

Contents

INTRODUCTION	2
RESULTS	2
DEMOGRAPHICS	2
OCCUPATION	2
COUNTY BREAKDOWN.....	4
AGE	5
GENDER	5
EDUCATION LEVEL	5
SOURCES OF INFORMATION REGARDING TURF GRASS AND LAWN CARE.....	6
LEVEL OF SOURCE CREDIBILITY.....	8
GENERAL PERCEPTIONS OF TURF GRASS	9
CONCERN ABOUT THE USE OF WATER USE ON TURF GRASS.....	9
CONCERN ABOUT FERTILIZER USE ON TURF GRASS.....	9
DOES TURF GRASS FIT WITHIN A FLORIDA-FRIENDLY LANDSCAPE™?	10
FLORIDA-FRIENDLY LANDSCAPING™ AND TURF GRASS.....	10
AWARENESS OF NEW TURF GRASS TYPES.....	10
FAMILIARITY OF TYPES OF TURF GRASS	11
KNOWLEDGE GAPS REGARDING TURF GRASS CARE.....	12
BIGGEST EDUCATIONAL NEED REGARDING TURF GRASS	14
QUESTIONS REGARDING TURF GRASS MOST OFTEN COME FROM.....	15
COMMON TURF GRASS QUESTIONS.....	17
TURF GRASS ALTERNATIVES.....	18
CITY/COUNTY OFFICIALS LANDSCAPE QUESTIONS.....	19
HOMEOWNER ASSOCIATION LANDSCAPE QUESTIONS.....	20
LANDSCAPERS QUESTIONS ABOUT TURF GRASS	22
FAMILIARITY WITH FLORIDA SOD GROWERS COOPERATIVE.....	23
KEY FINDINGS	24
NEXT STEPS.....	24
APPENDIX A	25
RECOMMENDATIONS FOR THE TURF GRASS INDUSTRY TO PROVIDE EDUCATION	25
ADVICE TO SOD INDUSTRY.....	30

Introduction

In February 2011, the Florida Sod Growers Cooperative (FSGC) contacted the Center for Public Issues Education in Agriculture and Natural Resources to conduct a survey of horticulture Extension agents, master gardener coordinators and master gardeners as to their perceptions of turf grass. Working closely in conjunction with FSGC’s executive director, the PIE Center crafted an online questionnaire to measure these target audiences’ perceptions of turf grass. Once the survey was created, it was sent to a panel of experts at the university to measure face and content validity.

After approval was granted by the panel of experts, the survey was sent to a purposive sample of 100 extension agents. These agents were selected because of their specialty in horticulture areas and service as Master Gardener coordinators. For counties without horticulture Extension agents and master gardener coordinators, the survey link was sent to the county Extension director. Only five counties did not have listed contacts for the survey to be sent to: Franklin, Glades, Leon, Liberty and Madison.

Extension personnel were asked to take the survey and forward survey to master gardeners in their area. The master gardener coordinators were asked to send the survey link to the master gardeners in their areas. This survey received a total of 262 responses.

Results

Demographics

Occupation

The majority of respondents (71%); n= 155) were Master Gardeners.

Answer	Response	%
County Extension agent in Commercial Horticulture	8	4%
County Extension agent in Urban or Residential Horticulture	20	9%
County Extension agent in Agriculture	6	3%
FYN Coordinator	7	3%
Master Gardener	155	71%
Other	22	10%
Total	218	100%

Additionally, other occupations mentioned included:

Other	
State employee who gets all the turf calls!	FYN Community Outreach Coordinator
Concerned homeowner with a FFY&L	Community Manager
Horticulture Program Assistant and MG Coordinator	County Extension Agent for Both commercial and home Hort
Commercial and Residential Horticulture	All of the above (except MG)
LA1362fl and teacher	mg status on hold working as a cpo
Master Gardener/Nusery Certified. Home Depot	Master Gardner Trainee
Extension Specialist	FYN agent, MG coordinator
CED & Com. Hort.	Master Gardener and FCHP
Master Gardener AND owner of a Design/Build landscaping company	commercial and residential and fruit, vegetable, nuts
Former Extension agent/ Landscape contractor	LID Project Planner

County Breakdown

County	# of Responses	% of Total	County	# of Responses	% of Total
Bay	1	0%	Orange	2	1%
Brevard	1	0%	Pasco	14	7%
Citrus	1	0%	Pinellas	3	1%
Clay	1	0%	Polk	1	0%
Columbia	1	0%	Putnam	11	5%
Duval	32	15%	St. Johns	11	5%
Flagler	7	3%	St. Lucie	1	0%
Hendry	1	0%	Santa Rosa	1	0%
Hernando	9	4%	Sarasota	1	0%
Highlands	2	1%	Seminole	16	8%
Hillsborough	1	0%	Suwannee	3	1%
Holmes	1	0%	Taylor	1	0%
Indian River	1	0%	Union	1	0%
Jackson	2	1%	Volusia	40	19%
Lee	1	0%	Washington	2	1%
Levy	7	3%	Total	207	100%
Manatee	1	0%	Orange	2	1%
Marion	1	0%	Pasco	14	7%
Miami-Dade	9	4%	Pinellas	3	1%
Nassau	6	3%	Polk	1	0%
Okaloosa	12	6%	Putnam	11	5%
Okeechobee	1	0%	St. Johns	11	5%

Age

Answer	Response	%
18-25	0	0%
26-35	8	4%
36-45	12	6%
46-55	44	20%
56-65	90	42%
Over 65	62	29%
Total	216	100%

Gender

Answer	Response	%
Male	84	39%
Female	131	61%
Total	215	100%

Education Level

Answer	Response	%
Some High School	0	0%
High School Graduate /GED	9	4%
Some College	32	15%
Associate's Degree/2 year degree	26	12%
Bachelor's Degree/ 4-year degree	62	29%
Master's Degree	69	32%
Doctoral Degree	19	9%
Total	217	100%

Sources of Information Regarding Turf Grass and Lawn Care

Question	Very Unlikely	Unlikely	Neither Likely or Unlikely	Likely	Very Likely	Responses	Mean
UF/IFAS Websites/Other university websites	8	1	2	34	188	233	4.69
Other	13	4	6	5	8	36	2.75
Association websites	47	32	54	60	6	199	2.73
Industry/Company websites	49	46	44	60	6	205	2.65
Environmental group websites	51	44	52	49	8	204	2.60
Newspapers	56	59	46	40	6	207	2.43
Television	84	58	40	16	1	199	1.95
Blogs	102	40	42	11	1	196	1.82

Responses to this question were on a 1-5 scale with 1 being very unlikely and 5 being very likely to use as a source of information. The source of information receiving the highest score was UF/IFAS/Other university websites. 93% of respondents reported that they were likely or very likely to use UF/IFAS/Other university websites as a source of information about turf grass or lawn care.

The “Other” Category received the second highest mean of 2.75 out of a possible 5. Respondents provided their own sources of information in the other category. Those responses included:

Other
Reference books
science news
Books
google.com
Lawn and Garden Publications
IFAS turf specialist
books
Individual growers
publications
lawn company
UF/IFAS books / class material
UF Specialists
Books
Extension Agent
directions on the feed packaging
Word of mouth
Florida Yards and Neighborhoods program in county
lawn maintenance personnel
home depot, Lowes, neighbors
home magazines
Ask locals
Search by grass names

Level of Source Credibility

Of the sources listed, this question asked respondents to assess the level of credibility of each source.

Question	Not credible	Somewhat un-credible	Neither Credible or Un-credible	Somewhat Credible	Very Credible	Responses	Mean
UF/IFAS Websites/Other university websites	0	0	1	25	205	231	4.88
Other	6	1	12	7	12	38	3.47
Association websites	17	19	67	70	12	185	3.22
Environmental group websites	18	32	55	73	14	192	3.17
Industry/Company websites	22	35	67	65	3	192	2.96
Newspapers	26	35	87	50	4	202	2.86
Television	44	37	85	22	0	188	2.45
Blogs	51	38	79	13	0	181	2.30

Response items for this question were on a 1-5 scale with 1 being “not credible” and 5 being “very credible.”

UF/IFAS/Other university websites received the highest mean score. The **Other** category received the second highest mean score with **Association websites** receiving the third highest mean score.

General Perceptions of Turf Grass

Respondents were asked to rate their level agreement with the following statements.

Question	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Responses	Mean
Turfgrass is neither “good” nor “bad”; it all depends on how you maintain it.	7	18	30	107	70	232	3.93
Turfgrass has many benefits if it’s cared for responsibly.	5	13	37	127	49	231	3.87
Turfgrass is okay, but we use too much of it.	6	31	35	104	55	231	3.74
Turfgrass is bad for the environment	42	75	71	32	10	230	2.53
Homeowners and/or landscape services can’t be depended on to use best management practices, so eliminating turfgrass is the best way to control water, pesticide and fertilizer use.	41	91	51	39	11	233	2.52

- 76% agree or strongly agree that turfgrass is neither “good” nor “bad”; it all depends on how you maintain it.
- 76% agree or strongly agree that turfgrass has many benefits if it’s cared for responsibly.
- 69% agree or strongly agree that turfgrass is okay, but we use too much of it.
- 21% agree or strongly agree that homeowners and/or landscape services can’t be depended on to use best management practices, so eliminating turfgrass is the best way to control water, pesticide and fertilizer use
- 18% agree or strongly agree that turfgrass is bad for the environment.

Concern about the Use of Water Use on Turf Grass

87% of respondents reported that they were “concerned” or “very concerned” about the amount of water use on turf grass.

Concern about Fertilizer Use on Turf Grass

77% of respondents reported that they were “concerned” or “very concerned” about the amount of fertilizer use on turf grass.

Does Turf Grass Fit Within a Florida-Friendly Landscape™?

Answer	Response	%
Strongly Disagree	10	4%
Disagree	34	15%
Neither Agree nor Disagree	64	27%
Agree	103	44%
Strongly Agree	23	10%
Total	234	100%

54% of respondents reported agree or strongly agree that turf grass does fit within a Florida-Friendly Landscape™.

Florida-Friendly Landscaping™ and Turf Grass

Respondents were asked “Has there been more interest in or questions about turfgrass and Florida-Friendly Landscaping™ from the people with whom you work in the past two years?” The majority of respondents indicated that they had received more questions in the last two years.

Answer	Response	%
Yes	153	71%
No	61	29%
Total	214	100%

Awareness of New Turf Grass Types

Respondents were asked if they were aware of any new turfgrass types that use less water, less fertilizer and/or have improved pest and disease resistance.

Answer	Response	%
Yes	122	53%
No	110	47%
Total	232	100%

The results for this question appeared to be split with approximately half of the respondents responding “yes” and approximately half responding “no.”

Familiarity of Types of Turf Grass

Respondents were asked if they were familiar with the following types of turfgrass.

Question	No	Yes	Responses
Bahiagrass	0	227	227
Bermudagrass	1	225	226
St. Augustine	2	224	226
Zoysia grass	6	220	226
Empire Zoysiagrass	67	147	214
Captiva St. Augustine	77	138	215
Discovery Bermudagrass	161	46	207

- All respondents were familiar with Bahia grass.
- 31% were unfamiliar with Empire Zoysia grass.
- 56% were unfamiliar with Captiva St. Augustine.
- 77% were unfamiliar with Discovery Bermuda grass.

Respondents were then asked if they believed the following types of turf grass were Florida-Friendly.

Question	No	Yes	Don't Know	Responses
Bahiagrass	27	178	20	225
Zoysia grass	61	99	62	222
St. Augustine	114	94	17	225
Bermudagrass	87	91	44	222
Empire Zoysiagrass	33	71	108	212
Captiva St. Augustine	41	64	105	210
Discovery Bermudagrass	18	24	158	200

- 70% believe that Bahia grass is Florida-Friendly.
- 51% do not believe that St. Augustine is Florida-Friendly.
- 79% do not know if Discovery Bermuda grass if Florida-Friendly.

Knowledge Gaps Regarding Turf Grass Care

Respondents were given six statements and asked to select the statement that reflected the biggest knowledge gap regarding turf grass care.

Answer	Response	%
Small lawn maintenance companies who need more education on best management practices	8	4%
Developers or landscapers who install unsuitable varieties or install sod where it won't thrive	10	4%
Large pest or lawn care companies and best management practices	10	4%
Homeowner Associations or Property Owner Associations that have not updated their landscape requirements	21	9%
Other	29	13%
Homeowners who don't have realistic expectations for their lawns (green all year long, 100% weed-free)	71	32%
Homeowners who apply too much pesticide or fertilizers or apply them incorrectly	74	33%
Total	223	100%

Respondents indicated that the biggest knowledge gaps included:

- Homeowners who don't have realistic expectations for their lawns (green all year long, 100% weed-free).
- Homeowners who apply too much pesticide or fertilizers or apply them incorrectly.
- Twenty respondents commented under “Other” that “all of the above” knowledge gaps were important.

Respondents were also allowed the opportunity to provide comments about their answer selection. The table below indicates respondents’ elaboration on the knowledge gaps.

Knowledge Gap	Additional Comments
Small lawn maintenance companies who need more education on best management practices	<p>There is too much of this</p> <p>local bmp training requirements are making a difference but many more small lawn maintenance companies need training</p> <p>All maintenance companies - keeping lush lawns is a business no matter how much pesticide, water, or fertilizer it takes. The bottom line is to keep the customer happy with a lovely lawn and keep the company in the black and pay the employees. That is business, and most of the businesses may talk the talk of protecting the environment but they don't walk the walk. Some of the problem is lack of knowledge, but most is making money and staying in business. Period.</p>
Developers or landscapers who install unsuitable varieties or install sod where it won't thrive	Poor soil, compaction, and poorly designed irrigation, turf doesn't have a chance!
Large pest or lawn care companies and best management practices	There are many knowledge gaps but homeowners look to these 'experts' for advice which many times is way off the wall.
Homeowner Associations or Property Owner Associations that have not updated their landscape requirements	<p>This is a biggy!!!!</p> <p>They assume that prescribing turf will maintain quality of landscapes/communities -- not true</p>
Homeowners who don't have realistic expectations for their lawns (green all year long, 100% weed-free)	<p>Don't acknowledge water & soil needs & expect maint co's to accommodate without</p> <p>not going to happen</p>
Homeowners who apply too much pesticide or fertilizers or apply them incorrectly	<p>have seen homeowners treat lake weeds with diesel fuel</p> <p>Most think more is better and will work faster</p> <p>too much too often</p> <p>It is not only the product but the equipment is not properly used. They 'over love' their lawn</p> <p>Those who sell fertilizer and pesticides need to be better educated</p> <p>weed and feed products are being irresponsibly used</p>

The “Other” Category in the Knowledge Gaps Section was also frequently selected and several respondents provided comments to this category. The table below reveals those comments.

Twenty respondents commented that the biggest knowledge gap was “all of the above”

Knowledge Gap	Additional Comments
Other	All of the above seem true and all are a very large problem. I see all of these in the plant clinics
	FFL helps but there are some questions and issues that have no answers.
	The answer to this question is all the above. I see everyone of these problems on a near daily basis.
	I think all of the above contribute to the problem except large pest or lawn care companies and BMPs
	all of the above plus a lack of knowledge about disease and insect diagnosis and treatment which leads to over-fertilization, excess water use and ineffective pesticide use
	Labels on pesticides and fertilizers that are not homeowner friendly (don't understand what the label says), developers and landscapers who plant the wrong plants because they are an "approved list" at the permitting office and all lawn care companies regardless of size who "spray for pay".
	developers install too much lawn to cut costs
	I don't believe it to be just one of the above but a combination. We have people who apply too much pesticide or fertilizers or apply incorrectly, but we also have developers and landscapers who install unsuitable varieties as well as maintenance companies who just see services to make a buck and are not looking at the environment or the customer. Homeowner's Associations are definitely unrealistic in their expectations during droughts and have little regard for Florida Friendly landscape practices.
	All of the above should be considered. Also transplanted northerners need to remember that we do things differently here. They need to understand that the success or failure depends not only on what they do or don't do but also their neighbors as well
	St John river water management has no logic what so ever.
	Regulatory agencies that apply unrealistic and standardized restrictions on homeowners and professionals.
	Not sure how to phrase this but so many of our homeowners come from up north and try and treat their lawns in Florida the same way - thus I think the biggest issue is the lack of knowledge in all turf grass issues on the part of the homeowner as our biggest issue - if they were better educated, they would force all the professionals to act more responsibly - having said that - I think it is unrealistic to say you can educate all the homeowners right away.

Biggest Educational Need Regarding Turf Grass

Respondents were given the choices below and asked to select one of them as the biggest educational need for the people/groups they work with regarding turf grass. If they selected "Other," they were asked to describe what they felt to be the biggest educational need in the text box provided.

Answer	Response	%
How to care for newer turf grass types	2	1%
Pest or disease control	10	4%
How to fertilize responsibly	19	8%
Other	24	11%
How to choose the right turf grass or turf grass alternatives	41	18%
Low maintenance turf grass care (using less water, less fertilizer, less pesticide)	50	22%
How to have a lawn but still be Florida-Friendly	79	35%
Total	225	100%

Nine respondents indicated that “all of the above” were important educational needs. The table below explains the additional responses collected under the “Other” category.

Biggest Educational Need “Other” Category
General cultural care - proper watering, fertilizing, and providing customers with information about expectations - there is no miracle grass or miracle product. People don't realize that sometimes products are not available to pest control people and that environmental conditions really do have a factor in how your grass looks, i.e. There is such a thing as winter damage.
IRRIGATION design is hugely important!
How to read a pesticide, fertilizer label. What do all those words mean and what good is the "active ingredient" if you can't pronounce it or know what it means?
Alternative to the use of turf grass.
how to recognize and correct problems using the correct procedure first
Identification of problems with turf grass
Again a combination. There is not one specific area where education is lacking. People need to be educated on low maintenance turf grass care, how to choose the right turf grass or alternative and how to have a lawn but still be Florida-Friendly. They need education on proper mowing height as most homeowners do not cut their lawns at the correct height and fertilizing responsibly. I feel most homeowners want to care for their lawn appropriately but they don't necessarily know where to go to get the correct information and some of who they trust for correct info do not know what is correct.
Right Plant Right Place: Use turf only where needed and when appropriate, missing connection between proper care and healthy turf and unrealistic expectations
How to water and mow correctly
How to save money which would address all of the above areas.
Less turf, more groundcover
Alternatives that are native and environmentally sound
that they don't need to have turf grass covering their yard
Educate all homeowners on the problems caused by fertilizers, including property owners who hire the job to be done
Homeowners hear and read the info but go right back to the 'old ways'!

Questions Regarding Turf Grass Most Often Come From...

Respondents were asked to identify the individuals/groups that the majority of their turf grass questions come from.

Florida Sod Growers Cooperative – Extension Agents and Master Gardeners’ Perceptions of Turf Grass

Answer	Response	%
Pest control companies	2	1%
City and county officials or staff	6	3%
Landscapers or lawn maintenance companies	8	4%
Other	16	7%
Homeowners	186	85%
Total	218	100%

The “Other” Category was made up of the following responses.

Other
both pest control and landscapers/ lawn maintenance
Property Managers, HOA Boards and residents
students
I'm a new Master Gardener
no questions
All of the Above
U F
Board of directors of community associations
Home owners assoc.
NA-I do not work the help desk.
N/A
County Extension Offices
My husband
NA
developers

Common Turf Grass Questions

Respondents were asked about the frequency of turf grass questions in the last two years. This table reveals that 55% of respondents reported an increase in turf grass questions while 43% think question frequency has remained about the same.

Answer	Response	%
Significantly Decreased	1	0%
Somewhat Decreased	4	2%
Significantly Increased	44	21%
Somewhat Increased	74	35%
Stayed about the same	91	43%
Total	214	100%

Respondents were given a set of questions regarding turf grass and asked to identify the question they are asked most frequently. If the question they hear most often was not listed, they were asked to provide it in the “Other” category. 8 responses said “All of the Above” in the other category.

Answer	Response	%
What turf grasses are appropriate for Florida-Friendly Landscapes™	15	7%
Alternatives to turf grass	17	8%
Questions about turf grass water use, including drought tolerance	17	8%
Other	23	10%
Specific questions about turf grass types (the differences, benefits, where to find it)	34	15%
Specific questions about pest or disease problems or caring for turf grass	114	52%
Total	220	100%

The “Other” Category was made up of the following responses.

Other
can a HOA keep me from planting a FF Landscape
all of the above - they want a landscape that doesn't require a PhD to maintain or needs to be continually replaced
What is the best turfgrass?
The first three topics are equally asked about, if I had to pick one it would depend on time of year: spring=type & care; summer=disease/insect; fall = care; winter=types/care
I'm a new Master Gardener
homeowners can not understand difference why the brown patches
which grows in complete shade
Problems with the turf grass they already have.
What to do with declining turf
why is my grass dying when I water it sufficiently at least twice a week?
get questions about problems and alternatives to turf grass in about same quantity
50% of our calls are from homeowners who are having problems growing turf - they have spent lots of money trying to get it to survive and often are following our recommendations to the best of their abilities.
i generally ask my neighbors what they think they are doing. The answers can be discouraging.
All of the above. People are angry about not being able to successfully grow turf.
Pests, Disease, Weeds and how to keep green all year round
what can i get to replace my St. Augustine that will grow in shade?

Turf Grass Alternatives

Respondents were asked if they receive questions about alternatives to turf grass. An overwhelming majority had been asked by their constituents about turf grass alternatives.

Answer	Response	%
Yes	194	88%
No	26	12%
Total	220	100%



For those respondents who had been asked about turf grass alternatives, statements were provided to understand the main reason given for requesting information about a turf grass alternative? The majority of respondents indicated that their constituents were requesting additional information because of “problems with their current lawn (pests, disease, shade).”

Answer	Response	%
Concern about pesticide or fertilizer use	5	3%
Concern about water use	21	11%
Other	24	12%
Ease of maintenance or less maintenance needed	36	19%
Problems with their current lawn (pests, disease, shade)	107	55%
Total	193	100%

Nineteen text responses in the “Other” Category were “All of the Above” answers. Additional “Other” Category responses include:

Other Category Responses
Environmentalists and native plant enthusiasts claim the alternatives will save water, time and maintenance --- misleading and half truths that the homeowner wants to believe because they sound so convincing.
too much shade
water, fertilizer, pesticides, problems with pests and diseases, ease of maintenance
Texture and area coverage

City/County Officials Landscape Questions

Respondents were asked “In your role as an Extension agent or Master Gardener, have you in the past five years or are you currently working with City/County Officials relating to landscapes and/or turf grass?” The majority of respondents indicated that they had not worked with this clientele.

Answer	Response	%
Yes	66	30%
No	151	70%
Total	217	100%

For the 30% who indicated they had worked with City/County officials, they were asked what types of questions/information these officials most wanted.

Answer	Response	%
What turfgrass varieties are Florida-Friendly	3	5%
Available turfgrass varieties and their benefits and drawbacks	5	8%
Other	8	13%
Drought tolerant turfgrasses	10	16%
Pesticide and/or fertilizer use on turfgrass	13	20%
Landscapes in general - not turfgrass specific	25	39%
Total	64	100%

Four of the eight “Other” responses were “All of the Above.” Additional “Other” category responses included:

Other
Not regulating the subject
I encourage them to use the saying Right Turf Right Place
economics of turfgrass
How to properly maintain their turf areas

Homeowner Association Landscape Questions

Respondents were asked “In your role as an Extension agent or Master Gardener, have you in the past five years or are you currently working with Homeowner Associations or Property Owner Associations relating to turfgrass?” A majority of respondents indicated that they are not currently working or have worked with this clientele in the last 5 years.

Answer	Response	%
Yes	77	35%
No	140	65%
Total	217	100%

For the 35% who indicated they had worked with Homeowner Associations or Property Owner Associations , they were asked what types of questions/information these officials most wanted.

Florida Sod Growers Cooperative – Extension Agents and Master Gardeners’ Perceptions of Turf Grass

Answer		Response	%
Being sure they are in compliance with the state statute		0	0%
What turfgrass varieties are Florida-Friendly		5	7%
Available turfgrass varieties and their benefits and drawbacks		8	11%
Drought tolerant turfgrasses		8	11%
Other		10	13%
Balancing attractive landscapes with homeowner preference and state requirements		15	20%
Making sure landscapes are attractive		30	39%
Total		76	100%

Additional “Other” category responses included:

Other
Keeping property values high
all of the above but most importantly, What's Killing my turfgrass and how do I stop it?
less water use
Crab grass infestation, maintenance of common areas and homeowner satisfaction
all of these
Individual's properties not fitting in with the Association's perception of what is "attractive", which is primarily lawn.
maintenance issues
All of the above, but many have the concerns about property values without turf.
Satisfying a few of the property owners that have high expectations for the lawn grass areas

Landscapers Questions about Turf Grass

Respondents were asked “In your role as an Extension agent or Master Gardener, have you in the past five years or are you currently working with Landscapers, lawn maintenance and other green industry personnel relating to turfgrass?” A majority of respondents indicated that they are not currently working or have worked with this clientele in the last 5 years.

Answer	Response	%
Yes	73	34%
No	141	66%
Total	214	100%

For the 34% who indicated they had worked Landscapers, lawn maintenance and other green industry personnel, they were asked what types of questions/information these officials most wanted.

Answer	Response	%
Watering correctly	4	6%
What turfgrass varieties fit within Florida-Friendly Landscaping™	5	7%
Available turfgrass types, including their benefits and drawbacks	11	15%
Other	14	19%
Maintenance of current or newer turfgrass types	16	22%
Specific pest control or fertilization questions	22	31%
Total	72	100%

Additional “Other” category responses included:

Other
how to maintain declining turf
Also the importance of good irrigation design
Mainly we are getting these folks in our door because of the GI-BMP training and the fact they will need to have this training by 2014, if it was not for that law most could not care less about Extension!
All of the above
right plant in the right place, makes no difference if it is turfgrass, shrub or tree the landscape is usually planted out by these professionals with poor plant choices.
low cost and inputs; high quality
All of the above! So many know so little.
Turfgrass care as advised by UF/IFAS
not applicable
As a Master Gardener, I do not work with professionals.
All of the above
I don't work with these
these businesses are dictated by volume not proper care of turf.

Familiarity with Florida Sod Growers Cooperative

Respondents were asked if they were familiar with the Florida Sod Growers Cooperative. A majority of the respondents were not familiar with this organization.

Answer	Response	%
Yes	74	34%
No	142	66%
Total	216	100%

Respondents were then asked if they were familiar with the Florida Sod Growers Cooperative outreach effort “Lawns Make Our World Greener.” Again, a large majority were unfamiliar with this outreach effort.

Answer	Response	%
Yes	29	13%
No	186	87%
Total	215	100%

Key Findings

- The majority of Extension agents and Master Gardeners in this survey were receiving their information about turf grass and lawn care from UF/IFAS Websites and Other University Websites.
- 76% of respondents feel that turf grass is neither “good” or “bad”; it all depends on how you maintain it.
- 76% of respondents feel that turf grass has many benefits if its cared for responsibly.
- 54% of respondents agree or strongly agree that turf grass does fit within a Florida-Friendly Landscape™.
- 35% of respondents feel the biggest educational need for groups they work with is “how to have a lawn, but still be Florida Friendly.
- The majority of respondents work with homeowners the majority of the time.
- 55% of respondents reported an increase in questions about turf grass in the last two years.
- 88% of respondents have been asked about alternatives to turf grass.
- 55% of respondents who had been asked about alternatives to turf grass indicated the reason was constituents had problems with their current lawns (pests, disease, shade).
- Only 14% of respondents who had been asked about alternatives to turf grass indicated the reason was “constituents had concerns over pesticide or water use.”
- Overall, respondents were not spending a lot of time working with city/county officials, homeowner/property owner associations or landscapers.
- 66% of respondents were not familiar with the Florida Sod Growers Cooperative
- 86% were not familiar with FSGC’s outreach campaign “Lawns Make Our World Greener”.

Next Steps

Report will be finalized and will include implications of this research and strategic recommendations. Final report will be made available through Florida Sod Growers Cooperative and the PIE Center.

Appendix

Recommendations for the Turf Grass Industry to Provide Education



Text Response

Make products that are appropriate

Require those who sell turfgrass, fertilizers and pesticides to be educated about the species/products.

As long as we use weed and feed products we cannot consider turfgrass maintenance Florida-Friendly. As long as we continue to use St. Augustinegrass, we will be using too much water and too many pesticides which is not good for our environment.

Representatives should be more present in community venues. Provide sample gardens. Market differences more widely to combat the all or nothing public mentality

Educate the sellers of turfgrass who in turn need to educate their buyers.

promote the sale of turfgrass to match the soil types and available water

public awareness campaign on the benefits of turf - turf is great if managed properly, the pest control person is not to blame when something goes wrong (most of the time; there are environmental conditions that affect turf, etc.

I am so happy to comment on this issue. Turf is the victim of poor soil preparation, poor irrigation design and unknowledgeable homeowners. Turf DOES have a place in a FF yard but needs better soil and even distribution in irrigation. Help FIS get irrigation professionals licensed!

We need to have realistic expectations. Turf is not bad per se. But people are sold on this new grass (i.e. 'Empire' Zoysia, 'Captiva' St. Augustinegrass etc.) as being "perfect". Does anyone remember back to the early 2000's when Seashore Paspalum was billed as the best grass ever? It proved to be a nightmare for most homeowners. Now with the last two extremely cold winters, we are seeing lots of dead 'Floritam' and people are turning to 'Empire' or 'Captiva' as being the answer to their turf prayers. I have people coming into the office and they were told by XYZ Company that 'Empire', the only problem with it is nematodes. They are not told about it needing supplemental irrigation during drought, because its drought tolerance is about on par with St. Augustine. They are not told about hunting bill bugs, thatch, take-all root rot can also be a problem. Then there is 'Captiva' St. Augustinegrass. Yes it has demonstrated chinch bug resistance, but the public takes the word "resistance" to me "immune" to chinch bugs. 'Captiva' will have the same culture and care needs of any dwarf or semi-dwarf St. Augustine, but people think that 'Captiva' will be "care-free" since it is resistant to chinch bugs. We'll find out for sure in a few years that ALL our current turfgrass have problems. People need to pick their problem they will eventually need to deal with when they select their new turf. I guess you could say that I think industry needs to be more up front and honest about the positives and negatives of the turfgrass choices. They could also use and/or promote the Extension Service to diagnose problems in the early stages when we still have the chance to save the turf, rather than yet another re-sod job. The industry should really get on the ball with their personnel who are in the field. Many of the companies hire folks who have minimal knowledge of turfgrass, turfgrass problems and what can be done about the problems. Without the proper education on turfgrass care and culture many "professionals" are doing a disservice to the industry! For example, I have had in the last couple of weeks several people come to me and say "I have had 4 different opinions from 4 different companies about..." turfgrass selection, care, problems etc. We ALL should have the same answer if it is the same plant!

Assist Extension offices with funding or trainers for programs required by the State of Florida to certify industry professionals with BMP's and Florida Friendly Landscaping practices.

Develop more grasses which can tolerate a typical landscape which will include canopy coverage (sun and shade tolerant).

Promote organic soil amendment (ie. compost) as proper preparation of soil and as continuing maintenance (eg. topdressing) to increase soil moisture capacity, reduce soil borne diseases, reduce runoff, reduce thatch accumulation etc... The message should be that the receiving soil needs to be similar to that attached to the roots of the sod.

Stay out of the education of homeowners because they only tell what is good (advantages) and never the bad (disadvantages). They mislead the "ease of installation" and need for irrigation is never communicated clearly from the turfgrass industry.

There is no perfect grass. All have + & -. The home owner has to have the right expectations.

Educate the public on using Florida Friendly practices through the use of TV, newspaper ads etc.

Work toward producing varieties that are noninvasive and do not require augmentation with pesticides, fertilizers or water.

collaborate available turf for specific regions with IFAS to educate right plant, right location

help golf courses become less chemical dependent

There should be required certification from IFAS beyond BMP. Homeowners need correct info not just hype to sell products or services.

help set expectation that a monoculture is not attainable in the long run, some "other stuff" is OK.

Please don't stop with educating people on the differences between the turf varieties. Homeowners want to treat all of the varieties the same way. And then leave 6 months and expect it perfect. Also, help in educating us on how to 'dumb down' our wording so homeowners understand how to monitor and treat with disease control. Teach us to use layman's terms on turf care. Hope that makes

sense....

Teach the public how to own turf for southern and Florida conditions. You cannot grow the same lawn in Florida as you once owned in New York. Teach the public that more fertilizer will not fix the problem of a dead lawn. Teach them patience and how to have an open mind. Demonstrate a way to integrate turf with other options of landscaping.

strengthen their technical and management skills of their field staff

promote science based fertilizer laws and the metering of home wells.

More programming to foster customer awareness

Educate growers and the public about use of native, environmentally friendly alternative. Help transition growers to cultivation of Native Plants and Food Crops that utilize environmentally sound cultivation practices.

Train homeowners (clear product requirements & care directions), lawn companies large and small, as well as chem/spray companies (good luck) about best practices. Too many companies give wrong advice, prepare site wrong and sell wrong product to consumers

Sponsor unbiased, independent research.

Educate the developers and landscape contractors they sell to before they purchase.

Use only well-suited to environment types requiring no chemical pesticides or fertilizers, and having low water requirements.

The information is wonderful, but there is still a lack of simple explanation for homeowners, who become overwhelmed when we go into some detail. The biggest misconception is that fertilization every month is a good idea. I would like to see Master Gardeners invited to review IFAS publications before they are finalized to make sure the language is clear for homeowners or nonscientists, and that key issues of "why" and "when" are addressed.

don't advertise products with claims the owner can't tell are unrealistic. green industry should stop trying to sell all the product they can and provide areal service-example- most lawns should not be sprayed 12 times a year.

provide lawn service companies with information Use the media to help teach homeowners the proper care of proper lawn grass for Florida

sod should come with better care instructions no matter where its purchased. present water regulations make it difficult to get sod started in some locations. tried captiva and empire but both failed after continuous watering stopped. to be honest i'm losing 40yr established bahia without regular water. this wasn't required in past years.

stop promoting lawn care products as if they will solve all problems. Stress the importance of proper site preparation.

Stop pushing Saint Augustine grass!!

advertise to educate on TV, in magazines, and news papers and on the radio

Train landscape professionals on best management practices for each turf species.

Disseminate knowledge through internet and printed materials. Broadcast media is another more costly choice.

Provide information REPEATEDLY to developers and builders. Provide residential information REPEATEDLY in newspapers. Provide residential information REPEATEDLY to retail gardening departments and nurseries.

Reinforce correct procedures, offer clinics at local "boxstores" and provide website addresses where people can access correct information and use every available free resource for distribution of the web address.

Provide rebate for best use turf training completion.

Low maintenance turfgrass for florida landscape

Many "service gardeners" that does not have idea what they are doing , no licence, not educated, and people use them because they provide a "cheap" service."

stop promoting fertilization

Follow the Florida Friendly Landscaping principles.

educational info available to consumer where they buy their turf and fertilizers

Press releases to newspapers, magazines and TV; write up credible, user-friendly guides to applying fertilizer, pesticides and fungicides and have available at public places, stores, festivals.

Provide actual pros and cons to every customer.

Downplay the "need" for huge expansive lawns.

Before selling educate people personally, through media.

Label bags according to correct need so there is not excess runoff.

HAVE UPDATED INFORMATION AVAILABLE FOR THE HOMEOWNERS ABOUT GRASS TYPES THAT WILL HELP PROTECT AND SUSTAIN OUR FLORIDA WILDLIFE AND ENVIRONMENT. BUT I DON'T SEE THAT HAPPENING SINCE THEY ARE IN BUSINESS FOR PROFIT.

We need more research to find some turfgrass which is more tollerant of low temperatures,,lower water requirement,and lower fertilizer requirements. The turfgrass Industry itself needs to fund more research at the University toward these requirements.

provide inservice to public

more education

If asked, help Extension faculty teach turfgrass topics by supplying turf variety samples and possibly sponsoring turf demonstration plots at Extension offices.

Television and mail outs

be more realistic regarding results with information given

Provide updated information on new varieties suited for our area and sample to the extension office for trial. Also provide the updated information to Master Gardeners fielding Homeowners questions.

Have more free educational seminars for the public and advertise extensively to get people to come.

Hold free education classes

they should also branch out to ALTERNATIVE GROUND COVERS

seminars

When approached by a homeowner or HOA to purchase new sod, inform them of better options and provide them with Florida Friendly Neighborhood and BMP info before ;purchase made.

More education and making newer turf products available to homeowners

Educate the use of less amounts of turfgrass used throughout our communities. Promote alternatives to turfgrass. Educate the public on the destruction the pesticides and herbicides are doing to our environment.

Educate the general public about what it means to have and maintain a Florida-Friendly lawn and yard.

printed material, e-mails, web sites, info. programs and any other materials that will "catch the attention" of customers or potential customers might be a start. It is hard to get people's attention unless they see an economic benefit for themselves.

make Bahia grass sod more easily available

The turfgrass industry is only interested to sell a product maximize their profit and hope to stay in business during bad time (recession and other)

Service and maintenance personnel need to be compitent.

Honesty is a big factor.:Educate clientel (i.e. homeowners) about all options and what the appropriate groundcover would be for the respective scenario. Again: Right Plant Right Place. Very often turf DOES NOT WORK at all and is still proposed as the landscape solution # 1.

Sell products that are appropriate for the area.

Follow FYN guidelines

Help residents make an informed decision about what turfgrass is Florida friendly

Regularly offer free training to Master Gardeners regarding recent industry developments which can be disseminated to the general public.

publish more info on each turf grass, drought tolerance, cold hardy , pest resistance,

stop promising the perfect lawn.

educate...educate...educate...

TV adds.

Place articles and Topics in newspapers and magazines with information on the best types of turfgrasses for the different types of lawns and locations (conditions) and the proper care of the chosen turfgrass.

be realistic about how a lawn should look year round. offer alternatives to turf. educate homeowners

Newspaper articles, "town" meetings, Master Gardener updates

Educate people and home owner associations as to the proper grass for their location , soil, and water requirements.

not sure what they are doing now so hard to say what else they might do or how they might do things differently

Nothing - this should come from UF research that is non biased. Overfertilizing, using potatble water will become more and more of a problem, and pesticide use to control diseases and insect problems is really not environmentally friendly. There are a lot of questions in N FL on Zoysia - very few answers regarding long term care - bahia grass although drought tolerant has weed issues plus pest problems so that will not cut down on use of pesticides. Yes Captiva is supposed to be resistant to chinch bugs but so was floratam. We need alternative ground covers to replace much of the turf. Have turf areas for pets, kids, etc. It is effective for erosion control but a ground cover may provide the same function and require less care once it's established. UF researchers need to separate themselves from industry and make sure they are presenting information that is best for the environment otherwise they will loose credibility.

Fairly disclose what the performance expectation of a particular turf is, water requirments, as well as other maintenance needs concerning fertilization and pesticide applications. Research and development of disease resistant cultivars and providing a wide range of alternatives dependent on location and use intended.

Test buffalograss, help homeowners choose the right grass for their conditions, help homeowners avoud unrealistic expectations

Educate Lawn Care Companies better, hold free clinics for homeowners, prepare pamphlets for each lawn type

Turffgrass industry needs to help people have a realistic expectation of what their lawn will and will not be. They should also take a more proactive role in educating the consumer about proper IPM and fertilization.

Give instructions with the turfgrass, or send them to Extension.

TV announcements

Seasonal needs for watering, type of fertilizer to use and time of year to maintain healthy lawn, mowing heights and frequency

Have one set of standards

work with cooperative extension to facilitate education to the general public using methods such as group educational sessions.

Grant opportunities for Extension Agents, Specialits and Master Gardeners

Get familiar with the Florida-Friendly principals.

Help people realize the optimum amount of fertilizer so they don't overapply or underapply it, depending on their situation.

Educating the public is the toughest task of all. The only way you are going to get people's attention, in my opinion, is to have support and understand at the places where people do pay attention like Facebook and Other social networks; popular TV shows (Oprah and Ellen). Once there is an awareness at this level, knowledge and awareness will trickle down to the general public. A cute jingle doesn't hurt either.

Install public demonstration areas showing how to care for turf, emphasizing lower input practices.

Advice to Sod Industry

What advice would you give to the sod producers and/or the sod industry to be more successful?

Text Response
Educate the public
Stop producing St. Augustinegrass
marketing to the general public is key - especially to dispel the myth of the evil turf
Need to educate buyers as to care and maintenance of sod.
recognize soil and available water limitations and promote smaller, more sustainable use of turf grass in all applications
Many people (homeowners and landscapers) are beginning to feel that their turf diseases are coming in on the new sod. It is becoming an image problem.
Work to encourage topsoil on lots prior to turf and very important that the irrigation has even distribution and appropriate scheduling - don't over water. Help FIS in their efforts, better irrigation - better turf.
They need to associate themselves with University research to backup thier claims. They need to see University/Extension as a resource and not thier enemy.
Allow all technicians and supervisors to attend educational programs on BMP's for turfgrass and landscapes.
Increase production of hardier turfgrass varieties such as shade tolerant, cold tolerant, and drought tolerant.
Most of the grass I see has no roots due to either Take All Root Rot, Nematodes, grubs, overwatering etc. Promote education about disease/pest diagnosis, prevention and treatment. If sod growers wouldn't bet their business on growing their product on sand with low to zero organic matter then they shouldn't sell their product to customers to grow under those conditions. Healthy fertile soil is the right place for turfgrass.
tell more of the story and not only what will sell more sod.
Produce sod that is genetically engineered to not require augmentation with water, pesticides, or fertilizers.
availability of drought tolerant varieties like celebration that have to be shipped from georgia; need local access
encourage low maintenance - sellers of maintenance materials don't care about BMP's - there are many conflicting messages being sent in media. lots of confusion, no athoritative, trusted voice.
Setting realistic customer expectations
Don't stop introducing the newer varieties. Continue to market 'cool', 'baby friendly,' 'picnic atmosphere' desirable images of Florida turf. Use images that hit home so that we can sell the product easier. Far be it from me to tell you how to market it, but when I throw in the hard sell about how fantastic grass is, science only goes so far. Since Florida is the #1 recreation state, don't just leave it at the golf course. Use pictures from college campuses with kids sitting on it, school playgrounds, theme parks, churches, cemetary plots, girls laying out in the sun on the grass in the back yard near the pool, pet play and baby's first steps. Bring the image home that a homeowner lives every day. Make it an 'American tradition'. Hell, it beats living in sand! As a matter of fact, throw in the American Flag in the ad an you can bet it will be noticed. I did it with onions marketing once and it worked amazingly well. When I speak of these images to a disgruntled homeowner, 100% of them (mostly women) change their mind and resod their lawn again instead of getting rid of it. The woman is the one that convinces the man (Husband) to sod. Please don't take offense to my suggestions. If they are stupid, throw them out. But if they work, I'd love to know about it.
Come to the Master Gardeners and educate us on your mission. Help us educate the public.
Participate in professional turfgrass management training offered by UF through its Extension Services
eliminate st augustine grass production
Stay on the land but tansition to cultivation of Native Plants and Food Crops the use of which can be environmentally sound AND profitable. Be willing to change. Recognize that the WORLD can no longer afford for us to selfishly use grass in such a wasteful manner. Educate yourselves to alternatives that will provide food and beauty, Contact growers that have successfully made the change.
Promote Xeriscaping

Florida Sod Growers Cooperative – Extension Agents and Master Gardeners’ Perceptions of Turf Grass

Educate the industry, the public, and create better sod varieties which require less water & fertilizer.

Work with chemical and fertilizer companies to get "on the same page" about FFL lawn care .

Develop a turf grass that is truly Florida Friendly

More outreach

Make sure locals know that sod is grown right in their own county and can be purchased directly. Be more visible to the public.

Promoting responsible lawn maintenance and watering only as-needed

education is the key

evaluate the amount of soil transferred with roots to have better ease of starting a lawn. also i've had several complaints of insect infestations within first month of palnting new sod. these resulted in loss of moderate amounts of new sod.

Some push resodding during tmes when the grass is dormant and owners waste water trying to make it look green

Don't try to go it alone. Partner with the fertilizer industry, the water management districts, the pest control industry,etc. to promote broad industry standards for effective maintenance stressing the turf grasses strengths when properly cared for.

Stop pushing Saint Augustine grass

get the word out even posters at nurserys and plant sales would help

Grow and promote turf that has more Florida Friendly attributes

Greater exposure to the public .

Don't ever stop providing correct information regarding maintenance of your product to everyone in the chain.

Provide correct maintenance information with every sod delivery they make so that the end-owner has an educational document to refer to for proper care as to watering, pesticides, and fertilizers

Keep producing drought and pest resistant turf.

let homeowners know about florida friendly sod and low maintenance

Spread the word that thre are differente variety of sod, let people know that the you cooperative exist.

produce a durable turf grass alternative which can be used as a viable substitute.

Only supply FFL sod and groundcover to clients. Continue to stay informed and offer educational resources to your clients

they do not give home owners enough info about the specific needs of the turf selected by consumers

Try to get information out to Extension offices, Master GArdeners, landscapers and retail establishments about what is readily available on the market, where to buy it and the attributes of newer, improved varieties of sod.

Find native varieties that can be commercialized. Refer customers to the Extension office for advice and help.

More publicity

Grow sod that is more drought tolerant, needs less fertilizer and fewer pesticides.

When new sod is placed give the owner written suggestions for maintaining the sod in good condition. Offer help in diagnosing problems in new sod during the first several weeks.

Be truthful about what turf works where. Develop and push the use of alternatives where applicable.

Keep doing what you are doing. Have members contact local Extension agents working with turf and offer to donate turf variety samples or sponsor a turf demonstration area.

Have meetings with the local Chamber of Commerece

no comment

Increase awareness i.e. Pamphlets, Garden Festivals provide info to county extention.

Be informed as to current methodology and practices. Hire experienced workers.

sell florida friendly sod.

WHEN PUTTING SOD THE FIRST TIME, TO CHOSE THE RIGHT KIND IS IMPORTANT. START FROM EDUCATING THE BUILDERS OR LANDSCAPERS TO INSTALL THE RIGHT VARIETY , AND DO THEIR HOMEWORK BEFORE ALL ELSE..

less water

Providing more info to the Extension Offices and providiing clients with affordable options beside St Augustine.

Limit amounts of sod used...get back to environmentally safe yards.

Florida Sod Growers Cooperative – Extension Agents and Master Gardeners’ Perceptions of Turf Grass

Listen to the issues on the local and state level.

Am not informed enough to advise

Master gardeners in this country do not deal with commercial operations

Be more visible to the public

Being honest and more environmentally friendly. Thinking not only about profit, but about protection of our water resources for the present and the future.

More outreach

Florida Friendly turf grasses.

Get the word out to the general public that you exist by holding free programs touting Florida Friendly ways to integrate turf into the landscape.

stop promising the perfect lawn

educate...educate...educate...

To become more "visible" and accessible to the public with information.

Become more visible-more vocal.

More education to home owners asocaitions.

come up with new varieties that are Florida-Friendly and have reduced mowing, water, fertilizer, and pesticide needs. Create trial plots that have less inputs to showcase what they will look like and create cost analysis for annual maintenance. Folks are hesitant to listen to someone promoting their own product - self-serving.

Clear descriptions of how the products perform in Florida environments which vary considerably from region to region and what care is needed in various communities for best results and what can be expected year round from healthy management of those grasses.

Think out of the St Augustine/ Bermuda/ Zoysia box. Consider developing different varieties of groundcovers for sun, shade and a variety of conditions & situations. How about Dwarf Confederate Jasmine 'sod?' Again - test buffalograss. Is it feasible in Florida? Innovate.

Free Pamphlets regarding lawn types pros and cons and care instructions given out at point of sale, garden stores, libraries, community centers, senior centers, large HOA's etc.

Provide good quality sod.

Give care instructions. Send clients to Extension materials or office.

Educate the public

Proper advice on when and how often turf, especially centipede varieties, should be fertilized and also educating clientele on the damage that can be done by materials such as weed and feed.

Partner with organizations that can help share the message

Learn about Florida Friendly turf and principals.

Partner with the big box stores, Water Management districts or other organizations that can afford high cost media campaigns.

Cultivate new grasses that need less water to sustain a healthy lawn

Close the gap between growing practices available to the grower before the product reaches market and practices available to the homeowner once the product is expected to perform over several years. The homeowner expects a long term relationship with the turfgrass that can be disappointing and expensive if not achieved.

Talk about the money saving aspects as well as BMPs. No yard is trully maintenance free.

Develop sod alternatives. We need to stop wasting our potable water and polluting our surface waters.

sell sod that will survive and is correct for florida

Stop promoting "low maintenance and ease of care"

Help people understand that turf needs care and many people need to learn more. Hepl them learn that turf goes dormant and is not always green. Help them understand how to deal with weeds, pests and funguses. Many people who come from other states do not know how to grow sod/turf in Florida and it creates a financial hardship for them when they kill their yards. Also they do nort know about water pollution and water restrictions and about what they do in their yard effects and affects Florida's quality of life.

Make themselves more known.

Spread the word!

Local leadership and reasonable solutions and suggestions for people wanting to reduce their reliance on turfgrass as the only suitable choice along waterways. Why not partner with state FLNGA to give people good low-growing buffer and border plantins along waterways.

Lower water needs for a type of sod that is slow growing and tolerably attractive

Continue to research sod choices that need less water.

Communication is the key word for success.

Come to our Master Gardener meetings and educate us.

Grow a mixture of grass species. The one that survive with minimum care are the ones that are adapted to the soil and climatic conditions locally.

Producers work on alternative plant types, chemical co's focus on irrigation equipment (but not additives)