

Original Research

Rutgers Equine Science Center Industry Needs Assessment Survey 2016



Kyle S. Hartmann, Nettie R. Liburt, Karyn Malinowski*

Rutgers Equine Science Center, The State University of New Jersey, New Brunswick, NJ

ARTICLE INFO

Article history:

Received 9 May 2016

Received in revised form 30 June 2016

Accepted 11 July 2016

Available online 1 August 2016

Keywords:

Equine industry

Needs assessment

Economic impact

ABSTRACT

The Rutgers Equine Science Center is a designated Center of Excellence at Rutgers, The State University of New Jersey. The center's mission is to promote, "Better horse care through research and education." As part of the land-grant university system, the center is obligated to provide outreach programs to serve the equine-related community. To do so, it is best to understand the needs of those constituents. The center maintains a database of equine professionals and enthusiasts for distribution of educational and promotional material. In January 2016, a survey was conducted via email to determine the most pressing needs of the equine-related community. The survey revealed a diverse industry with 46% of respondents classifying themselves as recreational riders. Most participants (78%) were interested in horse health and nutrition (57%) information. Owners relied predominantly on veterinarians (89%), printed materials (83%), and horse-related websites (78%) for care and business information. Responders also ranked highly the five programmatic focus areas of the center, including horse health, land use, integrity of equestrian sport, environmental stewardship, and development of future leaders. The center collected comments about how it can be even more useful to the equine-related community, which will help in planning future events, research, and programming.

© 2016 Elsevier Inc. All rights reserved.

1. Introduction

The New Jersey equine industry is the one of the largest agricultural commodities in the Garden State, valued at \$4 billion. It generates \$1.1 billion annually in economic impact and employs 13,000 people. Equally important, in the most densely populated state in the nation, the horse industry is responsible for keeping 176,000 acres in equine-related agricultural production and 46,000 in traditional agricultural production to produce hay, grain, and straw to support New Jersey's 42,500 horses [1].

New Jersey is also home to the Rutgers Equine Science Center, now in its 15th year of providing cutting edge

equine research and delivery of science-based information to equine enthusiasts around the world. The center's mission is, "Better horse care through research and education to ensure the wellbeing of the equine athlete and sustainability of the New Jersey equine industry." The center speaks for the entire New Jersey horse industry, provides credibility for the horse industry, has no hidden agenda, is the sole source for programming to ensure the industry's viability and vitality, and is the place of education for the development of the industry's future leaders. The center has no political ties and produces recommendations based on sound science.

Previous surveys of the equine industry have been used to frame extension programs and research projects of land grant universities [2,3]. The purpose of the current needs assessment study was multifaceted and aimed to: (1) reaffirm the center's programmatic focus areas; (2) define sub-groups that comprise New Jersey's equine industry; (3)

* Corresponding author at: Dr Karyn Malinowski, Rutgers Equine Science Center, The State University of New Jersey, 57 US Hwy 1, New Brunswick, NJ 08901.

E-mail address: Malinowski@aesop.rutgers.edu (K. Malinowski).

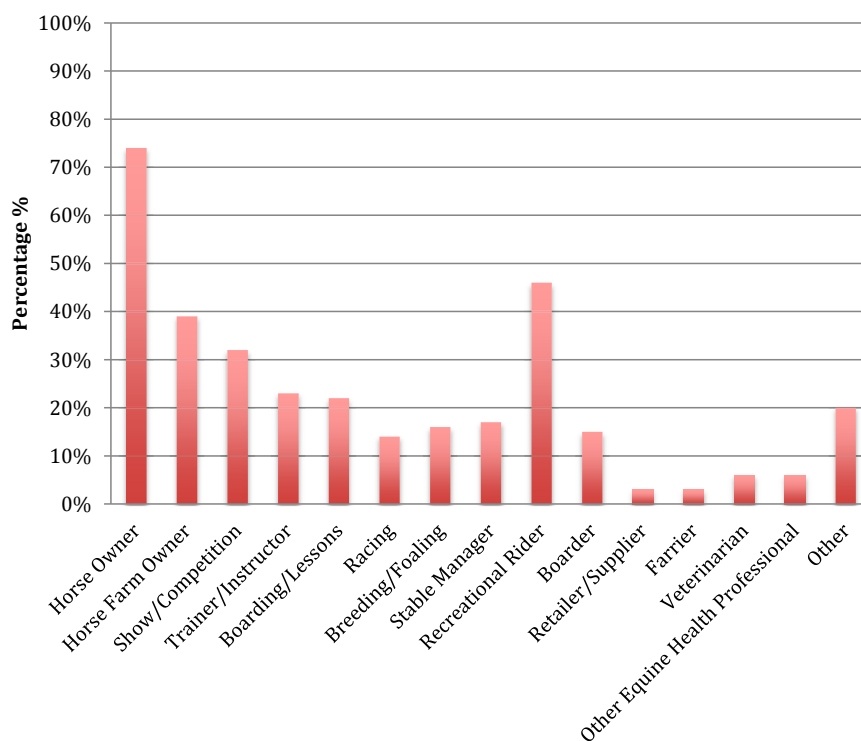


Fig. 1. Type of involvement with horses. Self-reported affiliations with horses reported by respondents.

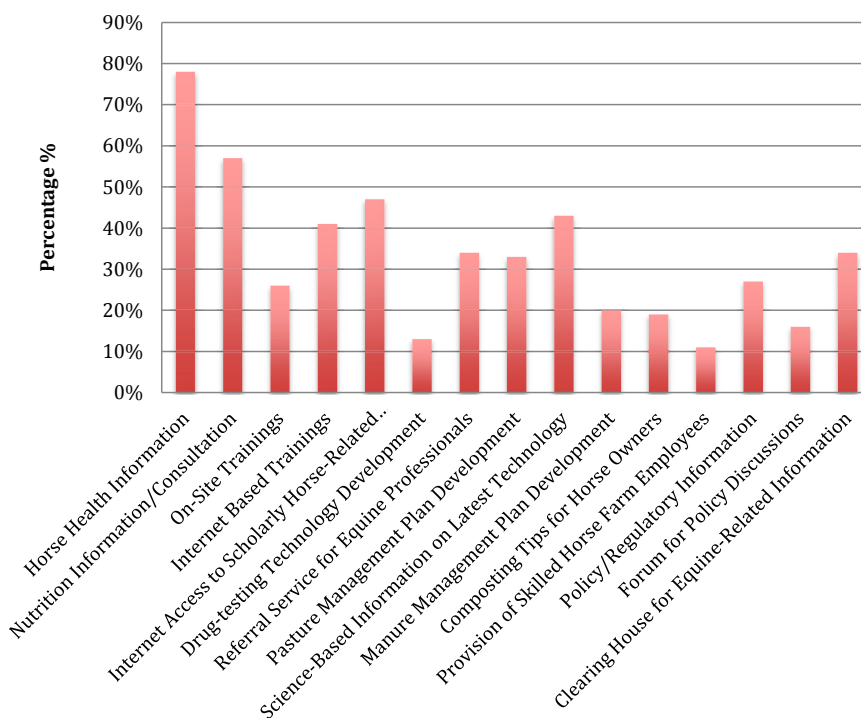


Fig. 2. Services found useful offered by the Equine Science Center. Respondents indicated which services offered by the Equine Science Center were most useful.

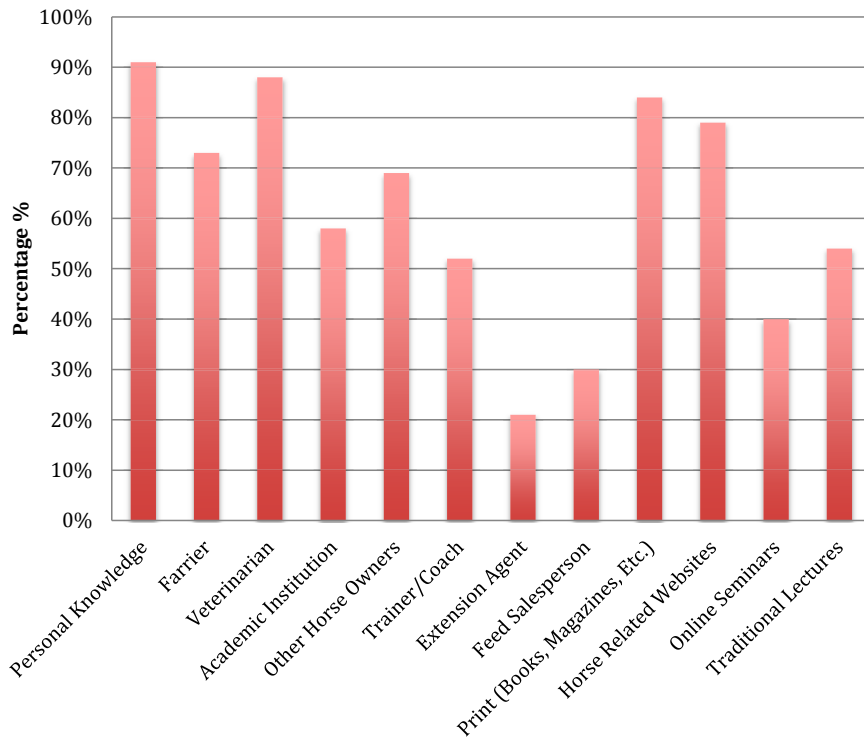


Fig. 3. Sources of equine information used. Respondents reported several sources of equine information.

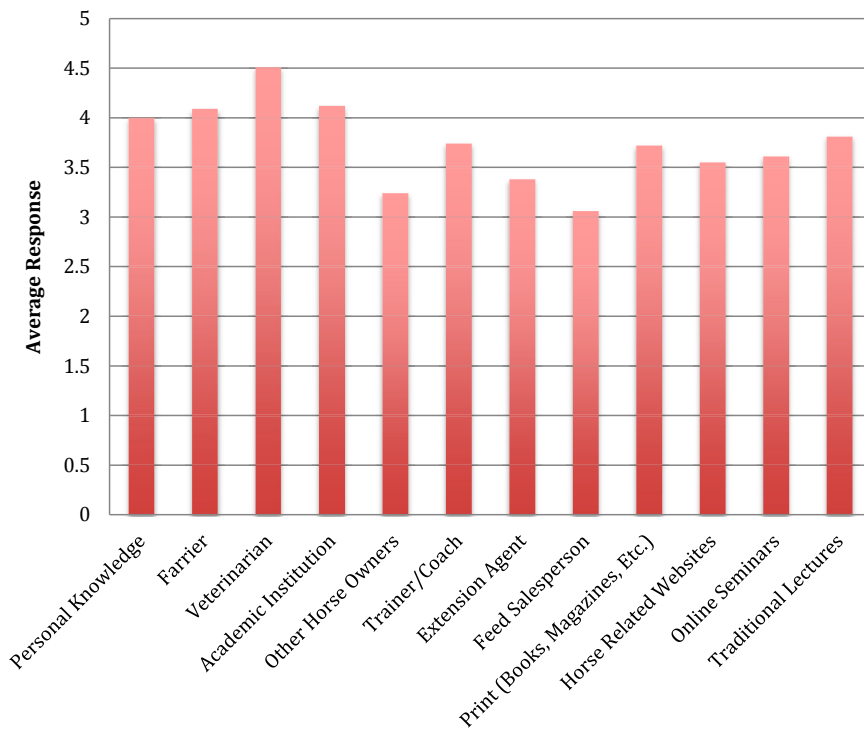


Fig. 4. Level of trust for each source. Using a scale of 1 (lowest) to 5 (highest), respondents rated their level of trust with a variety of listed sources of equine information.

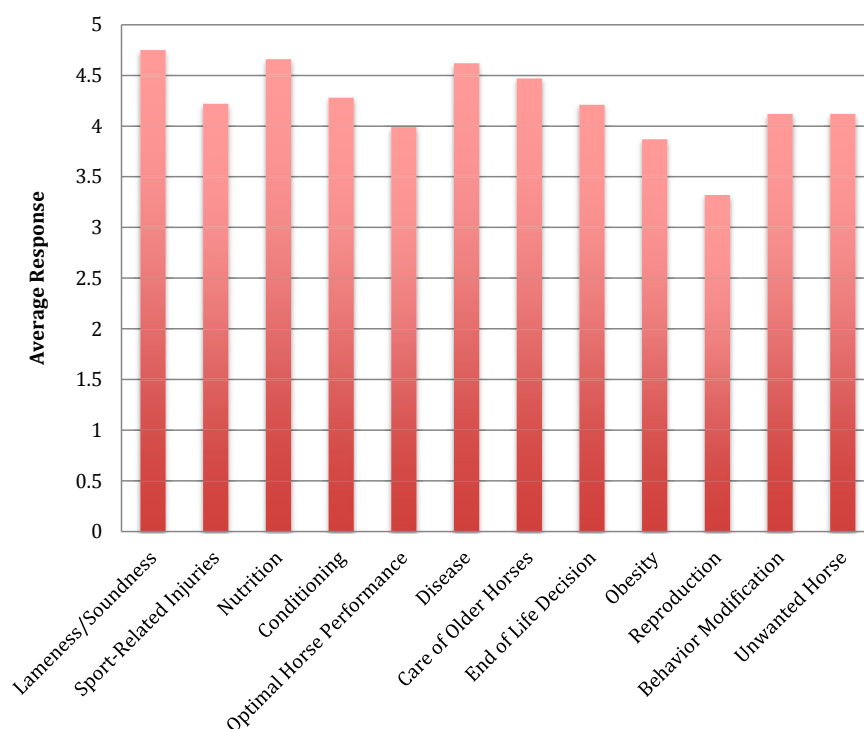


Fig. 5. Level of importance of equine health and well-being issues. Using a scale of 1 (lowest) to 5 (highest), respondents rated their concerns regarding horse health and well-being.

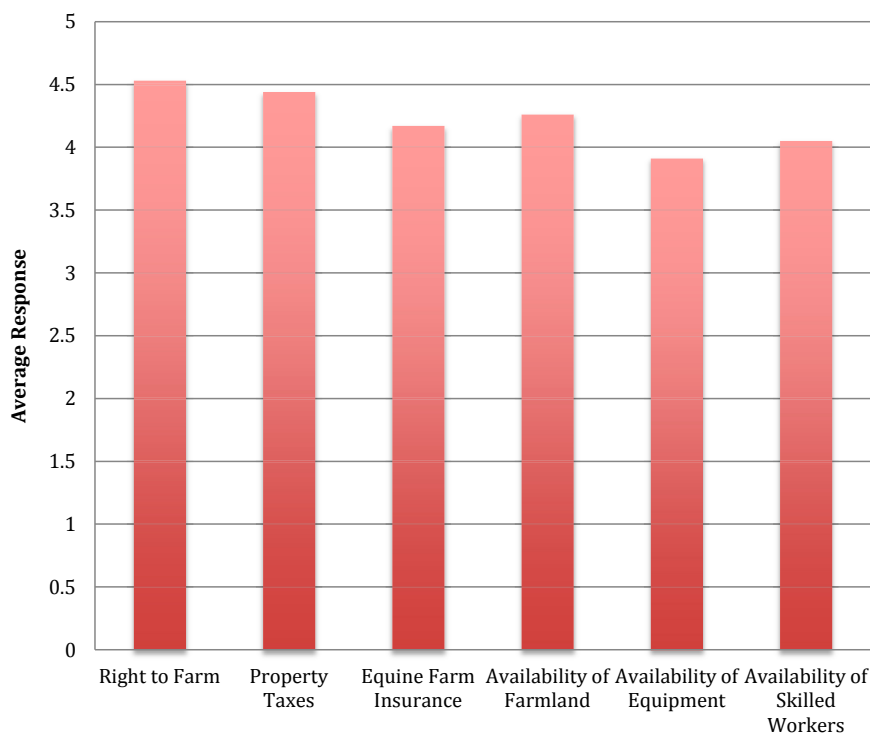


Fig. 6. Level of importance of land use policy and management-related issues. Using a scale of 1 (lowest) to 5 (highest), respondents rated the importance of land use issues.

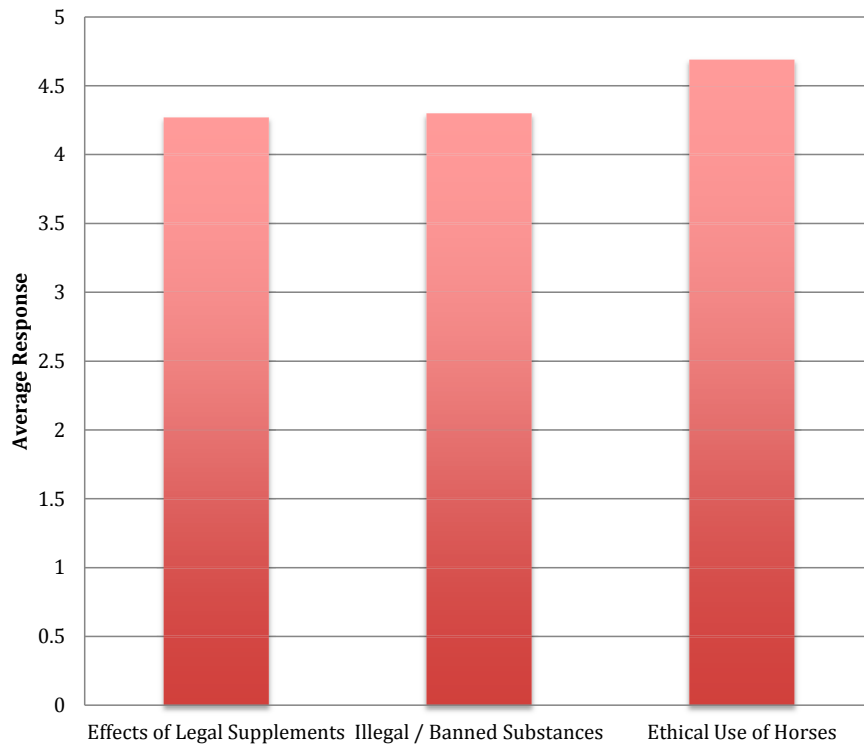


Fig. 7. Level of importance of issues related to integrity of equestrian sport. Using a scale of 1 (lowest) to 5 (highest), respondents rated the importance of integrity issues.

determine their current sources of information; (4) identify the gaps in those information sources; and (5) predict information needs for the future.

2. Materials and Methods

In January, 2016, the Equine Science Center sent out an online needs assessment survey (Qualtrics, LLC, Provo, UT) to 5,202 of its contacts via email ([Appendix 1](#)). The online survey format allowed the Center to target a specific population in a cost-effective manner in a reasonable time frame [4]. A chi-square analysis was used to compare characteristics of responders, described below, with an *a priori* level of significance set at $P \leq .05$.

3. Results

This survey was the second of its kind conducted by Rutgers, the first being in 2002 [2]. In addition, the center conducts an annual, face-to-face stakeholder meeting where issues of importance to attendees are identified. Of the 5,202 emails sent, 1,017 were rejected, leaving a total of 4,185 emails sent and received by contacts. Of the 4,185 emails sent, 955 recipients (22.8%) opened the email. A total of 269 recipients clicked on the link to the survey, but only 236 (5.6%) completed the survey. Responders were mostly from the tri-state area (New Jersey, New York, Pennsylvania) but also from twelve other states. Response rate appeared to be lower than that of other studies [3–6].

Seventy-nine percent of the survey responses were from females. Fifty-four percent of respondents were in the age range of 36–60 years, and 36% were 61 years or older. Respondents categorized their level of experience as beginner (6%), intermediate (26%), advanced amateur (36%), or professional (33%).

The equine industry in New Jersey is diverse and cross disciplinary—74% of responders were horse owners, whereas 39% were horse farm owners. Seventy one percent of responders owned one to seven horses, and 19% reported owning no horses. Only 4% reported owning 16 or more horses. The majority were recreational riders (46%); 32% were show/competition, 23% were trainers/instructors, and 22% were involved in boarding horses and giving lessons ([Fig. 1](#)). The “other” category was made up of people involved in driving activities, Pony Club, therapeutic riding, endurance riding, mounted police officer, and other activities.

Chi-square analysis was used to compare level of equine experience to the types of Center resources used for information. The only significant ($P = .04$) comparison was with respect to scholarly publications, which were used more by advanced amateurs and professionals, compared to beginners and intermediates. Comparison of each of the center’s resources listed in the survey to the type of involvement in the equine industry revealed no significant relationships. There were also no significant relationships between age of respondents and social media platform (Facebook, Twitter, Pinterest, or YouTube).

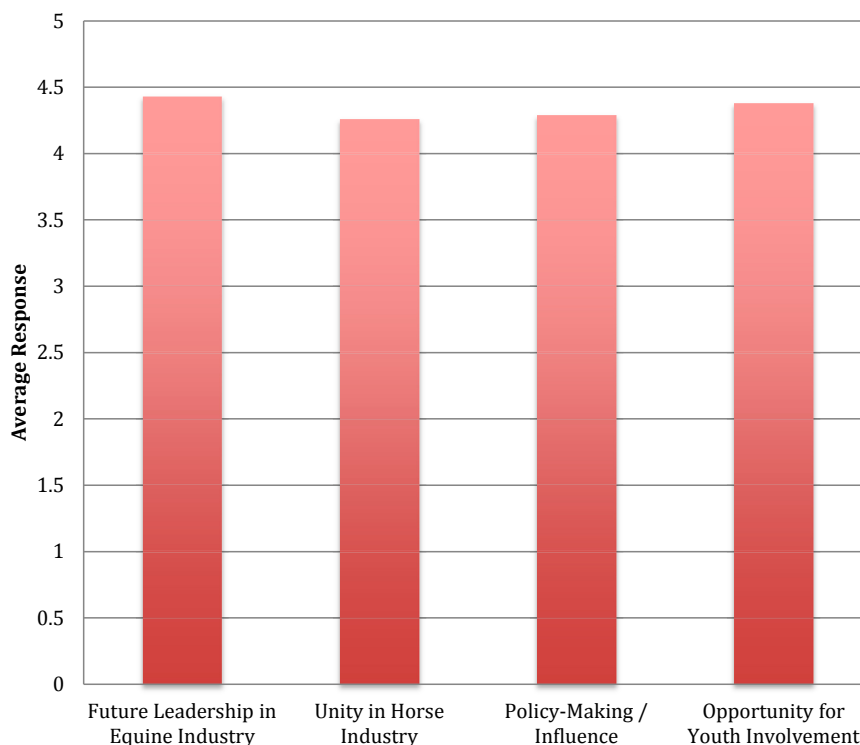


Fig. 8. Level of importance of economic growth and industry sustainability-related issues. Using a scale of 1 (lowest) to 5 (highest), respondents rated the importance of issues concerning the sustainability of the equine industry.

Ninety-six percent of responders were aware of the Rutgers Equine Science Center although only 62% used the Center's resources. Of the users of the Center's resources, 90% used the website, 85% read the E-newsletter, and 65% used the scholarly publications archived in the library section of the website. Sixty-one percent of responders stated that they neither came to center onsite trainings nor used the online trainings (71%). When asked about the top five services that would be useful from the center: 78% responded horse health information, 57% nutritional information, 41% Internet-based trainings, 47% scholarly publications access, and 43% science-based information on latest technology (Fig. 2).

Horse owners and users rely on multiple sources for information to assist them in the pursuit of better horse care and running their business. Ninety-one percent cited personal knowledge as a primary source of information, followed by veterinarians (88%), printed materials (84%), and horse-related websites (79%). Academic institutions were used by 58% of responders (Fig. 3). When asked, on a scale of one (low) to five (high), the level of trust responders had with various sources of information, veterinarians ranked highest (average = 4.51) with academic institutions second (average = 4.13). Interestingly, the least trusted source of information was other horse owners (average = 3.24) and feed salespersons (average = 3.06; Fig. 4).

Overall, the center accomplished the goal of identifying issues of importance to the equine industry. Issues were

broken out into the five programmatic focus areas of: (1) horse health and wellbeing; (2) land use policy and management; (3) integrity of equestrian sport; (4) economic growth and industry sustainability; and (5) environmental stewardship. Issues identified ranked high on a scale of 1–5 with horse health issues, such as lameness and soundness, nutrition, disease, and care of the older horse of primary concern (Fig. 5). Right to farm and property taxes ranked high in the land use section (Fig. 6). Ethical use of horses was very important to responders (average = 4.69; Fig. 7) as was determining future leaders of the equine industry (average = 4.43; Fig. 8). All the issues identified in the environmental stewardship area were very important to responders, with pasture management ranking the highest (average = 4.46; Fig. 9).

4. Discussion

Similar to a survey conducted by the University of Minnesota in 2006 [3], the present data indicated that horse owners sought information from equine publications and veterinarians. Topics of interest in both surveys included horse health, nutrition, pasture management, and general horse care [2,3]. In addition, an email survey of Thoroughbred and Standardbred race horses in New Zealand showed high interest for research-based information on welfare, horse health, nutrition, and exercise physiology [5]. Again, websites, veterinarians, and other

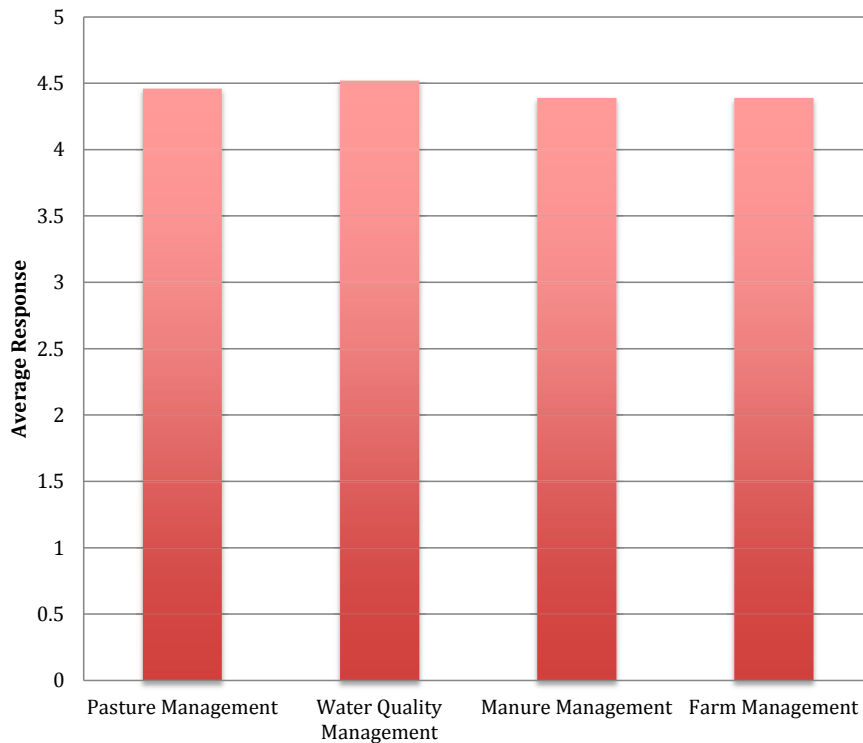


Fig. 9. Level of importance of environmental stewardship-related issues. Using a scale of 1 (lowest) to 5 (highest), respondents rated the importance of environmental issues related to horse care and management.

horse owners were some of the top sources of equine information [5]. Results were also consistent with a survey conducted by the University of Delaware [6]. Current data suggest that the needs of respondents have not varied drastically from the previous survey conducted by the center in 2002 [2].

The center received many thoughtful comments about how to be more useful to horse owners and horses. Comments were plentiful and varied and included thoughts on educating the inexperienced horse owner, managing the cost of running farms, efficacy of supplements and reaching out to nonhorse people about the importance of the equine industry. In planning future programs, events, and activities, the center will take these into consideration.

The Equine Science Center has excellent visibility and constituent awareness. In an effort to increase outreach and use of the Center's online resources, we propose the creation of online training modules as a future endeavor. This may help encourage the use of academic institutions, such as the Equine Science Center, for sources of accurate, unbiased, scientifically based information, currently used by only 58% of responders. It may also encourage self-education among those who rely on personal experience for running their businesses and providing horse care.

5. Conclusion

Results of the current survey are remarkably consistent with those of other extension programs and international horse-owning communities. Research at the Rutgers Equine Science Center is driven by stakeholder needs and interests. The center has kept up with those needs by defining five main pillars of research and outreach (1) horse health; (2) environmental stewardship; (3) integrity of equestrian sport; (4) sustainability of the equine industry; and (5) land use. This survey suggests the center is actively addressing those concerns and has provided insight into where knowledge gaps potentially exist. As a land-grant university, this information can be used to drive future research and generate outreach projects to disseminate the information to the horse-owning public. The survey inspired ideas for the development of future programs and was a valuable tool to assess current, and potential, activities at the center. The survey and resulting data may also serve as a reference for other outreach-based equine programs throughout the country.

Acknowledgments

The authors thank Ms Carolayn Munoz for her assistance in preparation of this manuscript. There were no

conflicts of interest of concern when preparing and evaluating this survey. Funding was provided by the Rutgers Equine Science Center to conduct the survey.

Supplementary Data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.jevs.2016.07.002>.

References

- [1] Equine Science Center. New Jersey Equine Industry – 2007. <http://esc.rutgers.edu/wp-content/uploads/2014/12/The-New-Jersey-Equine-Industry-2007-Economic-Impact.pdf> [accessed 21.04.16].
- [2] Equine Science Center, 2002. Needs assessment survey. NFO Plog Research, New Brunswick, NJ. 2002. Unpublished. Document available via corresponding author.
- [3] Martinson K, Hathaway M, Wilson JH, Gilkerson B, Peterson PR, Del Vecchio R. University of Minnesota horse owner survey: Building an equine extension program. *J Extension* 2006;44: Article # 6RIB4.
- [4] Wright KB. Researching internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *J Comput Mediat Comm* 2016;10. <http://dx.doi.org/10.1111/j.1083.6101.2005.tb00259.x>.
- [5] Bolwell C, Gray D, Reid J. Identifying the research information needs of the racing and breeding industries in New Zealand: Results of an online survey. *JEVS* 2013;33:690–6.
- [6] Wickens C, Waite K, Garey S, Frazee S. An assessment of the educational needs of Delaware equine owners. *JEVS* 2011;31: 332–3.