The State of the Range Curricula

By Wayne Leininger

Range programs across the country are generally struggling to maintain adequate enrollment to remain viable entities during periods of fiscal restraint. One of the questions that is being raised is whether the range curricula meet the needs of the students and employers in the new millennium. To help answer this question, I recently surveyed the schools in the United States that offer degrees in range management/science. The following summarizes my findings.

History of the Range Curriculum

Arthur Sampson presented the first formal range curriculum in 1919. It included 21 semester credits in a range management core. Interestingly, at this time only the University of Idaho and Montana State offered degree programs in range.[1] In 1951, the American Society of Range Management Civil Service Committee recommended that students take 10 courses in range management. Eleven years later, the Range Science Education Council proposed a range management core that included 16 semester credits. More recently (1978), the Society for Range Management (SRM) set a standard of 18 semester credits of range management courses for institutions to be accredited by SRM. This is the same number of credits required by the (1994) Office of Personnel Management for the Rangeland Management Series (GS 454). For a more complete history of the range curricula, see McClaran.[1]

Do Universities Differ in Their Requirements?

I found that 21 schools in the United States have range programs. Nine of the schools are in private land states (mostly "plains" states having a small amount of public land, eg, Nebraska), and 10 universities are in public land states (schools in states with a considerable amount of Forest Service and Bureau of Land Management lands, eg, Utah). The universities in the private land states required an average of 128.8 total credits to graduate. In comparison, universities in public land states averaged 6 fewer credits (ie, 122.2 credits). However, universities in the public land states required 4 more credits in range courses (23.1 vs 19) than those in private land states.

Have Range Schools Deemphasized Field Courses?

Heady[2] noted that graduates in range management must be able to recognize and understand the field evidence of vegetation changes and ecological processes. However, because of budget constraints and so on, few range courses now have field components. Texas A&M University, however, requires 11 credits (27 contact hours) of labs in range courses. I noted that only 3 range schools have summer camps, Colorado State University being one of them. In 1999, Harold Heady reported in a *Rangelands* article that "reduction of field experience in university curricula is a mistake."

What's in a Name?

Curricula at a university serve 2 purposes: recruitment and placement. At Colorado State University, we offer courses titled Rangeland Improvements, Rangeland Planning and Grazing Management, Grass Taxonomy, and so on. Some of the other universities (particularly Oregon State) have been a little more creative in titling courses. For example, they offer courses such as Arid Land Biomes, Wildland Ecosystems, Rangeland Vegetation Manipulation,

Plant–Herbivore Dynamics, and so on. Faculty at Oregon State University believe that enrollment in their range courses went up when new names were chosen.

General Observations

Four of the 19 schools surveyed required that students take a Geographic Information Systems/Remote Sensing course. Only 5 of the schools offered a Riparian Ecology course (all public land schools), and less than half of that many (ie, 2) required students to take a Fire Ecology class. Many of the schools have reduced the number of required credits in recent years because of budget and other concerns. Not too surprisingly, however, is that there is a very high level of similarity among all range management curricula sheets.

Summary

I believe that range-trained graduates are in high demand in the job market. Nearly all of Colorado State's range graduates in the past decade have found employment in their field. I also feel that the range curricula in the various universities are designed to provide the proper academic training for graduates to be successful. However, the reality is that enrollment needs to increase in most range programs in order to remain viable. At Colorado State, we are evaluating whether course titles, concentrations, and so on need to be changed. For example, we are going to explore the feasibility of adding a concentration in wildlife habitat management within the rangeland ecology major. We believe this concentration will be attractive to students wishing to emphasize this area of wildlife management. Faculty at the various universities would appreciate any suggestions that members of SRM can provide to improve our curricula to better meet the needs of employers and help in recruiting students into range management/science programs.

References

1. McClaran, M. P. 2000. History of the range curriculum: are there new trails? *Rangelands* 22(6):23–27.
2. Heady, H. F. 1999. Perspectives on rangeland ecology and management. *Rangelands* 21(5):23–32.

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