

Perceptions of the Audubon Cooperative Sanctuary Program: A Survey of Superintendents of U.S. University-affiliated Golf Courses

Jacob Kuban¹, David Kopsell¹, Aslihan D. Spaulding¹, and Ann Marie VanDerZanden²

¹ Department of Agriculture, Illinois State University, Normal, IL; ² Department of Horticulture, Iowa State University, Ames, IA

Introduction

The Audubon Cooperative Sanctuary Program (ACSP) is administered by Audubon International (Troy, NY) and is a partnership with the United States Golf Association which recognizes sustainable golf course management practices. There are six categories of the ACSP certification (Figure 1). Currently, only 13% of the estimated 16,000 golf courses in the U.S. have achieved some level of ACSP certification, while only 5% of U.S. golf courses have achieved certification in all six categories (1).

An online survey of U.S. university-affiliated golf course superintendents was conducted to determine the level of ACSP certification and the interest in student involvement in the application process.

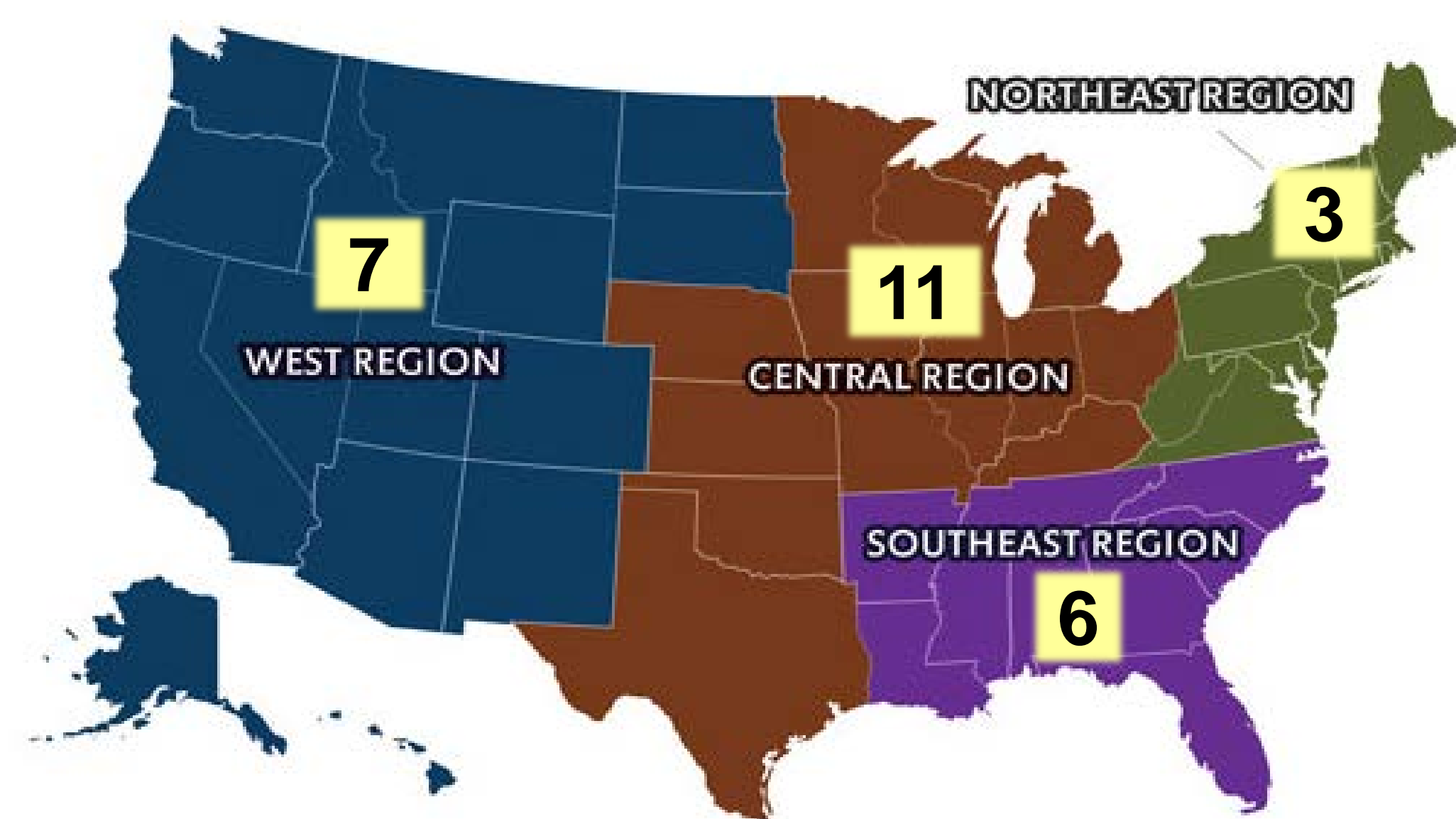


Figure 2. USGA green section regional map with corresponding number of responses from each region to a survey of superintendents on university-affiliated golf courses in the U.S.

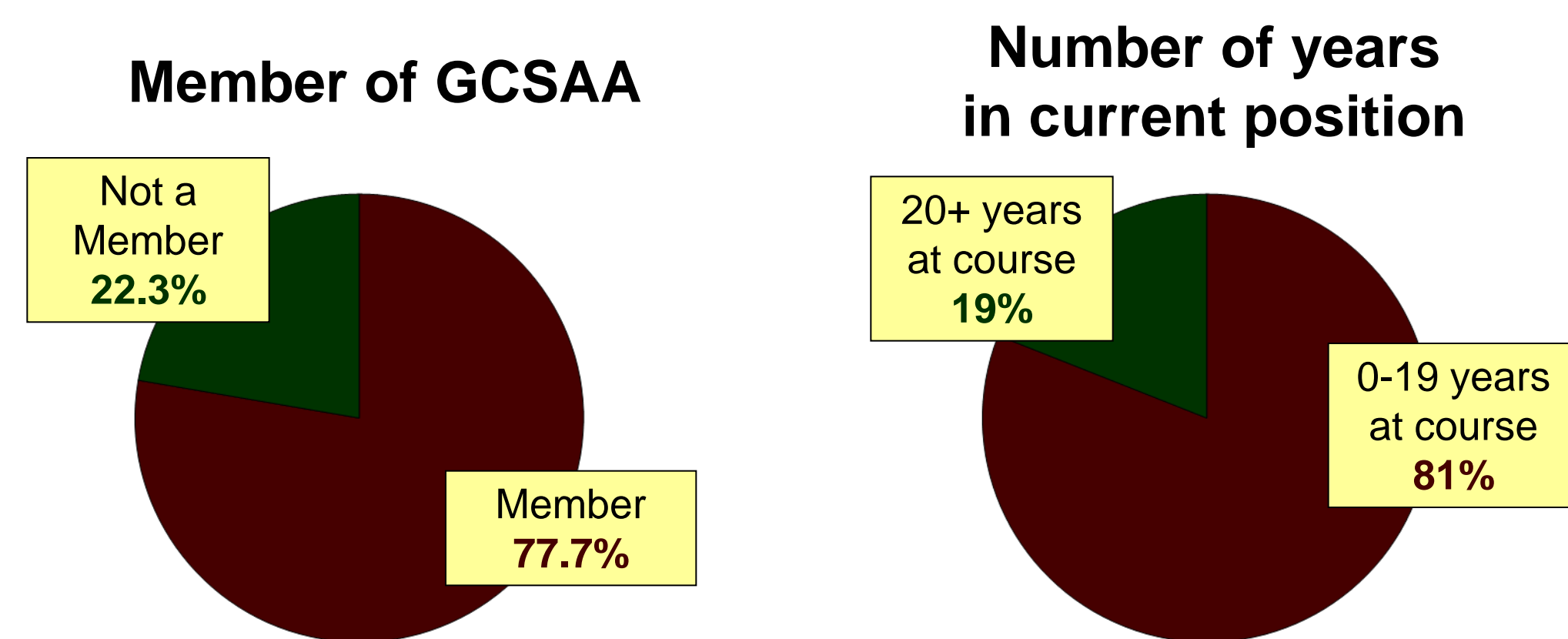


Figure 3. Demographics of superintendents on university-affiliated golf courses in the U.S. (4)

Figure 1. Audubon Cooperative Sanctuary Certification Categories. (1)



Environmental planning.



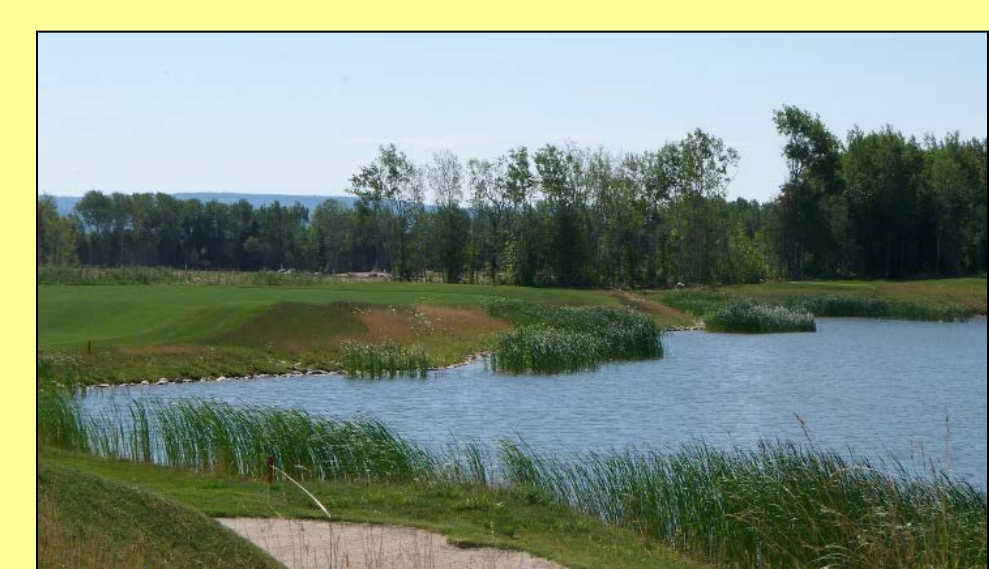
Wildlife and habitat management.



Outreach and education.



Chemical use reduction and safety.



Water quality management.



Water conservation.

Survey Methodology

A cross-sectional, self-administered online questionnaire developed in Qualtrics consisting of a mix of closed- and open-ended questions was emailed to a population of 120 U.S. university-affiliated golf course superintendents over the winter of 2013-2014 (2,3). Survey questions and letter of consent were approved by the Institutional Review Board (IRB) at Illinois State University (protocol number 2013-0156). Data was analyzed using Chi-square, Spearman's rank correlation, and Cox multiple regression analysis using Qualtrics, SPSS 20.0, SAS 9.3 and Microsoft Excel. The survey response rate was 31.9%.

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Survey Results

- 75% of U.S. university-affiliated golf course superintendents have heard of the ACSP and 25% identified their university-affiliated golf course as having some level of ACSP certification (Table 2).
- 54% of superintendents reported their college/university affiliate has a turfgrass or horticulture program and these programs were more likely to be ACSP certified (Table 3).
- Nearly 60% of superintendents reported academic classes visit their golf course for tours or laboratory exercises and 85% of superintendents report employing full- or part-time students on their course.
- 73% of superintendents at non-ACSP courses reported being interested in becoming certified if students were to assist in the application process (Table 1).
- Superintendents at non-ACSP certified courses ranked "cost" as their main reason for not being certified, while those superintendents at ACSP certified courses ranked "labor" and "time" as the most challenging factors for completing the certification process.
- The most reported benefit of being ACSP certified was "enhanced public perception".

Table 1. Chi-square tests of independence: ACSP certification status vs. independent variables from a survey of superintendents on university-affiliated golf courses in the U.S.

Variable		Not ACSP certified ^z	ACSP Certified ^z	Sig. ^y
Years in golf industry	0-19 years	40.0%	0.0%	0.008
	20+ years	28.0%	32.0%	
Presence of horticulture/turf program and research	Yes	14.8%	22.2%	0.025
	No	55.6%	7.4%	
Interested in student help	Yes	42.3%	30.8%	0.062
	No	26.9%	0.0%	

^z Percent of respondents. ^ySignificance from test (2-sided).

Table 2. ACSP status from a survey of superintendents on university-affiliated golf courses in the U.S.

ACSP status	# of responses	% of respondents
Not Certified & Not Interested	11	34%
Not Certified but Interested	13	41%
Environmental Planning (beginning the certification process)	4	13%
Environmental Planning Plus (certified in one or more, but not all categories)	2	6%
Audubon Cooperative Sanctuary (certified in all six categories)	2	6%

Table 3. Spearman's rank correlation coefficients (*r*) between bivariate variables of the ACSP status from a survey of superintendents on university-affiliated golf courses in the U.S.

Variable	ACSP status	Years in golf industry	Interest in student involvement	Presence of horticulture or turfgrass program	Conducting research on course
Correlation coefficients (<i>r</i>)					
ACSP status	--	0.56**	-0.41*	-0.45*	-0.40*
Years in golf industry		--	ns	ns	ns
Interest in student involvement			--	ns	ns
Presence of horticulture or turfgrass program				--	0.55**
Conducting research on course					--

*,** are significant at $p < 0.05$ and $p < 0.01$, respectively. ns = non-significant.

Conclusions

Interest exists in the Audubon Cooperative Sanctuary Program at U.S. university-affiliated golf courses. There is also interest in student assistance from superintendents in the ACSP certification process. While cost was the biggest reason for not being certified, it was reported by superintendents at ACSP certified courses that time and labor involved in certification are actually the most difficult obstacles to overcome.

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