

Current and Anticipated Funding Sources and Expenses for Four-Year Collegiate Livestock Judging Programs¹

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Abstract

Collegiate livestock judging programs require financial resources to support expenditures associated with competition and overall team achievements. Recent economic pressures have forced administrators to critically evaluate program the value of co-curricular programs. Therefore, the purpose of this research was to examine the current and anticipated sources of support and expenditures associated with university livestock judging programs. Each of the thirty-nine four-year college livestock judging programs that competed at the North American International Livestock Exposition in 2012, 2013, or both years, were sent a researcher-developed electronic survey. Twenty-nine surveys were returned for a 74.4% response rate. Most collegiate livestock judging programs received funding from their academic unit(s), stakeholders, development accounts and via fundraising revenue. Less than half of collegiate livestock judging teams received funding support from student participants, in-kind support, or other sources. Most respondents anticipated level funding support from the academic unit(s) over the next few years. However, among those who expected a change in academic unit(s) support, ten anticipated a decrease and only one anticipated an increase. Over half of the respondents anticipated expenditures for travel, contest entry fees and overall livestock judging program expenditures to increase over the next five years.

Introduction

Intercollegiate livestock judging is a co-curricular activity that provides opportunities for students to apply animal science knowledge related to livestock selection, production and management. Laboratory exercises involving livestock judging “. . . quickly became the focus

of interest for students, because it prepared them for the rapidly expanding purebred segment of the livestock industry . . .” during the late 1890s and early 1900s (Willham, 2008, p. 9). Taylor and Kauffman (1983) reported that for the first 50 years (beginning in the late 1800s through the mid-1900s), livestock judging was one of the primary subjects of animal science instruction taught to students. Visual appraisal was the primary means of assessing the value and quality of livestock during that time period. Despite a few complaints in the 1930s, the importance of livestock judging was not seriously challenged until the 1960s. Subsequent changes in required coursework resulted in livestock judging classes becoming elective courses in many animal science programs by the 1980s (Taylor and Kauffman, 1983).

Literature associated with the cost of sponsoring collegiate judging teams was limited to one survey conducted in the late 1990s that encompassed all non-salary expenses of animal related judging teams (livestock, meats, dairy, horse, wool and meat animal evaluation teams). Expenditures for judging programs ranged from \$2,500 to \$25,000 annually, with an average annual expense of \$10,953.70. Academic institutions covered 50% of the costs on average, along with funding provided by team members (15.2%), endowments (12.2%) and annual giving (11.2%) covering the remaining costs (Field et al., 1998). According to McCann and McCann (1992), the financial cost of sponsoring an intercollegiate livestock judging team coupled with the de-emphasis of livestock judging as a subject, contributed to a reduction in the number of collegiate livestock judging programs in the U.S. For example, the number of collegiate livestock judging teams declined from 44 in 1981 to 31 in 2013

¹This study was deemed exempt by the university Institutional Review Board (protocol number 2014E0520).

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(108th National Collegiate Livestock Judging Contest Awards Breakfast Program, 2013).

Much like contemporary collegiate athletic programs, colleges of agriculture in the late 1800s and early 1900s recognized the need to recruit students to their institutions and capitalized on their livestock judging team as one avenue for recruitment (Willham, 2008). Some colleges with agricultural programs still support a livestock judging team to promote student interest in their agriculture departments. Illinois Central College, Peoria, IL, recently established a livestock judging program specifically for this purpose and reported over 100 students enrolled in their agriculture department for the first time ever during the 2013-2014 academic year (G. Grebner, personal communication, September 9, 2013). The program manager in charge of recruiting students to the College of Food, Agricultural and Environmental Sciences, at The Ohio State University, reported an increase in student interest in attending the institution as a result the school's competitive success at recent livestock judging competitions (J. Tyson, personal communication, April 12, 2014).

Sources of funding support for higher education have changed dramatically in recent years. State appropriations for higher education dropped from \$9.74 per \$1,000 in personal income in 1989-1990 to \$5.63 per \$1,000 in personal income in 2011-2012 (Baum and Ma, 2012). College students are responsible for over half of the actual cost of their education today, compared to only 38% in 1998 (Desrochers et al., 2010). Research funding support has coincidentally shifted more to private sector sources and individual contributions (Baum and Ma, 2012). Funding resources for educational programming and co-curricular activities are also likely to experience a similar trend shifting away from public sources of support.

Based upon somewhat analogous evidence which implies that athletic success can lead to increased student interest in academic institutions (Toma and Cross, 1998), a similar phenomenon may exist within agriculture departments in relation to livestock judging programs (G. Grebner, personal communication, September 9, 2013; Willham, 2008).

Financial support systems for higher education has shifted and will likely continue to shift away from public funding toward cost recovery in the form of student tuition (Baum and Ma, 2012; Desrochers et al., 2010). Research and program funding within higher education has also begun to be outsourced to private partners and individual contributors (Baum and Ma, 2012; Desrochers et al., 2010). Based upon these resource shifts, financial support for collegiate livestock judging programs may also become increasingly dependent upon external stakeholder contributions.

Purpose

This study was conducted to identify and describe support, expenditures, anticipated trends in support and expenditures, anticipated trends of espoused stake-

holder support and their relationship to competitive performance and the structure and characteristics of senior college livestock judging programs. The following research objectives were developed to guide this study.

1. Describe the sources and amounts of funding support for university livestock judging programs.
2. Describe the expense categories and amounts included in university livestock judging program budgets.
3. Describe anticipated trends of funding support for university livestock judging programs.
4. Describe anticipated trends of expense categories and amounts for university livestock judging programs.

Materials and Methods

Livestock judging programs in four-year colleges and universities in the United States that competed in the North American International Livestock Exposition (NAILE) in 2012, 2013, or both years, comprised the target population for this study (N=39). Contest results from the NAILE in 2012 and 2013 contests were used to identify institutions included in the target population. The population frame included the livestock judging program in each respective institution. Subjects were identified by the president of the National Collegiate Livestock Coaches' Association. Two subjects were replaced with alternate contacts from their respective institution, due to personnel changes and the survey was conducted based upon the final population frame (N=39).

Data collection was conducted according to the tailored design method (Dillman et al., 2008). Pre-notification letters were sent via email on October 27, 2014, to 39 subjects inviting their participation in the study, informing them of materials needed to complete the electronic questionnaire and that they would be receiving a URL link to the survey. A cover letter containing the URL link to the data collection instrument was sent via SurveyMonkey®, (a secure online survey administration service) on November 3, 2014. The initial cover letter included a description of the research and the human subjects review requirements. Subjects were asked to click on or copy and paste the secure URL link into their Internet browser to complete the data collection instrument within three weeks. On November 10, 2014, the cover letter was resent as a first follow-up email message through SurveyMonkey® to subjects that had not yet responded. A third, identical follow-up email message was sent via SurveyMonkey® on November 17, 2014, to subjects who had not yet responded. A fourth cover letter email was sent via SurveyMonkey® on November 21, 2014, to subjects that had still not responded. The data collection process was closed on December 8, 2014.

Two subjects reported they did not receive the data collection instrument due to SurveyMonkey® site restrictions and were sent electronic cover letters and web links using the researcher's University email account. The locally established site restrictions were

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beyond the researcher's control. A similar timeline for sending reminder emails was used for the two subjects receiving individual electronic cover letters and URL links.

Data analysis began on December 10, 2014. Thirty-one subjects provided data out of 39 subjects in the target population, yielding an initial response rate of 79% (n=31). Two of the 31 responses were partially complete and were excluded from the data set yielding a 74.4% response rate based on 27 useable responses. Greater than 10% of the information requested on the data collection instrument was missing from the two excluded responses.

Cronbach's alpha reliability coefficient for internal consistency was computed post-hoc using data collected in this study to assess reliability of the data collection instrument (n=29). The post-hoc test revealed a Cronbach's alpha reliability coefficient of 0.850 based upon variables comprising anticipated trends of funding support and expenditures and 0.885 for variables comprising current and anticipated trends in espoused stakeholder support. Each reliability coefficient was higher than the minimum threshold alpha level of 0.70, which was established a priori to determine reliability. Therefore, the data collection instrument used in this study was considered reliable (Nunnally and Bernstein, 1994).

Ten randomly selected support variables were used to compare early to late respondents (Lindner et al., 2001). Respondents were divided into quartiles based upon when each completed survey was electronically submitted. Early respondents were defined as those responding within the first quartile (n=7). Late respondents were those responding during the fourth quartile (n=7). Independent t-tests revealed no significant differences when comparing the means of the early and

late respondents based on ten randomly selected topics involving anticipated trends in support or expenditures associated with four-year university livestock judging programs.

Results and Discussion

The primary sources of funding support for collegiate livestock judging teams were academic unit(s), stakeholders, development accounts and annual fund-raising (Table 1). Two funding ranges from \$10,000 to \$24,999 and \$25,000 to \$49,999 were the most commonly selected categories of funding from academic units for livestock judging programs with six (21.4% each) respondents selecting each category. Fifteen (53.6%) subjects reported receiving financial support within the \$1 to \$4,999 range from stakeholder donations.

Students, in-kind giving and all other sources did not provide support for the annual livestock judging program budget at over half of the institutions that participated in this study. Sixteen (59.3%) respondents indicated that their livestock judging program did not receive financial support from student participants. The most common response category to describe the level of in-kind support for collegiate livestock judging programs was \$0, which was selected by 17 (63.0%) respondents (n=27). Eighteen (75.0%) survey responses selected the \$0 option, three (12.5%) respondents selected the \$5,000 to \$9,999 range, two (8.3%) selected the \$1 to \$4,999 range and one (4.2%) reported receiving funding in the \$10,000 to \$24,999 range for all other sources of financial support.

Salary and travel composed the greatest amount of total dollar expenditures at most institutions (Table 2). Eighteen (62.1%) subjects reported salary expenditures (apportioned specifically for livestock judging program coaching activities) in categories exceeding \$10,000. Likewise, travel expenditures were reported to exceed \$10,000 by 20 respondents (71.4%). Contrarily, scholarship expenditures were reported to be \$0 by 16 respondents (59.3%).

Although most respondents (62.1%; Table 3) indicated funding support from academic unit(s) is not likely to change, of those that anticipated change, ten respondents (34.5%) anticipated a decrease over the next five years compared to only one (3.4%) that anticipated an increase. Most respondents also expected expenditures for travel (58.6%; Table 4) and contest entry fees (55.2%) to increase over the same time period. Subsequently,

Table 1. Sources of Funding Support Received During Fiscal Year 2013-2014 for Livestock Judging Programs at Four-Year Colleges and Universities.

Funding Support Source	Frequency (Percentage) ^a						
	\$0	\$1 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 to \$74,999	\$75,000 to \$99,999
Academic unit(s) (n=28)	3 (10.7)	5 (17.9)	2 (7.1)	6 (21.4)	6 (21.4)	4 (14.3)	2 (7.1)
Stakeholder donations (n=28)	7 (25.0)	15 (53.6)	2 (7.1)	2 (7.1)	2 (7.1)	0 (.00)	0 (.00)
Development accounts (n=29)	8 (27.6)	8 (27.6)	2 (6.9)	6 (20.7)	5 (17.2)	0 (.00)	0 (.00)
Student participants (n=27)	16 (59.3)	7 (25.9)	1 (3.7)	2 (7.4)	1 (3.7)	0 (.00)	0 (.00)
Fundraising revenue (n=28)	7 (25.0)	10 (35.7)	4 (14.3)	4 (14.3)	3 (10.7)	0 (.00)	0 (.00)
In-kind support (n=27)	17 (63.0)	9 (33.3)	0 (.00)	1 (3.7)	0 (.00)	0 (.00)	0 (.00)
All other sources (n=24)	18 (75.0)	2 (8.3)	3 (12.5)	1 (4.2)	0 (.00)	0 (.00)	0 (.00)

^aNo subjects reported receiving over \$100,000 from any of the funding sources.

Table 2. Financial Expenditures in Support of Collegiate Livestock Judging Programs at Four-Year Colleges and Universities during Fiscal Year 2013-2014.

Type of Expenditure	Frequency (Percentage) ^a					
	\$0	\$1 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 to \$74,999
Salary (n=29)	6 (20.7)	4 (13.8)	1 (3.4)	9 (31.0)	8 (27.6)	1 (3.4)
Employee benefits (n=28)	14 (50.0)	8 (28.6)	4 (14.3)	2 (7.1)	0 (.00)	0 (.00)
Travel (n=28)	0 (.00)	2 (7.1)	2 (7.1)	10 (35.7)	8 (28.6)	0 (.00)
Contest entry fees (n=28)	1 (3.6)	26 (92.9)	1 (3.6)	0 (.00)	0 (.00)	0 (.00)
Scholarships (n=27)	16 (59.3)	5 (18.5)	2 (7.4)	4 (14.8)	0 (.00)	0 (.00)
Team awards (n=27)	13 (48.1)	14 (51.9)	0 (.00)	0 (.00)	0 (.00)	0 (.00)
Instructional resources (n=28)	12 (42.9)	16 (57.1)	0 (.00)	0 (.00)	0 (.00)	0 (.00)
All other types of financial expenditures (n=25)	16 (64.0)	7 (28.0)	3 (8.0)	0 (.00)	0 (.00)	0 (.00)

^aNo subjects reported financial expenditures above \$75,000 for any expenditure category.

overall expenditures were expected to increase by most respondents (55.2%).

Financial data were collected within ranges to encourage participation in the reporting process, which inhibited precise budget determination. However, some benchmarks were defined for discussion purposes. Three hypothetical budget amounts were computed by summing the low end of the lowest category selected by at least one respondent to reflect the lowest level of funding provided by each source for the livestock judging program. A second hypothetical budget was computed by summing the top end of the range of the highest category selected by at least one respondent. A third hypothetical budget was determined by summing the midpoint of the range of the modal category (i.e. most frequently selected) by respondents. Using this process, the lowest possible budget was \$0, the highest possible budget was \$349,993 and the modal category midpoint summation was \$32,000. Hypothetical financial expenditures were also computed using a similar procedure, which yielded hypothesized annual expenditures of \$1, \$40,000 and \$249,993 for low end, modal midpoint and high end expenditure budgets, respectively.

Most respondents anticipated funding from academic units to either stay the same or decline over the next five years, which could result in a funding shortfall for programs that rely heavily on departmental support. This scenario is somewhat analogous to a business in a capitalist economy. Businesses that generate higher rates of return on investment are more likely to attract additional funding to grow and expand. Conversely, less profitable businesses often face challenges associated with declining resources, meeting cash flow obligations and may eventually face bankruptcy and/or cease to exist. Therefore, competitive livestock judging teams are more likely to attract external funding and thrive as a result of their competitive success, while underfunded

and less competitive teams may cease to exist due to the eventual effects of funding limitations.

Field et al. (1998) reported (from a national survey) that non-salary expenditures for all judging programs (livestock, meats, dairy, horse, wool and meat animal evaluation teams) were paid by academic institutions (50%), team members (15.2%), development accounts (12.2%) and annual stakeholder giving (11.2%). Field et al. (1998) also noted that livestock judging team members contributed the second highest amount of funding support for livestock judging program activities in the late 1990s. However, this study revealed that team members at most institutions did not provide funding support for the annual livestock judging program budget. Coincidentally, fundraising activities were not mentioned in previous literature, but were identified as a major source of funding support in this study. In addition, most respondents expect annual fundraising to increase over the next five years and fundraising was at least moderately important to most of the coaches and their supervisors. Therefore, it appears that the expectation of students to directly contribute funding support for the livestock judging team budget may have been supplanted with an expectation of team members to service fundraising activities. Many institutions host youth livestock judging camps that are frequently staffed by team members during the summer months, which may provide funding support for the livestock judging program budget (2014 Judging Camps, 2014).

Increased fundraising activities could also be in response to the expected changes in funding support from academic unit(s) that were revealed in this study. Most respondents expect funding support from academic unit(s) to either stay the same or decrease over the next five years. Independently, either of these scenarios would result in a net decrease of funding available to support judging programs if overall expenditures increase, which was the expectation shared by most of the respondents in this study. Travel expenditures were a cost that most respondents anticipated to increase in the future. Hotel accommodations, food, transportation and other costs associated with travel will likely continue to increase because of economic inflation. Contest entry fees were also anticipated to increase by most respondents, which could be the result of higher fees charged at individual contests or larger expenditures if teams decided to participate in more contests on an annual basis.

Therefore, coaches might value fundraising as a means to achieve their competitive goals, whereas supervisors might view extramural funding support as one method of decreasing the financial burden that McCann and McCann (1992) partially attributed to the decline in the number of livestock judging programs across the country. Anticipated reductions in funding support provided by academic units for collegiate livestock judging teams may be counteracted with increased fundraising activities, which would simultaneously enable coaches to direct funding toward areas viewed as more important for their specific team goals and contribute to long term

Table 3. Anticipated Changes in Financial Support for Collegiate Livestock Judging Programs at Four-Year Colleges and Universities Over the Next Five Years (n=29).

Source of Funding Support	Frequency (Percentage)		
	Decrease	Stay the Same	Increase
Academic unit(s)	10 (34.5)	18 (62.1)	1 (3.4)
Stakeholder donations	2 (6.9)	16 (55.2)	11 (37.9)
Development accounts	1 (3.4)	14 (48.3)	14 (48.3)
Student participants	1 (3.4)	21 (72.4)	7 (24.1)
Fundraising revenue	1 (3.4)	12 (41.4)	16 (55.2)
In-kind support	0 (0.0)	21 (72.4)	8 (27.6)
Overall financial support	2 (6.9)	12 (41.4)	15 (51.7)

Table 4. Anticipated Changes in Financial Expenditures for Collegiate Livestock Judging Programs at Four-Year Colleges and Universities Over the Next Five Years (n=29).

Source of Financial Expenditure	Frequency (Percentage)		
	Decrease	Stay the Same	Increase
Salary	3 (10.3)	18 (62.1)	8 (27.6)
Employee benefits	4 (13.8)	22 (75.9)	3 (10.3)
Travel	3 (10.3)	9 (31.0)	17 (58.6)
Contest entry fees	1 (3.4)	12 (41.4)	16 (55.2)
Scholarships	0 (0.0)	23 (79.3)	6 (20.7)
Team awards	2 (6.9)	19 (65.5)	8 (27.6)
Instructional resources	1 (3.4)	21 (72.4)	7 (24.1)
Overall financial expenditures	1 (3.4)	12 (41.4)	16 (55.2)

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program sustainability. Regardless of the identified need for fundraising, the wide disparity in funding that likely exists across livestock judging programs suggests that some institutions may benefit from increased extramural funding resources.

Summary

Previous research involving collegiate judging programs focused primarily on student development outcomes or funding. The research problem for this study was to determine how collegiate livestock judging programs have been supported in the past and to identify trends that will likely impact future financial support and expenditures. Funding for livestock judging programs in the future will likely shift from academic unit support to extramural sources, e.g. fundraising and donations. Although some academic unit funding is expected to continue, the proportion of academic unit support in the total budget is expected to decline over time. Extramural funding appears to be directly linked to competitive performance. Thus, livestock judging team coaches may need to become more entrepreneurial in conducting fundraising activities to build or maintain sustainable programs.

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