

GENERIC

† 0/1 Indicator Variables

ID- Unique, random 4 digit ID number assigned to each participant

lawn- Have lawn responsible for maintaining
1 "Yes" 0 "No"

fertilized- Whether or not fertilized lawn last year and did it themselves or hired contractor
1 "DIY" 2 "Contractor" 0 "Not Fertilized"

fertilized2†- Lawn was fertilized last year

selffert†- Lawn was fertilized- homeowner did it their self

confert†- Lawn was fertilized- homeowner hired a contractor

attractive- Likert for how important an attractive lawn is
1 "Very Unimportant" 2 "Unimportant" 3 "Neutral" 4 "Important"
5 "Very Important"

appmethod- Spreader used to apply fertilizer
1 "Drop" 2 "Broadcast" 3 "Hand" 4 "By Hand" 5 "Liquid" 17 "Not Applicable"
18 "Don't Know"

association- Live in a Neighborhood or Homeowners Association
1 "HOA" 2 "NA" 0 "Neither"

hoa†- Lives in an HOA

neighass†- Lives in a Neighborhood Association

hoarules- HOA or NA has rules with regards to lawn care
1 "Yes, and I followed them" 2 "Yes, but I did not follow them" 0 "No"

hoarules2†- HOA or NA has rules with regards to lawn care (simplified)

freqwater- Frequency waters lawn when no drought
0 "Never" 1 "Daily" 2 "Every Other Day" 3 "Twice a Week" 4 "Once a Week" 5 "2-3 Times a Month" 17 "NA"

sprinkler†- Has an in-ground sprinkler system

automated†- In-ground system is automated

hoasprink†- Interaction term for living in an HOA *and* having an in-ground sprinkler system

BMPs

bmp- Know the term “Best Management Practice”

1 “Know what it Means” 2 “Sounds Familiar” 0 “Don’t Know”

learn- Would like to learn more about best ways to fertilize lawn/garden

1 “Yes” 0 “No”

sweeps- Homeowner or contractor sweeps impervious surface after fertilizing

1 “Never” 2 “Rarely” 3 “Sometimes” 4 “Usually” 5 “Always” 17 “NA”

fertstrms- Homeowner or contractor applies fertilizer to stream banks

1 “Never” 2 “Rarely” 3 “Sometimes” 4 “Usually” 5 “Always” 17 “NA”

bfrains- Homeowner or contractor applies fertilizer right before it rains

1 “Never” 2 “Rarely” 3 “Sometimes” 4 “Usually” 5 “Always” 17 “NA”

mulches- Homeowner or contractor mulches grass clippings

1 “Never” 2 “Rarely” 3 “Sometimes” 4 “Usually” 5 “Always” 17 “NA”

tested- Soil tests are performed...

1 “Never” 2 “3 Years or Less” 3 “Every Other Year” 4 “Yearly” 17 “NA”

limed- Lime is applied to the lawn...

1 “Never” 2 “3 Years or Less” 3 “Every Other Year” 4 “Yearly”

5 “When Testing Says To” 17 “NA”

readlbl- Homeowner reads label on fertilizer bags

1 “Never” 2 “Rarely” 3 “Sometimes” 4 “Usually” 5 “Always” 17 “NA”

followlbl- Homeowner follows label on fertilizer bags

1 “Never” 2 “Rarely” 3 “Sometimes” 4 “Usually” 5 “Always” 17 “NA”

GRASSES

† 0/1 Indicator Variables

coolgrs- Percent of lawn cool season grass

0 “None” 1 “<25%” 2 “25-50%” 3 “50-75%” 4 “>75%” 18 “Don’t Know”

cjanuary~december†- cool season grass fertilized in this month

cidkt- Does not know what months cool season grass was fertilized in

cna†- Fertilizing cool season grass not applicable

cfert- Number of months cool season grass fertilized in

coost†- Cool season grass fertilized in the WRONG month (January, April, May, June, July, August, December)

warmgrs- Percent of lawn warm season grass

0 "None" 1 "<25%" 2 "25-50%" 3 "50-75%" 4 ">75%" 18 "Don't Know"

wjaneary~december†- Warm season grass fertilized in this month

widk†- Does not know what months warm season grass was fertilized in

wna†- Fertilizing warm season grass not applicable

wfert- Number of months warm season grass fertilized in

woost†- Warm season grass fertilized in the WRONG month (January, February, March, June, September, October, November, December)

grass- Amount of each type of grass reported to have in lawn

0 "None of Either" 1 "75% Cool 25% Warm" 2 "75% Warm, 25% Cool"
3 "All Cool" 4 "All Warm" 18 "Did Not Know"

DIY FERTILIZER

† 0/1 Indicator Variables

bagsize- Size of bag(s) purchased last year

1 "Small (~15 lbs, 5,000 sqft)" 2 "Medium (~30 lbs, 10,000 sqft)"
3 "Large (~45lbs, 15,000 sqft)" 15 "Do Not Recall"

bagnumb- Number of bags purchased last year

1 - 8 "1 - 8" 20 "Other" 15 "Do Not Recall"

bagquant- Quantity of bag applied with each application

1 "All" 2 "3/4 Bag" 3 "1/2 Bag" 4 "1/4 Bag" 15 "Do Not Recall"

*****Fertilizer type list and fertilizer rate variables at end of this document**

Contractor

† 0/1 Indicator Variables

attention- I pay attention to how much fertilizer my contractor applies
1 "Never" 2 "Rarely" 3 "Sometimes" 4 "Usually" 5 "Always"
6 "I Can't" 7 "NA"

procosts- Costs of professional lawn care last year (if services included fertilizer application)

profert†- Contractor applied fertilizer (all yes)

proweed†- Contractor treated for weeds

protrim†- Contractor mowed lawn

proedge†- Contractor edged lawn

proleafremov†- Contractor removed leaves

proaeration†- Contractor aerated lawn

prooverseed†- Contractor over-seeded lawn

proprun†- Contractor pruned trees and shrubs

progrub†- Contractor treated for white grubs

proorganic†- Contractor provided organic-only option

proother†- Other contractor services

pronum- Number of contractor services payed for

LAWN SIZE

lotsize- Reported lot size in acres

invlotsize- Inverse of reported lot size

lotmowed- Estimated percentage of total lot that is mowed
0 "None" 1 "10%" 2 "25%" 3 "33%" 4 "50%" 5 "66%" 6 "75%" 7 "90%"

lowmowed2- Estimated percentage of total lot that is mowed (percentage equivalents)

sqft- Estimated square footage of lawn ($lotsize * lotmowed2 * 43,560$)

sqft2- Estimated square footage of lawn (SUM_ACRE*lotmowed2*43,560)

TEST

† 0/1 Indicator Variables

correct answer in italics

test_tf- Adding more fertilizer makes grass greener- True or False

1 "True" 2 "*False*" 18 "Don't Know"

test_rate- Percentage of bag to apply to achieve application rate

1 "All of bag" 2 "3/4 of Bag" 3 "*1/2 of Bag*" 4 "1/4 of Bag" 18 "Don't Know"

test_npk- What do numbers 10-1-5 mean?

1 "Pounds NKP" 2 "*Percent NPK*" 3 "Percent PNK" 4 "Percent NKP"

18 "Don't Know"

allcorr†- Got all three test questions correct

GEOGRAPHY

† 0/1 Indicator Variables

pop~ - Present on property

md~ - Most dominant on property

ld~ - Least dominant on property

~vs† - Very steep slope

~ss† - Steep slope

~gs† - Gentle slope

~ft† - Flat, top of slope

~fb† - Flat, bottom of slope

river- River or stream on or near property

0 "None" 1 "Runs Through Property" 2 "Borders Property"

3 "Runs w/i 100 ft of Property" 4 "Runs w/i 500 ft of Property"

lake- Lake or pond on or near property

0 "None" 1 "Present on Property" 2 "Borders Property"

3 "Present w/i 100 ft of Property" 4 "Present w/i 500 ft of Property"

bank†- Property near enough (w/i 100 ft) to lake or stream to have a bank on property

DEMOGRAPHICS

† 0/1 Indicator Variables

occupants- Number of occupants in the home

yrsataddr- Years lived at address

own- Own or rent

1 "Own" 2 "Rent" 19 "Prefer Not to Say"

age- Age in years

education- Reported highest level of education completed

1 "Some High School" 2 "High School or GED" 3 "Some College"
4 "Completed College" 5 "Graduate Degree" 6 "Some Technical"
7 "Completed Technical" 19 "Prefer Not to Say"

education2- Reported highest level of education completed (simplified)

1 "Some High School" 2 "High School or GED"
3 "Some College or Technical" 4 "Completed College or Technical"
5 "Graduate Degree"

income- Reported household income range

1 "<\$20K" 2 "\$20-40K" 3 "\$40-60K" 4 "\$60-80K" 5 "\$80-100K"
6 "\$100-120K" 7 "\$120-140K" 8 ">\$140K" 19 "Prefer Not to Say"

income2- Median of reported household income range (>\$140K range median set to \$230K)

income3- Median of reported household income range PLUS weighted income based on education level for respondents with no reported income

MISCELLANEOUS

† 0/1 Indicator Variables

paper†- Responses from paper survey

full†- Responses from full survey

finished†- Survey was completed (yes for all respondents)

sample- Sample area respondent associated with

region- General region of county sample area is located in
1 "Urban/Down Town" 2 "Suburban/City Outskirts"
3 "Rural/Outside City Limits"

targeted†- Response is from one of the targeted (not randomly selected) areas

VOTER REGISTRATION VARIABLES

† 0/1 Indicator Variables

party- Reported party
DEM "Democrat" REP "Republican" LIB "Libertarian" UNA "Unaffiliated"

party2- Reported party (numerically recoded- libertarian dropped (n=1))
1 "Democrat" 2 "Republican" 3 "Unaffiliated"

eth- Reported ethnicity
HL "Hispanic" NL "Not Hispanic" UN "Would Not Say"

white†- Respondent is white

mage- Mean age of registered voters in household (rounded to nearest integer)

TAX PARCEL VARIABLES

† 0/1 Indicator Variables

SUM_ACRE- Total acreage of parcel (rounded to nearest hundredth of an acre)

invSUM_ACRE- Inverse of total acreage of the parcel

TOTAL_VALU- Total tax value of land and buildings on parcel (rounded to nearest \$1,000)

HOA†- Home located in a neighborhood with an HOA

FERTILIZER RATE

† 0/1 Indicator Variables

ttlbag- Total types of bags reported purchased last year

ttlbag2- Ratio of bags purchased to bag types indicated (bagnumb/ttlbag)

fertnonresponse†- Respondent did not indicate any types purchased

lotnonresponse†- Respondent did not indicate a lot size

sqft- Square footage of lawn based on reported data ($\text{lotsize} \times \text{lotmowed}^2 \times 43560$)

sqft2- Square footage of lawn based on reported area mowed and tax parcel data ($\text{SUM_ACRE} \times \text{lotmowed}^2 \times 43560$)

ttlns- Pounds of N applied last year, based on small bag sizes of reported bag types

ttlnb- Pounds of N applied last year, based on large bag sizes of reported bag types

ttl- Total pounds of N applied last year based on reported size of bags purchased- equals ttlns if $\text{bagsize}=1$, ttlnb if $\text{bagsize}=3$, or average of ttlns and ttlnb if $\text{bagsize}=2$

ttl2- Total pounds of N applied last year after adjusting for ttlbag^2 ($\text{ttl} \times \text{ttlbag}^2$)

nrates- Nitrogen application rate in lbs per 1,000 sqft per year ($\text{ttl}^2/\text{sqft} \times 1000$), using reported lot size

nrates2- Nitrogen application rate in lbs per 1,000 sqft per year ($\text{ttl}^2/\text{sqft}^2 \times 1000$), using Tax Parcel lot sizes

nrates3- Nitrogen application rate in lbs per 1,000 sqft per year ($\text{ttl}^2/\text{sqft} \times 1000$), using reported lot size, only includes observations with BOTH a reported lot size value AND a Tax Parcel lot size value (for comparison)

nrates4- Nitrogen application rate in lbs per 1,000 sqft per year ($\text{ttl}^2/\text{sqft}^2 \times 1000$), using Tax Parcel lot size, only includes observations with BOTH a reported lot size value AND a Tax Parcel lot size value (for comparison)

nrateshigh- Nitrogen application rate in lbs per 1,000 sqft per year, assuming all respondents purchased only large bags ($\text{ttlnb} \times \text{ttlbag}^2/\text{sqft} \times 1000$)

nrateshigh†- Indicator for applying more than 2 lbs N/1,000 sqft/yr

nrateshighhigh†- Indicator for applying more than 2 lbs N/1,000 sqft/yr, based on nrateshigh

ttlps- Pounds of P applied last year, based on small bag sizes of reported bag types

ttlpb- Pounds of P applied last year, based on large bag sizes of reported bag types

ttl- Total pounds of P applied last year based on reported size of bags purchased-

equals t_{lps} if $bagsize=1$, t_{lpb} if $bagsize=3$, or average of t_{lps} and t_{lpb} if $bagsize=2$

t_{lp2} - Total pounds of P applied last year after adjusting for t_{lbag2} ($t_{lp} * t_{lbag2}$)

$prate$ - Phosphorus application rate in lbs per 1,000 sqft per year ($t_{lp2}/sqft * 1000$)

$pratehigh$ - Phosphorus application rate in lbs per 1,000 sqft per year, assuming all respondents purchased only large bags ($t_{lpb} * t_{lbag2}/sqft * 1000$)

$phigh^{\dagger}$ - Indicator for applying more than 0.5 lbs P/1,000 sqft/yr

$phighhigh^{\dagger}$ - Indicator for applying more than 0.5 lbs P/1,000 sqft/yr, based on $pratehigh$

t_{lks} - Pounds of K applied last year, based on small bag sizes of reported bag types

t_{lkb} - Pounds of K applied last year, based on large bag sizes of reported bag types

t_{lk} - Total pounds of K applied last year based on reported size of bags purchased- equals t_{lks} if $bagsize=1$, t_{lkb} if $bagsize=3$, or average of t_{lks} and t_{lkb} if $bagsize=2$

t_{lk2} - Total pounds of K applied last year after adjusting for t_{lbag2} ($t_{lk} * t_{lbag2}$)

$krate$ - Potassium application rate in lbs per 1,000 sqft per year ($t_{lk2}/sqft * 1000$)

$kratehigh$ - Potassium application rate in lbs per 1,000 sqft per year, assuming all respondents purchased only large bags ($t_{lkb} * t_{lbag2}/sqft * 1000$)

$khight^{\dagger}$ - Indicator for applying more than 1 lbs K/1,000 sqft/yr

$khighhigh^{\dagger}$ - Indicator for applying more than 1 lbs K/1,000 sqft/yr, based on $kratehigh$

FERTILIZER TYPES

† 0/1 Indicator Variables

For summary of associated NPK values and weights, see the table at the end

$glawnfert^{\dagger}$ - Generic lawn fertilizer

$gweedfeed^{\dagger}$ - Generic weed and feed

$gstarter^{\dagger}$ - Generic starter

$gwinter^{\dagger}$ - Generic winterizer

gorganic[†]- Generic organic fertilizer

gallpurpose10[†]- Generic all purpose 10-10-10

gallpurpose17[†]- Generic all purpose 17-17-17

eglawnfert[†]- Expert Gardener lawn fertilizer

egweedfeed[†]- Expert Gardener weed and fee

lproturf[†]- Lesco Pro Turf fertilizer

lproweedfeed[†]- Lesco Pro weed and feed

lprostarter[†]- Lesco Pro starter

lprowinter[†]- Lesco Pro Fall/Winter

morganic[†]- Milogranite Organic fertilizer

pstarter[†]- Pemington starter

slawnfert[†]- Scotts lawn fertilizer

sweedfeed[†]- Scotts Bonus S weed and feed

ssgmaxfe[†]- Scotts Southern Green Max with Iron

stblawnfert[†]- Scotts Southern Turf Builder lawn fertilizer

stbweedfeed[†]- Scotts Turf Builder Plus 2 weed and feed

stbstarter[†]- Scotts Turf Builder starter

stbwinter[†]- Scotts Turf Builder Winterguard

stbwinterweed[†]- Scotts Turf Builder Winterguard Plus 2 winter weed and feed

sglawnfert[†]- Sta-Green lawn fertilizer

sgweedfeed[†]- Sta-Green weed and feed

sgwinter[†]- Sta-Green winterizer

vlawnfert[†]- Vigoro lawn fertilizer

vultraturft- Vigoro Ultra-Turf

vsupergreen†- Vigoro Super Green

vweedfeed†- Vigoro weed and feed

vstarter†- Vigoro starter

~N- Percentage of bag type that is mineral N

~P- Percentage of bag type that is mineral P

~K- Percentage of bag type that is mineral K

~lbs- Size, in pounds, of a small bag of the given type

~lbb- Size, in pounds, of a large bag of the given type

Fertilizer Variable Guide

Type	N-P-K			Large		Small	
	N	P	K	Lbs	1,000 sq ft	Lbs	1,000 sq ft
Lesco							
Pre-M Crabgrass Prevention	0	0	7	50	12	-	-
Weed and Feed	18	0	9	50	12.5	-	-
Professional Starter	18	24	12	50	12	-	-
Professional Fall/Winter	18	0	18	50	12	-	-
Professional Turf Fertilizer	24	0	11	50	12	-	-
Milogranite							
Organic	5	2	0	36	2.5	-	-
Pemington							
Signature Starter	18	24	6	50	14	-	-
Scotts							
Natural Lawn Feed	11	2	2	29	4	-	-
Turfbuilder Winter Guard	22	3	5	-	-	14	5
Turf Builder Starter	24	25	4	42	14	15	5
Southern Green Max	26	0	2	34	10	17	5
Turf Builder Winter Weed	26	2	12	43	15	14	5
Turf Builder Plus 2 (Weed)	28	1	4	43	15	-	-
Bonus S Weed and Feed	29	1	10	-	-	17	5
Winterguard	32	0	10	38	15	13	5
Southern Turf Builder	32	0	10	42	15	14	5
Sta-Green							
Winterizer	22	0	14	43	15	-	-
Weed and Feed	28	0	4	-	-	13	5
Lawn Fertilizer	29	0	5	42	15	-	-
Vigoro							
Starter	20	27	5	54	15	18	5
Weed and Feed	28	0	3	42	15	14	5
Lawn Fertilizer	29	0	4	42	15	14	5
Ultra-turf	30	0	4	44	15	-	-
Super Green	35	0	5	-	-	16	5.6
Generic							
Generic Lawn Fertilizer	28	0	6.4	42.0	13.4	14.9	5
Generic Weed&Feed	26	0.4	6	45.0	14.2	14.7	5
Generic Starter	20	25	6.8	49.0	13.8	16.5	5
Generic Winterizer	24	0.8	12	43.7	14.0	13.3	5
Generic Organic	8	2	1	32.5	3.3	-	-