



THE UNIVERSITY OF ARIZONA

Cooperative Extension

Monitoring Arizona Rangelands: An Evaluation of Cooperative Monitoring Programs

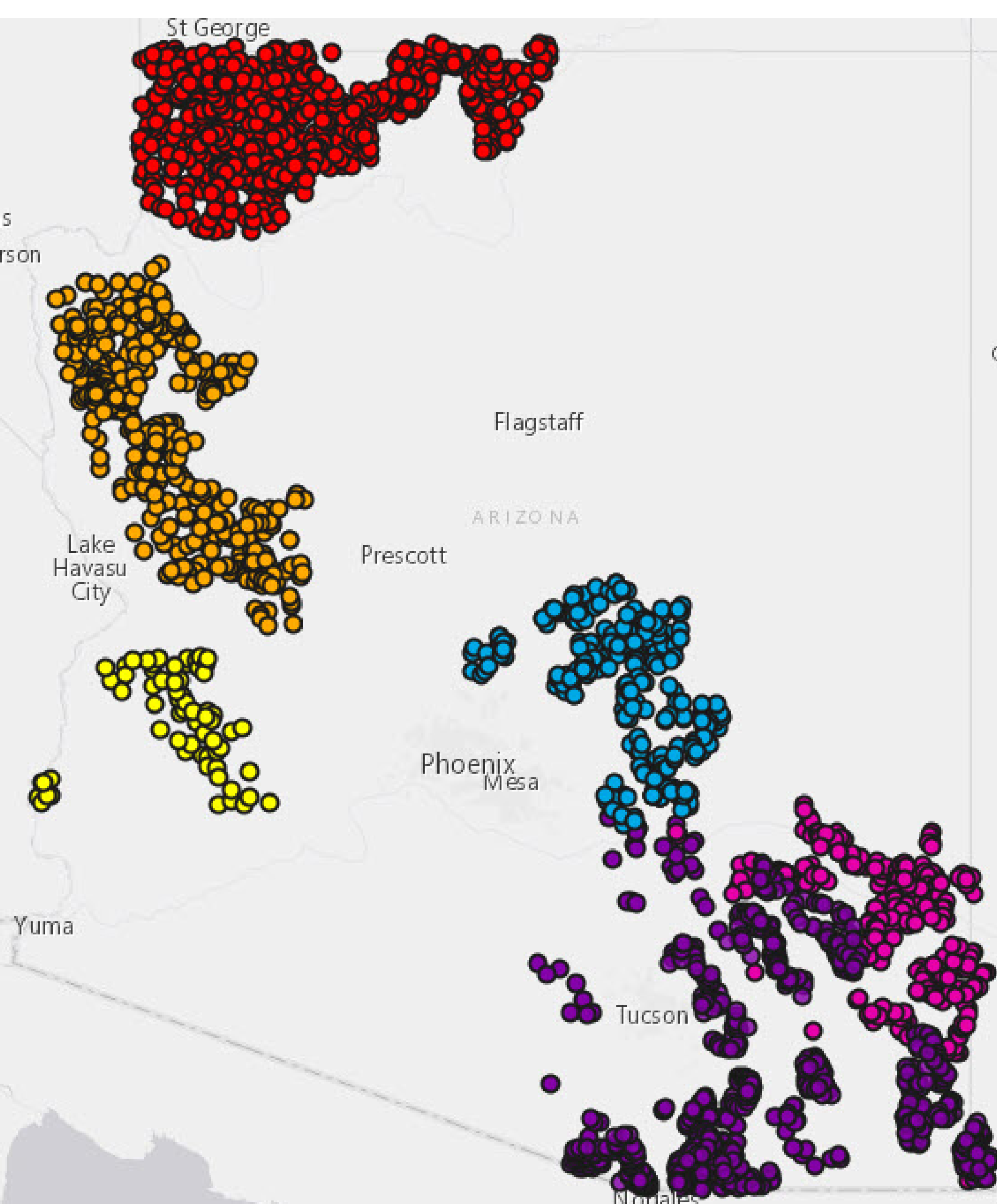
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BACKGROUND

Rangelands occupy approximately 75% of the US and are extremely important to society for the goods and ecological services they provide. Rangelands are the principal source of native forage for livestock operations in the US.

In order to maximize livestock production and optimize the sustainability of natural resources, conducting rangeland monitoring to collect information on vegetative resources improves the ability to make informed decisions through science-based data.

Rangeland monitoring provides information to livestock producers by collecting, analyzing, and educating managers about their vegetative resources.



Throughout Arizona, Cooperative Extension (UACE) has been involved in rangeland monitoring as part of a collaboration with the Bureau of Land Management (BLM) and U.S. Forest Service (USFS) since 2000.

These programs assist agency staff and ranchers in collecting long-term vegetation trend data that can be used for adaptive range management or during the grazing permit renewal process.

OBJECTIVES

1. Evaluate monitoring programs to determine educational component and impacts.
2. Determine the importance of monitoring to Arizona ranchers' and federal agency staff.
3. Determine what role UACE plays in education, facilitation and relationship-building, and delivery of reliable monitoring data.

EVALUATION METHODS

Twenty-two ranchers participated in 3 smaller focus groups. Information gathered through these groups were used to refine the survey that would be sent to a larger number of participants.



Group of ranchers, ranch hands, USFS staff and Extension Faculty discussing monitoring protocols

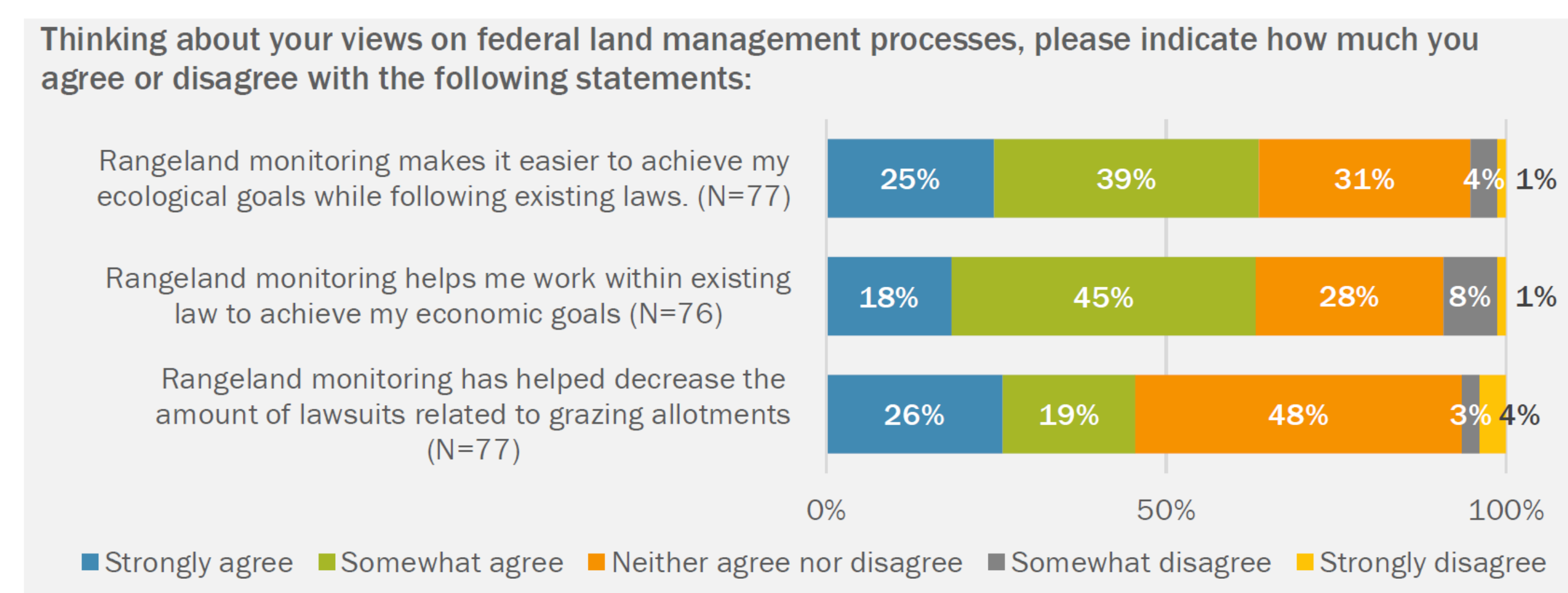
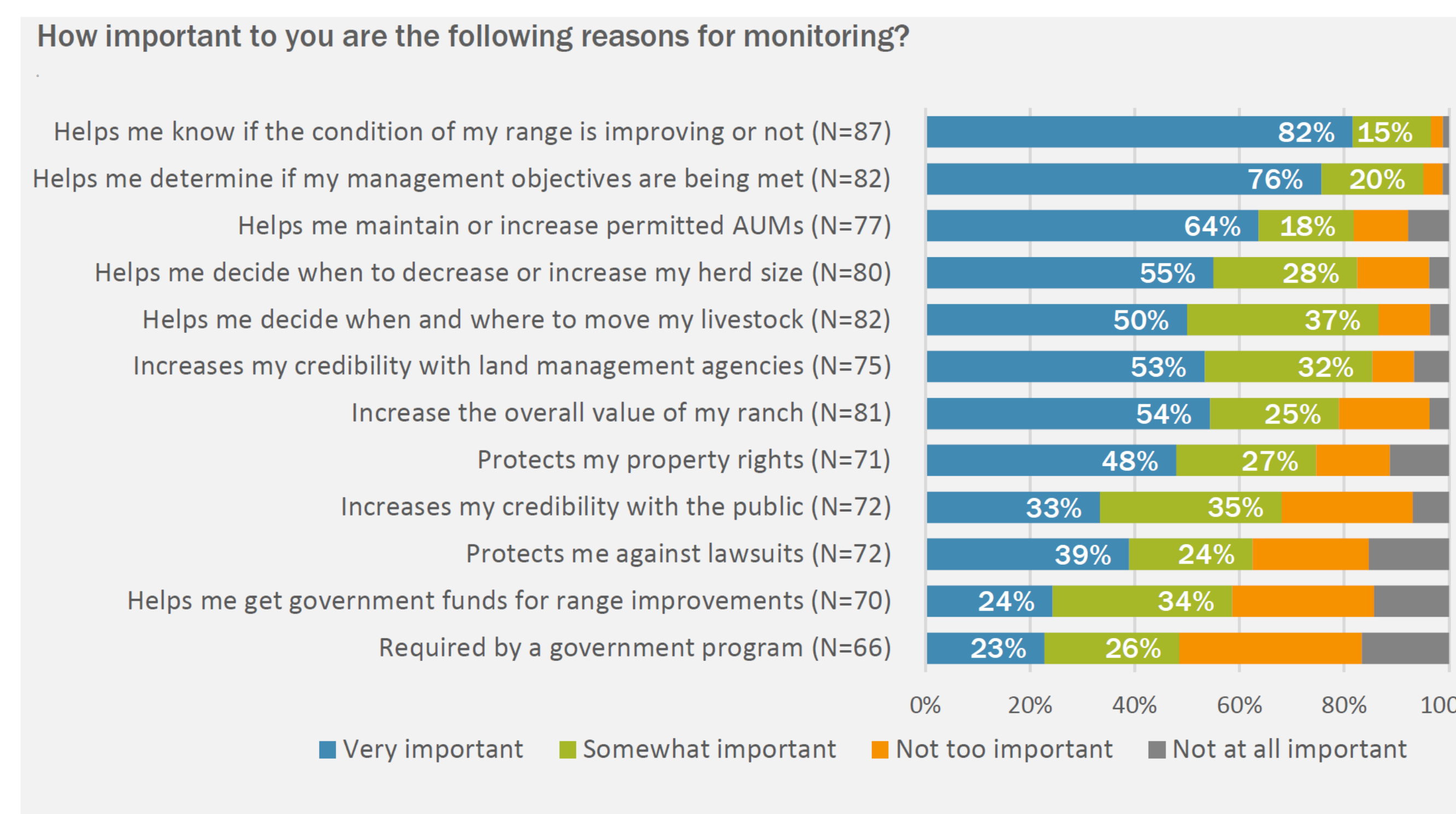
The Community Research, Evaluation, and Development (CRED) team developed a survey based on feedback from Extension Faculty and the focus groups. The survey went out to 744 ranchers across the state.

Ten agency rangeland management staff (5 USFS and 5 BLM) were interviewed.

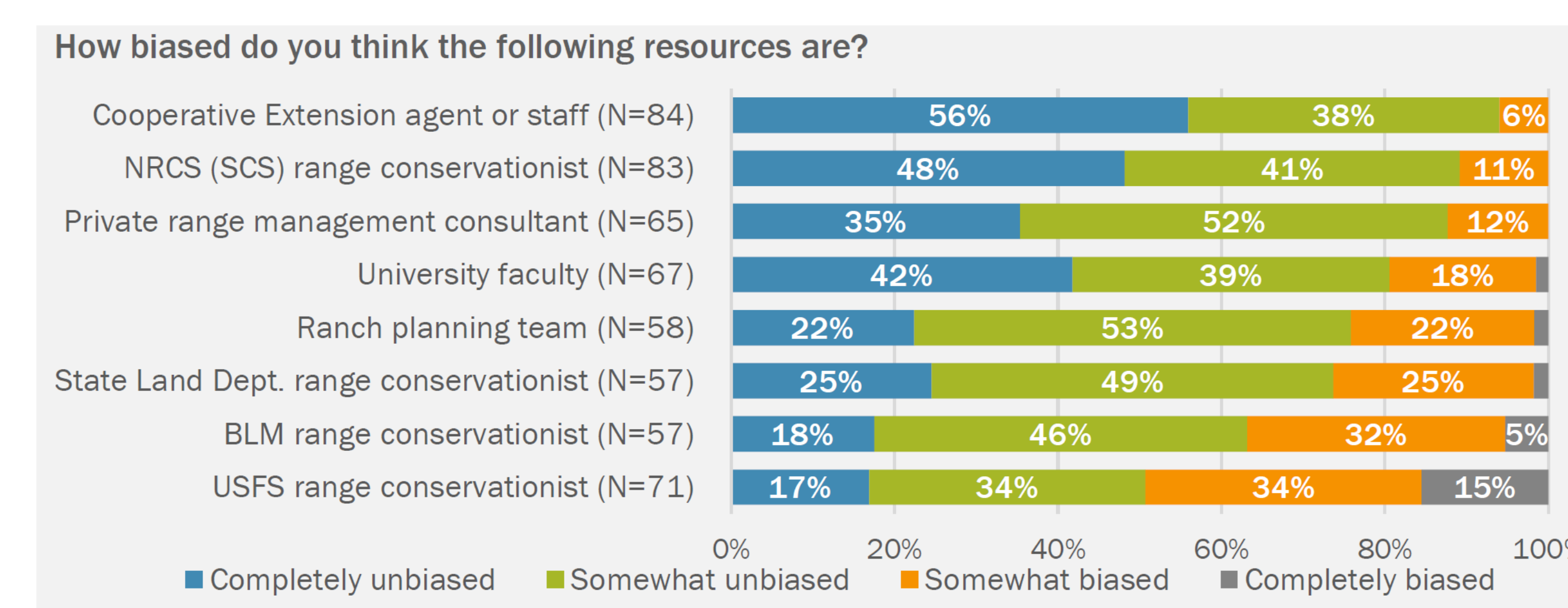
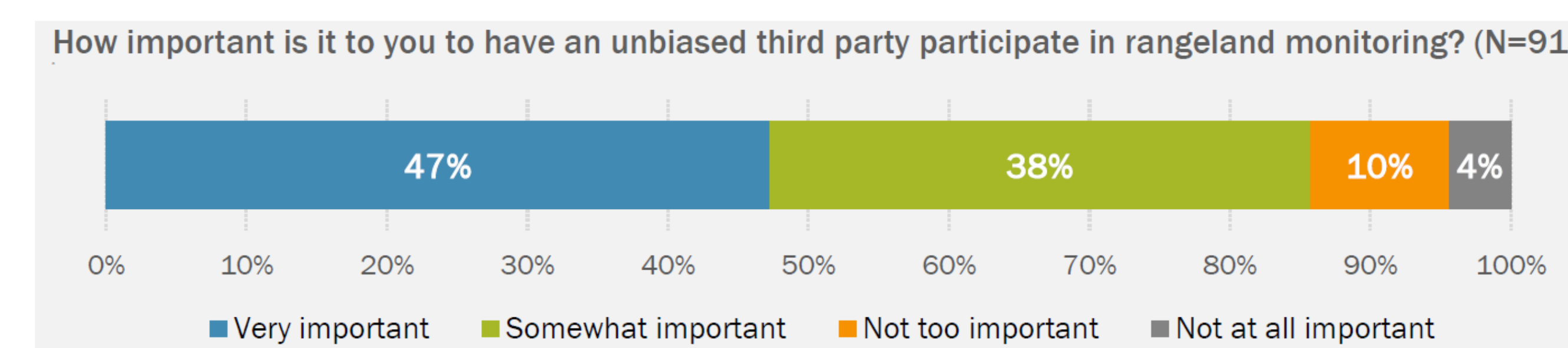
This project was determined not to be human subjects research by the UA Human Subjects Protection Program and was deemed exempt from Institutional Review Board review.

EVALUATION RESULTS

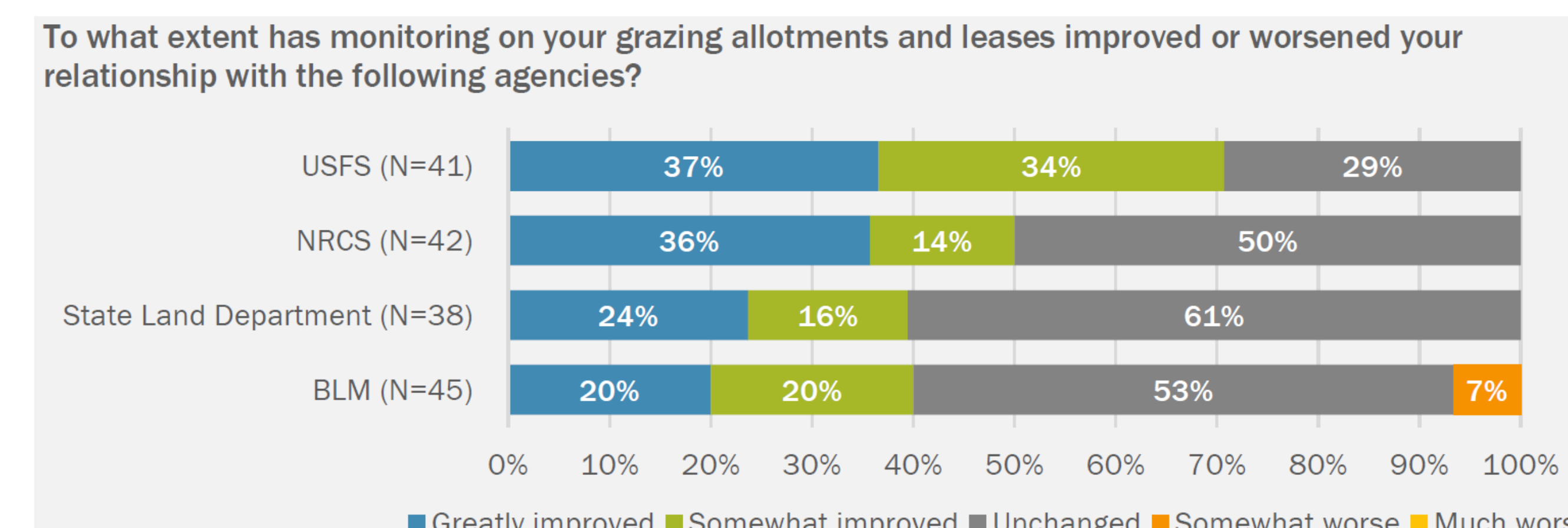
- Arizona ranchers recognize the value of rangeland monitoring and aids them in making management decisions.



- It is important to ranchers that data is collected by an unbiased party, with Extension being viewed as trusted source of information and expertise.



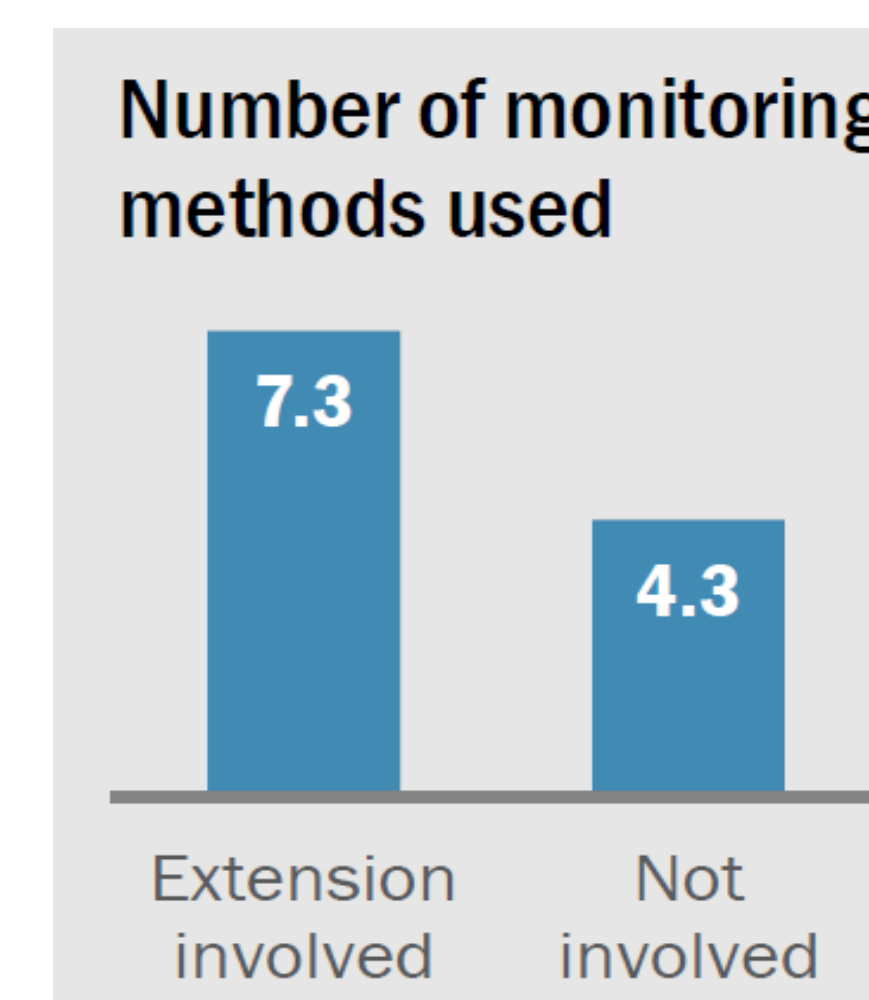
- Most survey respondents felt that participating in an Extension monitoring program had improved their relationship with federal and state land agencies or the relationship remained unchanged.



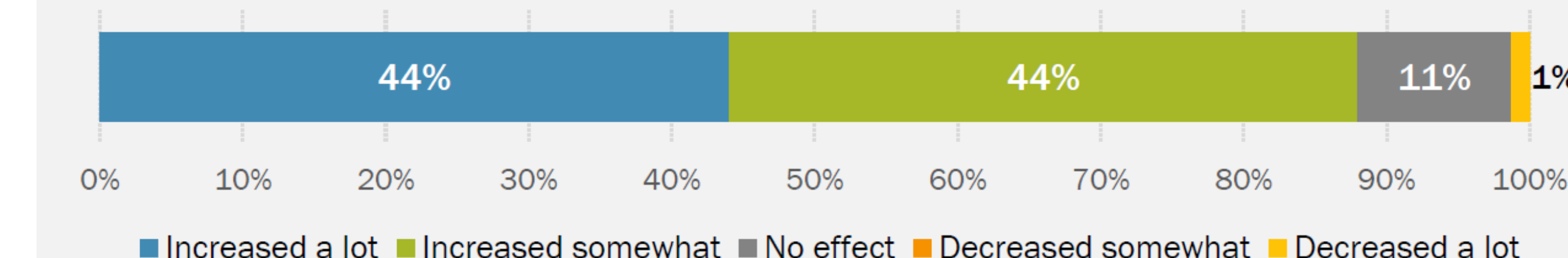
- All USFS and BLM agency staff interviewed highly valued monitoring because it was seen as an essential part of determining whether the agency was meeting its land management goals.
- Agency staff also viewed monitoring as an important part of agency-permittee relationship due to the process providing an opening for conversations regarding agency decisions and the overall condition of the land.

PROGRAM IMPACTS

- Over 2,500 sites have been monitored with multiple visits across 344 federal grazing allotments.
- Rancher and agency participation varies from year to year. Since 2018 participation averages are as follows:
 - Southeastern AZ : 52% rancher (55% goal)
 - Central AZ: 100% rancher, 90-100% agency
 - Northwest AZ: 12-46% rancher (50% goal), 35-65% agency (50% goal)
- Ranchers who were involved with Extension monitoring programs reported using significantly more formal monitoring methods than ranchers who were not, suggesting that involvement with Extension may encourage ranchers to do more monitoring across all land status types.
- Ranchers that participate in a monitoring program found that their knowledge increased.

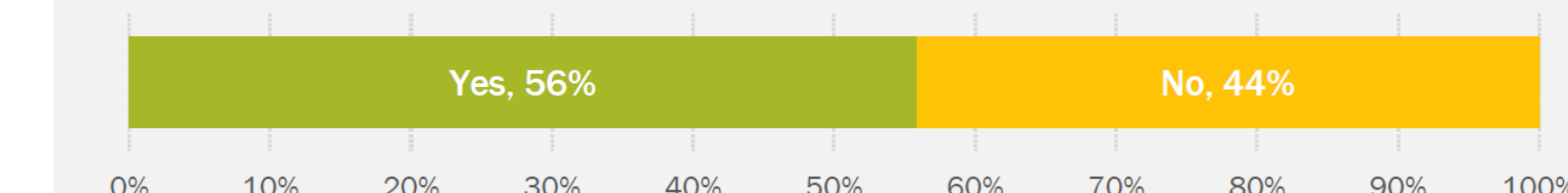


Overall, how would you rate the rangeland monitoring services or information you received from Arizona Cooperative Extension in terms of increasing your knowledge and understanding of rangeland monitoring? (N=75)



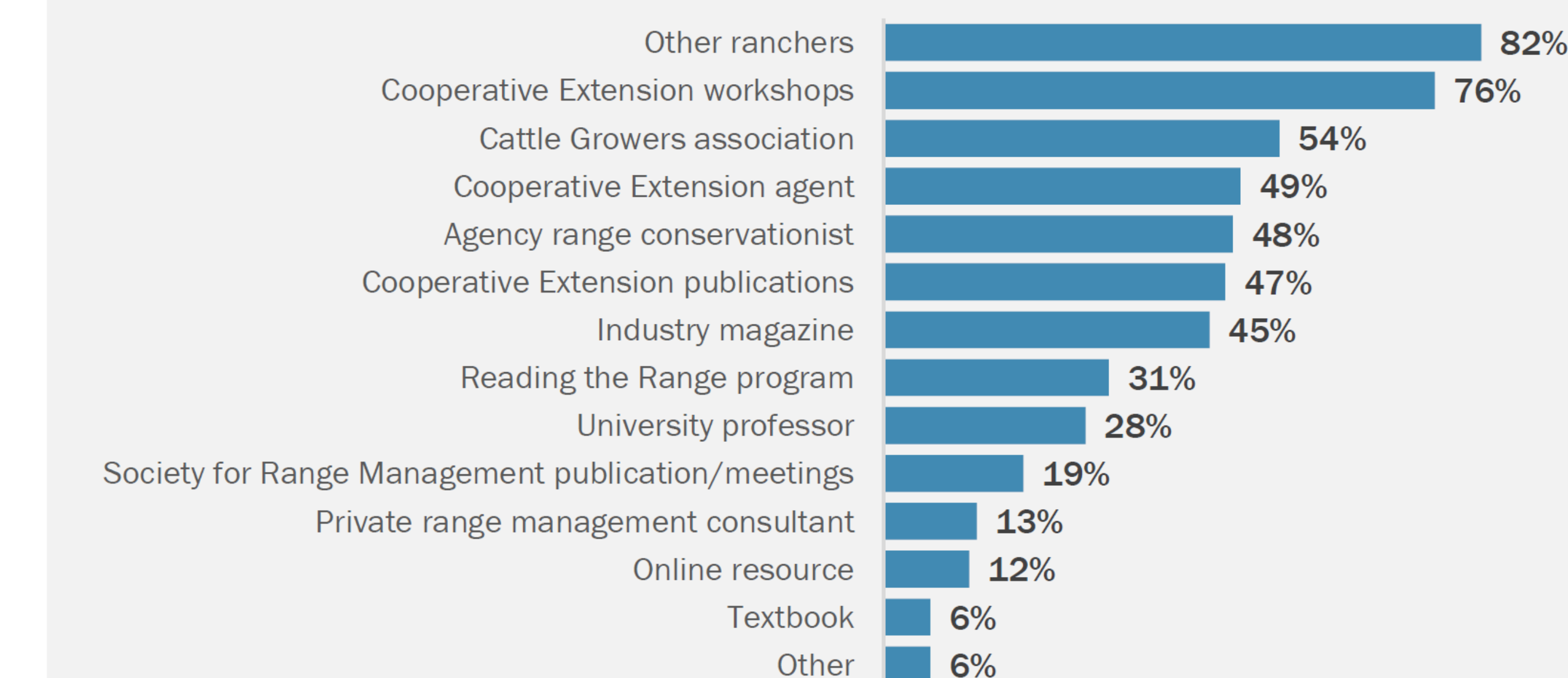
- Over half of the ranchers that participated in Extension programs changed their ranch or range management due to monitoring services or in the field education they received.

Did the rangeland monitoring services you received from Arizona Cooperative Extension affect any of your ranch or range management activities? (N=77)

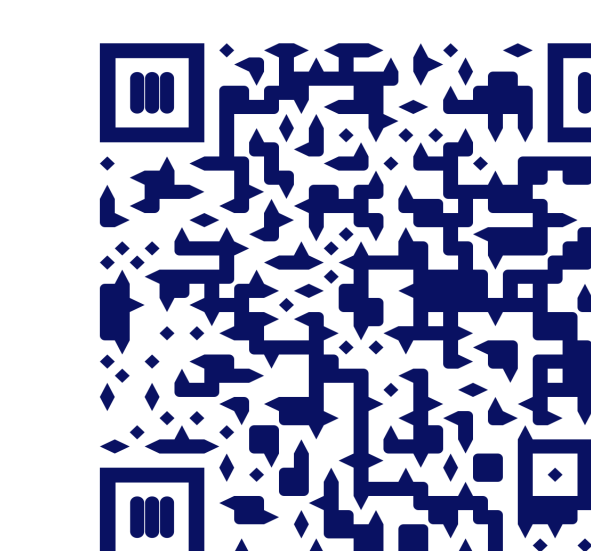


- Extension workshops are one of the top resources' ranchers use find information to help them improve their operation. Since 2018 educational outputs related to range monitoring include:
 - 13 workshops (166 participants)
 - Five publications or guides
 - Quarterly range and livestock newsletter

Where do you find information to help improve your ranching operation? (N=94)



Given the overall value and trust placed in Extension by both ranchers and agency staff, it is clear Extension plays an important role in the future of rangeland management in Arizona.



To read the full evaluation report scan the blue the QRC code.

To view a YouTube video describing further benefits of monitoring programs scan the red QRC code.

