Cactus Clippings

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Picture taken by Charles Lindsay 2003 at Troon Country Club

Nematodes ? In Arizona ???

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About a year ago, a chemical company approached me to conduct a survey of golf courses in Arizona to determine if nematodes were a problem on golf greens. They have a nematode control material in the product development pipeline and wanted to access their market potential. I responded that I would be happy to do the study but that I thought they were wasting their money as nematodes aren't on the radar as a problem here even though they are a severe problem in the Palm Springs area.

During my 20 years here in the Phoenix area, I have often wondered about nematodes and could they be a factor in some of the unexplained turf problems. It was one of those things that occasionally came to mind but always ended up on the back burner and I never examined the subject. So, in spite of my recommendation to the chemical company, I was eager to see the results of the survey. The chemical company has now permitted me to release the results (they paid for the study so the results are their intellectual property). However, out of respect for the confidentiality of the individual participating Superintendents, the golf courses will not be specifically identified. The results of the survey are as follows.

Note; Highlighted data represent numbers that exceed "damaging" levels.

Course	Hole	Turf	Week of	Root Knot	Sting	Lance	Spiral	Stubby Root	Stunt	Ring	Sheath	Sheathoid
1 A	9	TIfdwarf	7/25	53						407	90	
1 A	18	TIfdwarf	7/25	41						718	52	
1 B	16	TIfdwarf	7/25	47				11 B		165	1	
1 B	17	Tifdwarf	7/25	10						44		
2	5	Bentgrass	7/11			1				306	26	117
2	12	Bentgrass	7/11							308	3	3
Calif.	2	Bentgrass	6/20		29		273			926	189	
Calif.	12	Bentgrass	6/20		8		792			64	31	
3	3	Bentgrass	6/13				19	24				
3	17	Bentgrass	6/13					4				
4	1	Bentgrass	6/13					21				
4	5	Bentgrass	6/13									
5	3	Bentgrass	6/13					9				
5	8	Bentgrass	6/13					22				
6	4	Tifdwarf	7/4							655		
6	12	Tifdwarf	7/4	32					89	497		
7	1	Tifeagle	7/4	6								
7	9	Tifeagle	7/4	18						2		
8	4	Bentgrass	7/4							736		
8	5	Bentgrass	7/4					48		32		
9	1	Champion	6/13	120				9		31		
9	7	Champion	6/13	105				5		3		
10	2	Tifeagle	6/13	21						3		
10	PG	Tifeagle	6/13	37				3		1		
11	6	Tifgreen 328	6/13	13				2		71		
11	17	Tifgreen 328	6/13	5				5		79		
12	1	Champion	6/13	45				2		34		
12	18	Champion	6/13	3				3		369		

I had some suspicions about some golf courses, some turf species, etc and their likelihood of having problem levels of nematodes. The results were in fact striking. However, I must admit that my suspicions were not supported by the results. The occurrence of nematodes didn't seem to fit a particular pattern, at least not that could be identified using the limited number of golf courses. The occurrence seemed to be all over the map with some severe infestations whereas others were quite nematode-free. Personally, I have some theories about why the nematodes are where they are but I can't support the theories with documented fact.

What does this mean? I'm not sure precisely what to make of the results. I collected all of the samples personally. The laboratory analyses were performed by veterans of nematode testing (University of Florida) and I have utmost confidence in the integrity of the data. According to their published experience, the numbers of nematodes seen in some locations should be causing some serious damage. In at least a couple of the instances with severe infestation, I know that the unfortunate Superintendents have really struggled with greens turf. I suspect that there is indeed a strong relationship between the nematode incidence and their problems. Looking beyond greens, and comparing symptomology experienced in other parts of the country with fairway turf here, nematodes would potentially explain a lot of the problems I have seen.

So, where does it go from here? First and foremost would be to collect more information on nematode incidence and try to associate that incidence with observed problem areas. For that reason, I would encourage Superintendents to have nematode populations evaluated in areas with unexplained turf problems, particularly if those problems resemble the textbook nematode symptoms.

If a Superintendent wishes, I would be pleased to collect samples and have the testing performed as part of my technical services. As always, all technical services will be provided in absolute confidence. To arrange those services, Superintendents may contact me at 623-581-1669 or turfsci@cox.net.