact with your yard. They walk, play, sleep, drink from puddles.

I would need tests, scientific evidence between health and water quality. Like [the anti-smoking campaign]. Do it like cigarette commercials, show your dog walking across the lawn and his leg falls off. Like the cigarette commercials where the lady shows the hole in her neck. You have to give people an example.

Team 4 – Our first idea was pet health as well and then we started thinking about the cost. Right now people think the government is spending too much money. They want to know where their taxes go. If they could see where all that [fertilizer] money goes, and what the monetary repercussions are, that would hit home. People who normally wouldn't care would care if it were about money.

Do you think about cost when you buy fertilizer?

Participants all agreed that if you are applying too much fertilizer then you are wasting money. A female participant asked: “who actually reads the directions on the bag?” The male participants all said they read the directions on the bag, while the female participants were skeptical of that statement. Participants frequently brought up the effectiveness of cigarette campaigns and mentioned putting warning labels on the fertilizer bags to capture attention.

- Is there a health warning on the bag? Are there skulls or crossbones? You ask who fertilizes by hand? I wash my hands, yes, but I walk around background and I’m absorbing some of it.

Is anyone aware of the MD law that was passed addressing fertilizer?

None of the participants were aware of Maryland’s Fertilizer Use Act that came into effect in October of 2013, showing a lack of awareness in this region. This act includes restrictions on applying fertilizer near a water body, the months one can apply fertilizer, and mandatory professional certifications.

How would you get health information out?

“Online” was a popular response. One female brought up educating younger generations so they could influence their parents. This was the first time someone brought up formal education on the topic.

- Lawn care centers
- USDA sheets, and a number to call
- A stop sign over the bags of fertilizer at the store. How many times do you just go over to Lowes and just grab the bag because that’s what you’ve always used? It’s always buyer beware.
- My sister went by a pond and there were bales of hay and that they use to suck up algae in the pond. She said she learned that in school. So maybe another way is to educate the kids, so they can educate the parents.

Make a slogan:

Participants created rhyming slogans that had few words and addressed the negative impacts of fertilizer, particularly health. Participants spoke about other campaigns and slogans that have stuck with them. Celebrity spokespeople and social media were recommended as impactful ways to spread a message.

- *Fertilizer vs. nebulizer.*

- *Fertilize less, live healthier.*
- *Pollution stinks - just like you wouldn't drive and drink.*
- *Your health is best when you fertilize less.*
- *Greener isn't cleaner.*
- There is a song out there called Same Love that makes people think about gay rights and if they were to take the music and change the lyrics and make a song of what the bay could be like... what if your kids could play in it... that song goes across the spectrum.
- Something catchy like the "Give a Hoot, Don't Pollute". That was a campaign from the National Parks that I always remember.
- The "Be the Wall" billboard in Cambridge [that has a message to parents to combat] teen drinking always strikes me.
- Tell big stories with photos. Especially if you use everything all together. Use Pinterest, Instagram, Facebook.
- Get a celebrity to say not to fertilize.

Conclusion

- In contrast to the first focus group, this second group had a female majority and participants were easily influenced by each other.
- There were no strong opposing opinions between participants, which led to fewer exchanges of conversation.
- Neighborly competition was a strong motivator for using fertilizer to create a green lawn.
- Some participants owned pets and pet health remained a topic throughout the conversation. Pets were both a motivator to have a *neat* lawn, as well as a reason to stop using fertilizer as a health consideration.
- Overall the participants in this focus group seemed far less educated on the proper use of fertilizer, and less aware of its connection to water quality than the first focus group.

Moderator's note:

If this group were representative of the public then a significant percentage could be convinced to alter fertilizing behavior by simply becoming aware or being educated about the negative affects of lawn fertilizer use. This group was the first 30% of the bell curve

and would respond to a variety of messages: a public health message, a water pollution message, a save your money message, or any science based message, etc.

Focus Group #3

September 30, 2014

Demographics:

Two African American men; one African American woman; three Caucasian women; four Caucasian men.

Introduce yourself and say one thing you enjoy about your lawn.

- I like the style I cut it, I keep it cut close and I like it dark green. I like my lawn for the looks.
- I just like how green my lawn is and having activities out on the lawn.
- I enjoy my lawn a whole lot, planting things and watching them grow. I enjoy the earth.
- I like the fact that I found something that kills dandelions.
- It's a lot to cut, but it keeps the dust down.
- I like lawns, but I like bushes and flowers and gardens, so I like to create a nice environment in a lawn area.
- I like planting flowers and keeping the grass cut short.
- My favorite thing about my lawn is the smell when I'm cutting it. Fresh cut lawn is a great smell.
- I only have a little area, but I can still have my herbs. I like having my basil there.
- My lawn is sometimes a problem because of the weeds and one of the things that happens in this area is the wire grass. It can remain as a grass that stays and turns brown early, all the stuff that is a problem.
- Aesthetics, planting and watching the planting process, the whole process of growing.

Everyone in this group fertilizes their lawns. How do you decide how frequently and what season?

- Fall, once a year.
- I used to fertilize two to three times a year and the lawns did stay greener, but based on environmental concerns I reduced the amount I fertilized. I went from early spring, late spring, early fall, and late fall, and now I just do spring and fall.
- Spring and fall
- Spring and fall--that's what my father said and he knew everything.

How do you make those decisions? Where do you get your information on how to fertilize?

- My father (2 people)
- I read the bag, seriously.
- My brother used to work for a lawn care company, he says spring and fall.
- My boyfriend owns a lawn care company. Based on his experience.
- I originally got info from AgWay and then I moved down here. I farmed when I was in my earlier life.
- Google

How do you know what to buy?

- I go by chance. I just grab one and if I like it I keep getting it.
- I ask at Lowe's and they recommend.
- I do a soil test every year, pH. It tells you what you need. You can't pick a 10-10-10 if you don't know that you need it.
- (asks) How do you get a soil test here? Who do you send it to?
- (responds) Delaware, University Extension. Same as they test your oil they test your soil.
- I try and be green so I try and go with whatever is the most environmental.

Do you fertilize more or less than neighbors?

Mixed answers:

- More
- More
- About the same
- Less
- Same

Does anyone consider what your neighbors think about your lawn?

Heads shaking no in the group.

- I'm always proud when someone tells me my lawn and house looks nice. Makes me feel good.

Can you tell me any other reasons people fertilize? Prioritize these responses.

- Keep the grass healthy (8)
- Aesthetics -color (6)
- Initial growth - when you put down fresh seed and when you plant trees (1)
- Tradition (1)
- Pride in lawn (3)

Have you ever heard anyone say you shouldn't fertilize?

- Yes, it was in the context of a class. I took an environmental class and they were saying it's bad for the environment and to use compost without chemicals in it.
- I would say that there are a number of environmental groups that advocate for the Bay. Particularly on lawns. Particularly on golf courses. They are going with the "brown is beautiful."
- They don't like you to fertilize because it runs off into the water supply and streams.
- It can kill animals. Animals eat it and die.
- Like dogs. They put little flags up.
- Fumes. Respiratory reasons.

How about frequency, do you ever think you should fertilize at a different frequency?

- Commercials and on their website they recommend three times a year. But they sell fertilize too so...
- We fertilize with what they say.
- The more that it's advertised, the more you buy.

Are any of those reasons persuasive to you? Do you think about these issues?

- Fumes, inhaling the fumes. You see some people with masks when they fertilize.
- You got to think about the environment, why wouldn't you? Especially around here where there is so much nitrogen. I think environmentally is the only reason not to fertilize, or to fertilize.
- That's why there are new laws for fertilizer. It's changed in some states; they don't sell fertilizer in MD that contains phosphates.
- Nine or ten other states in the country have voted for the same thing.
- They are going to try and cut it back more from 14 to 10 (in reference to the law).

Only 4 people new about the new laws, all men.

How do you feel about the fertilizer laws that are being passed?

- Well I'm not the smartest guy in the world but I can see what nitrogen does. It makes my lawn grow. It's just like DDT, it has consequences. That was the best pesticide we ever had now look at what that did. It's nasty but it works.

If you were to hear about any major environmental issue associated with lawn fertilizer would that affect your actions?

- It could affect mine, I see all the criticism related to farmers and I think there is more contribution to what's happening in our rivers from lawns and sewer plants than the farmers. There is more manure put on farms when I was growing up than there ever is today. This whole area was covered in dairy farms and they spread manure on all of it. I would stop, I wouldn't have a problem. I could stop fertilizing and forget about pride.
- I would stop too.
- It's always a balance and a tradeoff. It depends on how close to the water I am, if I live in the middle of Maryland, or if live on the water. When you feel like you are directly responsible for any harm to environment, I feel like anyone in their right mind would stop, no matter what your father did, if you are killing crabs and rockfish.
- Yeah I agree.
- If it started drastically changing our environment I would stop. Like if it was killing fish in the sea. If it became a really big deal and was on the news a lot.
- If it harmed any wildlife I would stop.
- We need a new Rachel Carson [for lawn fertilizer.]

What kind of information would you need?

- Numbers, data, truth and facts.
- And groups other than the environmental ones. I would think someone from universities and I wouldn't pick UMD because they are too liberal. A southern State like Clemson or NC State. They would give you more truthful, neutral information than UMD.
- UMD could have a conflict of interest. It should be coming from another university from another state.
- I would change if the president said that.
 - I wouldn't trust that!

- If it's from another environmental group it wouldn't seem impartial. Like a completely neutral party.
- It's usually all or none. Environmental groups are just as tough as University of Maryland.
- You have to look at where we live. We have water all around us. We fertilize and we recycle and do all of that but we need to look at the numbers. We need to look at fish populations and crabs. If you look at populations 100 years ago we were doing great. We need to question what happened there. Is there a connection with that?

Based on some of these issues we have drafted messages that you might see in a newspaper, on billboard, etc. I want to show you examples of messages about this issue and you can tell me what you think about them.

It's not just agriculture; your lawn fertilizer pollutes MD.

- Amen!
- I don't like it because I just have to look at it too long. If I'm driving I wouldn't be able to read it [on a billboard.] I don't like the map; I don't like how the pictures are crooked. I don't like it at all. The message doesn't resonate with me. I'm trying not to analyze it but it's confusing.
- I don't pay as much attention to the map and the waterways. I read the statement first and I like the statement.
- I like it.
- No, I don't like it. You don't know what I'm using [for] fertilizer. What about if it's green fertilizer. You don't know my lawn; I don't like how you are accusing me. I take it personally.
- The first line is confusing; it's not just ag, where is this coming from? I don't get it.

One participant was confused by the term "turf."

- I like it. What is turf? That's what's coming off my lawn right?
- You need to say a little bit more about what it's doing. You say it's polluting but what is it actually doing?
- Show more of western MD. It's a big part of the state. It focuses on the shore and the bay and the western shore contributes as much if not more than the eastern state.
- I agree with the facts concept. More details about how much pollution it causes.
- This looks like an ad Purdue would put out.
- I think it's good as a teaser. I'd want to read more about it in an article.

Fertilizer pollutes our waterways. Every lawn matters.

- I don't know. If fertilizer is so bad why are they laying on [the lawn.]
- I can't see the mixed green lawn – we would never know [that is clover.]
- Most people don't know what clover is. They don't know that it produces nitrogen.
- More facts. If you are trying to say each lawn pollutes then say "one lawn pollutes our waterways by X". It's just a bunch of people laying on a green lawn. Everyone will say wow that needs to be cut. They won't know it's a non-fertilized lawn.
- Not inspiring. Doesn't come through.

Grass is the single largest irrigated crop in the United States. Lawn fertilizer pollutes our waterways.

- I like that one, it gives more information.
- It's too short, it's a little map and I don't know where we are.
- I would think corn and beans were the largest crops. So that makes me think.
- I would switch irrigated to fertilized.
- Very simple I like that it's the whole US.
- You might lose some people with irrigation. [What does that mean?]
- If the amount of grass in the US is that large then it must be polluting our waterways. So if its irrigated it must be polluting a lot of waterways.
- Why do you reduce? How about "eliminate lawn fertilizer."

Why expose them to chemicals. Reduce lawn fertilizer!

- I thought they were on a couch.
- I like it.
- I like that.
- The toxic sign on the grass-- that's the given. You don't want to hurt animals and children.
- Make the skull more visible but I like it.
- We all fertilize correct? So we don't believe that ad. We all do it. Keep in mind there are no facts or testimonials at all.
 - Well we are learning about it now.
 - I think that's a public awareness. I would have never thought it would hurt my grandkids. I like it.
- Doesn't this infer that all lawn fertilizers have chemicals in them other than nitrogen and potassium [sic]? Those are natural elements. You are inferring all fertilizer has chemicals in it.
- Obviously it's a reactionary ad.

Don't be duped. Once in the fall is enough. Lawn fertilizer pollutes.

- I'd go with that one.
- Yeah that's a good one.
- It's like save your money and save the earth.
- It doesn't matter what your beliefs are to interpret that.
- (everyone understands it, its clear)
- At least worth a try

The last two ads shown, the child and dog on the grass with the skull and cross bones and the cost ad were the favorite.

So the cost ad was the favorite of the group. What are other top three vote getters?

- 1) It's not just ag: 6 votes
- 2) family on the grass: 4 votes
- 3) lawn is the :largest crop 1 vote

What mediums would you use?

- Billboards

- brochures
- Television
- Public awareness campaign
- Stamp on the fertilizer bag like a warning on a cigarette package. Signage where the fertilizer bag is sold.
- Got to be grass roots, local people. Maybe a television ad, but that's a lot of money. Maybe someone sponsoring this locally, like Eastern Shore Land Conservancy. Use the public library. The way it is now, social media. I didn't know a lot of this information before tonight so get the information out now.
- Maybe in schools.
- The internet.
- Facebook
- YouTube. When you watch a video there is always an advertisement in the beginning.
- A funny video. Make something go viral like the ice bucket challenge.

Have you heard of Midshore Riverkeeper Conservancy?

- I think they were very influential with what happened with the farmer from Ocean City.
- I volunteer with Chesapeake Bay Maritime Museum. I know what they do.

Does anyone have any parting ideas?

- Give alternative suggestions. Like using as much natural compost if possible.
- A greener lawn fertilizer, once a year is kind of a good concept. Yeah once a year, everyone saves money and do you really need it? You sacrifice a little less green for the environment. But we all want a little green, so there is always that trade off. Just do less.
- I think what it comes down to is that people are set in their ways; if it's not illegal they aren't going to think its harmful. If people have been doing it their whole life then they're not going to stop without laws.

Conclusion

Focus group participants were very engaged in the conversation, and a few participants had strong beliefs and were very vocal. The advertisement feedback reflected our findings in previous focus groups. The retired farmer supported the agricultural messaging, and the cost and public health advertisements were well received. Participants suggest more facts and alternatives in the messaging. Some participants were confused with the terms "turf" and "irrigation," which suggests wording needs to be very simple.