Title

Rating the Websites of Agricultural Experiment Stations

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Rating the Websites of Agricultural Experiment Stations

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Introduction:

The mission of land grant universities is to emphasize and encourage the teaching of practical agriculture, science, and engineering. These educational institutions were funded by the Morrill Act of 1862 which granted federally-owned land to each state, in order to develop and raise funds to establish land grant colleges. These land grant colleges have developed into the large, public land grant universities of today.

Colleges of agriculture across the United States have established experiment stations that conduct scientific investigations used to address problems in, and propose improvements to, the agricultural industry. In these stations, research scientists, who are for the most part faculty members of land grant universities, collaborate with farmers, ranchers, input suppliers, and others involved in agriculture and food production, in order to study biological, economic, and social problems. Areas of research typically include crop varieties, soil testing, animal husbandry, livestock processing, and other technology now used in food and agriculture.

The Hatch Act of 1887 provided funds to create Agricultural Experiment Stations (AES) and to promote research at land grant colleges of agriculture. A key function of AES management is to promote the concept and mission of the AES with the public, with a goal of gaining political support. Two things make this increasingly important. Consolidation throughout the food chain leads to fewer, larger firms. There may be an expectation among the public that these larger firms should engage in or fund their own research. Also, with the fiscal difficulties that many states are currently experiencing, various organizations, including AES, may be targets for substantial budget cuts.

The advent of the Internet and its rapid adoption at the turn of the twenty-first century has provided a very useful, innovative, and efficient tool for land grant universities to convey information through the creation of interactive and informative websites. Among other purposes, land grant universities across the United States have launched Internet sites to promote the study of agriculture and to disseminate research results of past and ongoing studies conducted within their facilities. In addition, websites can help to achieve public relations goals, referred to above.

Objective:

Land grant universities have employed a great amount of creativity and technical innovations to make their AES websites as visually appealing, informative, and user-friendly as possible. There has not yet been enough effort, however, to methodically evaluate, rate, and provide written reviews on the usefulness and overall effectiveness of each of these sites. The objective of the project was to provide a rating guide for the websites of AES within the 1862 land grant universities of the United States. To achieve complete geographical coverage of the country, the AES of the University of the District of Columbia was included in the study.

Methods:

A panel of five reviewers visited each of the AES websites for land grant universities in the U.S. The panel members completed a review for land grant universities in each of the 50 states and the District of Columbia. Each evaluator rated and provided brief comments about each of these sites. In order to provide a complete evaluation, the panel of reviewers focused specifically on the following categories: loading time, visual appeal, ease of navigation, quantity of useful information, and overall effectiveness. For all of the evaluated websites, the reviewer assigned a numerical value (1-5) to each of the five categories previously mentioned, and provided comments on the overall effectiveness of the sites. The methods are consistent with Phillips (2005) and Phillips (2009).

Results:

The results will be organized in the five categories that were addressed in the evaluation, namely, loading time, visual appeal, ease of navigation, quantity of useful information, and overall effectiveness. For each of the 51 websites, the lead researcher calculated an average of the ratings for each of the categories rated.

Loading time

At the start of the project, there was a feeling that loading time was not as large of an issue as it had been in the past. In other words, that web designers and developers had solved the problem of slow-loading sites. While that was the case, in general, there were a number of exceptions. That is, some sites were perceived to load slowly by the panel members. An innovation by panel members was to obtain an objective measurement of loading time, in milliseconds. There was, however, some variation in loading time from evaluator to evaluator. The top performing websites, in terms of loading time, are listed in Table 1 below.

Table 1: Top Performers for 'Loading Time'

Universities	Average rating
Kansas State University University of Nevada	5
Auburn Univ., Univ. of Arkansas, Colorado State, Iowa State, Univ. of Kentucky, Univ. of Maryland, Univ. of Minnesota, Mississippi State, Univ. of Missouri, Virginia Polytechnic Institute and St. Univ., Univ. of Wisconsin	4.8

Visual Appeal

The issue with visual appeal is the lack of an objective standard for what is visually appealing. Despite this potentially complicating factor, the rating panel came to a consensus regarding the websites that were most visually appealing. They are listed in Table 2 below.

Table 2: Top Performers for 'Visual Appeal'

Universities	Average rating
Mississippi State Univ. Rutgers - The State Univ. of New Jersey	5
University of Illinois Michigan State University	4.8

Ease of Navigation

One of the best ways to assure that a website is user friendly is to make it easy to navigate. There are a number of ways to achieve that. For example, the web designer can implement a system of breadcrumbs, a visual trail that shows users where they have been and allows them to navigate back to a page that was previously visited. One thing that can quickly destroy a user experience is a broken link. These are to be avoided at all costs. This requires frequent testing and maintenance of websites. Also, while it can occasionally come in handy, listing a link as 'Under Construction' is annoying to users. In Table 3 (above, right), the most highly rated sites for ease of navigation are listed.

Table 3: Top Performers for 'Ease of Navigation'

Universities	Average rating
Rutgers - The State University of New Jersey	5
Univ. of the District of Columbia, Louisiana State, Clemson Univ., Texas A & M Univ.	4.8

Quantity of Useful Information

In the tradition of the land grant college of agriculture, land grant universities should provide interested parties with access to useful information. The advent of the Internet created a valuable opportunity for AES to make copious amounts of information freely available. Table 4 below shows the AES that were highly rated in this attribute.

Table 4: Top Performers for 'Quantity of Useful Information'

Universities	Average rating
University of Idaho University of Minnesota Rutgers - The State University of New Jersey Texas A & M University	5
Univ. of Illinois, Kansas State, Michigan State, North Carolina State, The Ohio State Univ., Oklahoma State, Oregon State, Univ. of Tennessee, Univ. of Wyoming	4.8

Overall Effectiveness

We wanted to give a general rating for the quality of the website. It should be noted that this rating was not an average of the other ratings. It was possible that the elements of a website could work together synergistically to achieve an effect that is greater than the quality of the individual elements. The top scoring websites in terms of overall effectiveness are listed in Table 5 below.

Table 5: Top Performers for 'Overall Effectiveness'

Universities	Average rating
Rutgers - The State University of New Jersey	5
Louisiana State University Mississippi State University	4.8

Concluding Comment:

The score and the tables that appear in this poster do not tell the entire story of this project. Due to space limitations, we could not address some important topics here. For example, we would like to discuss the purpose of a website for AES, as well as the pros and cons of changing the name of an agricultural experiment station. The plan is to create a companion document that will include a discussion of these issues, as well as a complete list of ratings for all 51 websites. If it is feasible, this document will be uploaded to Ag Econ Search (http://ageconsearch.umn.edu/).

References:

Phillips, Jon C. (2005). "Rating the Websites of Land Grant Universities and State Departments of Agriculture." Selected paper at the 2005 American Agricultural Economics Association meeting, Providence, Rhode Island, July.

Phillips, Jon C. (2009). "Rating the Websites of Cooperative Extension Services." Poster presentation at the 2009 American Agricultural Economics Association meeting, Milwaukee, Wisconsin, July.