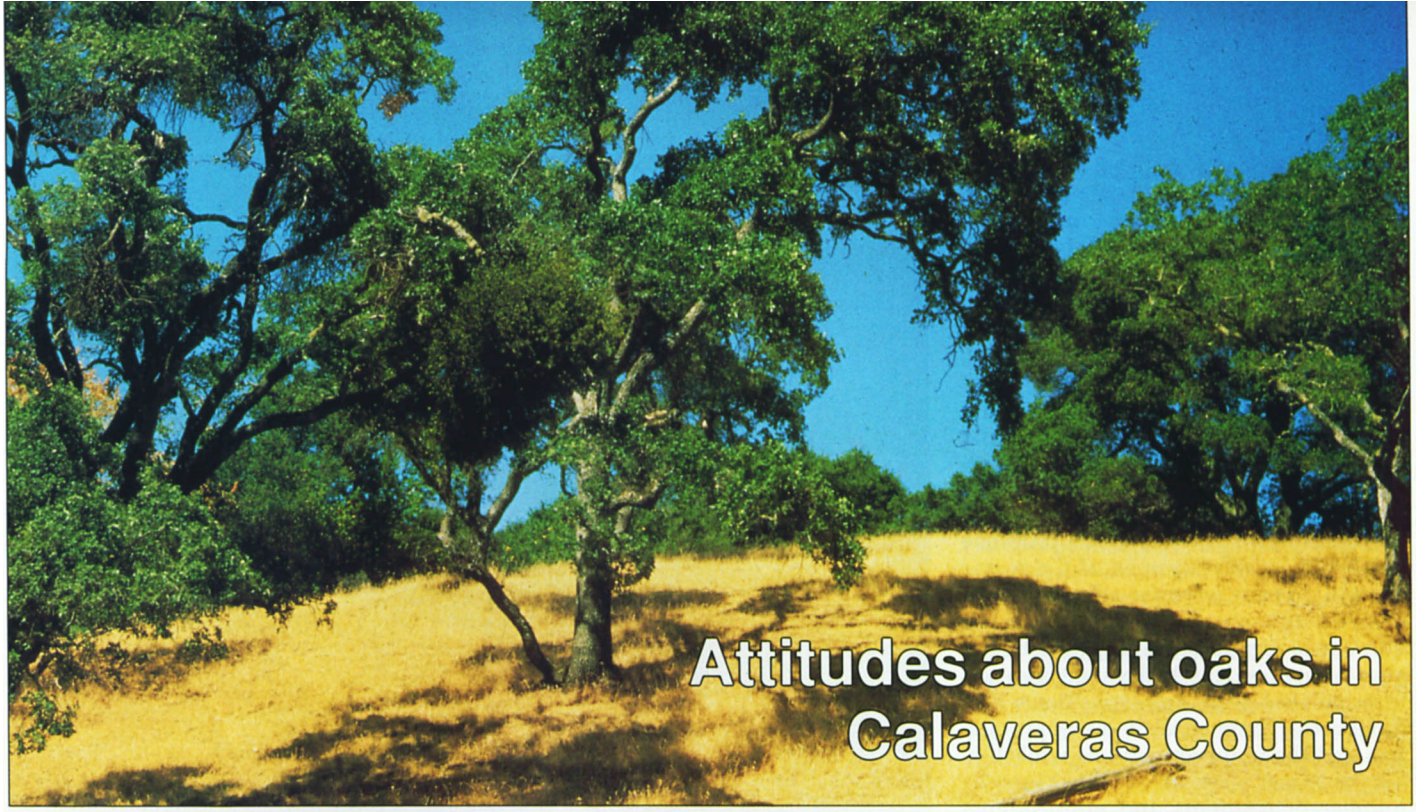

Attitudes about oaks in Calaveras County

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County residents surveyed considered oak rangelands important as a natural resource, but opinions diverged concerning management of the resource. The survey provides baseline information against which future educational outreach programs can be measured.

Several studies have documented concerns that California's oak-grass rangelands are threatened by a lack of oak tree regeneration, clearing for subdivisions or range improvement, and over-harvesting of oaks for domestic and energy-producing fuelwood. Many of these studies have sought to assess the oak issue on a statewide basis. The purpose of the study reported here was to evaluate attitudes about oak management in one county—Calaveras—where hardwood rangelands are a vital part of the local agricultural economy.

Calaveras County, in the oak-covered foothills of the central Sierra Nevada, derives over half of its $20 million of agricultural income from 400,000 acres of hardwood rangelands. Nearly all (97%) of these lands are privately owned and managed.

In our study, we specifically tried to answer several questions: How do Calaveras residents feel about their oak resources? How do current practices match these expectations? How do these perceptions vary among groups?

Methods

To answer these and other questions, document interest and attitudes, and evaluate current management practices, University of California Cooperative Extension researchers, assisted by a county advisory group, developed two questionnaires. One was directed toward owners of Calaveras County hardwood range, the other toward the "general public" (table 1). Various interest groups were the sources of names and addresses; interest group affiliation was not confirmed by respondents.

Surveys were sent in 1987 to 1,300 individuals selected from 13 interest groups. Owners of parcels greater than 1 acre within the hardwood range areas of the county were selected at random from the tax assessor's records to receive the landowner questionnaire. Owners of parcels less than 1 acre were targeted to receive the general public questionnaire, along with members of local chapters of environmental and agricultural interest groups, fire departments, realtors, and banks. Results from the survey were tabulated and analyzed statistically; all reported differences between groups are significant at or above the .05 level.

Value of oaks in the county

Respondents to the survey overwhelmingly indicated that they perceived oaks as a valuable resource in Calaveras County. The 48% response rate to this survey without a follow-up reminder, which is usually required in similar surveys, indicates a strong interest in oak resources.

Over 90% of the respondents in both the landowner and the general public groups indicated that they were interested or very interested in the oak issue. Most felt that oaks were valuable for shade, aesthetics, wildlife habitat, and fuelwood.

Respondents, especially real estate agents and bankers, agreed that having a few oaks on a property increased property value. (See article on value of oaks in *California Agriculture*, September-October 1987). Members of environmental organizations, fire department personnel, and renters were less likely to believe that oaks added to property value.

Few respondents indicated any disadvantages to having oaks. However, people who identified themselves as farmer/ranchers were less likely to believe that oaks had no drawbacks. Farmer/ranchers were more likely to believe that oaks reduced forage for livestock, reduced downstream water flow, and presented a potential wildfire hazard.

Number of oaks

Over half (58%) of all respondents believed that oaks were having trouble surviving in Calaveras County. Landowners, especially farmer/ranchers and long-term landowners in the county, were less likely than the public (56% vs. 62%) to feel this way. Members of environmental groups strongly believed that oaks were having trouble surviving in Calaveras County, citing urban development and harvesting for fuelwood as the major causes.

Over 80% of all respondents felt that there should be more oaks or that there were just about the right number, while only 6% felt there should be fewer. Members of environmental organizations were strongly in favor of more oaks. Landowners were more likely to believe that there were just the right amount of oaks (32%), although many (48%) said they would like to see more.

When questioned about possible causes of oak losses, members of the public were more likely than landowners to believe that losses were due to insects and disease, urban development, and over-harvesting for fuelwood. Landowners who did feel that oaks were declining attributed the losses to firewood harvesting, urban development, and brush competition.

Fuelwood merchandising

The public felt strongly (72%) that fuelwood harvesting contributed to oak loss. Of the nonresidents, 75% felt that commercial fuelwood production was an inappropriate use for the oak resources of Calaveras County. There were no affirmative responses; 25% answered "maybe" to the question of appropriateness. Interestingly, all of the nonresidents had bought firewood in the previous year. Among residents, 57% thought that commercial fuelwood production could be an appropriate use, while 43% felt it was inappropriate. (Table 2 lists the number of residents and nonresidents among the respondents.)

Landowners were less likely than the public (37% vs. 74%) to believe that fuelwood harvesting contributed to oak loss in the county. To find out if the oak management practices used by landowners supported their views, we asked them to describe their fuelwood harvesting activities. Landowners indicated that they cut quantities mainly for personal use. About 6% of landowners who had harvested oaks in the previous 5 years had cut more than 10 cords per acre. Most of the respondents selectively cut trees, citing reasons for tree selection such as wildlife habitat and range improvement, wildfire hazard reduction, and removal of dead and dying trees.

Respondents who cut fuelwood (72%) were the landowners most active in other management activities, such as prescribed burning and mechanical brush control. Landowners who harvested fuelwood were the most likely to seek outside assistance for land management advice; 46% had sought advice from UC Cooperative Extension, the California Department of Forestry and Fire Protection, or other sources, a much higher percentage than any other group. Only 18% of the landowners who did not cut firewood sought any outside assistance. Fuelwood-harvesting landowners tended to be those owning land for more than 15 years.

TABLE 1. Number of survey respondents by affiliation

Affiliation*	Landowners	General public
Environmental organization		24
Farm Bureau	14	
Cattlemen	12	
Fire department		4
Timber production zone	19	
Agriculture preserve	75	
Realtors		27
Renters		14
Owners of <1 acre		173
Small landowners (1-5 ac.)	61	
Medium landowners (5-40 ac.)	115	
Large landowners (40+ ac.)	46	
Banks and insurance companies		5
Total	342	247

* These groupings indicate the source of the names and addresses; they are not self-identified.

TABLE 2. Number of respondents by residence

Residence	Landowners*	General public*
Resident of county	273	222
Nonresident	62	12
Total	335	234

* Totals differ from those in table 1 because some respondents did not answer the question about residence.

A small percentage of landowners harvested oaks for sale of fuelwood. Most selectively cut trees for personal use. Landowners were less likely than the general public to feel that fuelwood harvesting contributed to oak loss.

Land subdivision

Land speculation and development were perceived by 32% of the landowners and 54% of the public as partly responsible for the loss of oak habitat. Such concern can be partially explained by the fact that the county's population has grown by 27% in the last 5 years. Much of the recent development has occurred along major roads within the county, highly visible to residents. All of the nonresidents and 51% of county residents believed that urban development was causing loss of oak trees.

The survey attempted to find out how landowners felt about subdividing their land. Responses indicated that they generally were not interested in selling their property. Only 8% said they definitely wanted to sell land in the next 5 years. As length of ownership increased, landowners became less likely to want to sell. A fairly large number of the respondents were long-term county residents (fig. 1). Only 13% of the landowners surveyed had owned their land for 5 years or less. Over 70% reported having had their property in their family for more than 10 years. Close to 10% of the landowners reported holding their property in the family for 100 years or more.

People who were considering selling land were those who had been in the county 5 to 15 years. Those who had sold land in the last 5 years (8%) were more likely to sell again. Only 18% of the respondents who had sold land in the last 5 years were definitely not expecting to sell land within the next 5 years. In contrast, 71% of respondents who had not sold land said they would definitely not consider selling land in the next 5 years.

Effect of livestock grazing

The predominant opinion of all respondents, 88% overall, was that livestock production is an important and desirable land use for the oak rangelands of Calaveras County. Both landowners (91%) and the public (88%) expressed the belief that live-

Both landowners and the general public expressed concern that land development was partly responsible for oak habitat loss. Landowners, especially long-term residents, were generally not interested in selling their land.

stock and wildlife are compatible on hardwood rangelands.

Landowners who had owned their property longer were more likely to have grazed cattle in oak rangelands. They were also the most likely to have performed other land management activities, such as removing mistletoe, thinning oaks or softwoods to promote oaks, and thinning oaks to promote livestock forage. Landowners were also the most likely group to have had contact with natural resource management professionals, such as professional land managers, Cooperative Extension farm advisors, and the California Department of Forestry and Fire Protection. Gathering such resource management information indicates landowner concern for the oak resource.

Wildlife and their habitat

In every question regarding wildlife, respondents reacted favorably to wildlife management issues. When asked specifically about the role that wildlife considerations should play in land management decisions, 12% felt that wildlife should be the dominant consideration, and 73% answered that wildlife should be equally considered with other resource values. Only 4% felt that wildlife should be a minor consideration.

Environmentalists' views

One of the interesting results of the study was the difference in views between members of environmental groups and other members of the public. Generally, the public agreed with landowners' opinions. Environmental group members, on the other hand, were more likely to want to see more oaks. They felt strongly that livestock grazing inhibited oak survival. Environmental group members were less likely to feel that livestock and wildlife were compatible land uses, favoring wildlife as a dominant consideration in land management. Environmental group members also felt that commercial recreation was inappropriate.

Conclusions

This comprehensive survey shows that oaks are very important to residents of Calaveras County. The general public and landowners tended to share a value system, which should help lead to a consensus about future policies on oak conservation in the county. There were notable differences between environmental groups and landowners regarding perceived problems in oak sustainability. These differences point out the need to develop a dialogue between these two groups.

The perception that subdivision is a major source of oak loss in the county is consistent with several statewide studies of oak habitat loss. This concern indicates that county planners are an important clientele for future educational outreach with materials developed by the University's Integrated Hardwood Range Management Program.

Both landowners and the general public considered livestock grazing and management for wildlife to be appropriate for hardwood rangelands. The public indicated a concern, however, that firewood harvesting was a source of loss of oak habitat. The survey did show that the most active hardwood range managers harvested firewood and were most likely to be reached by Cooperative Extension educational programs. This finding suggests that future educational activities directed at these active managers emphasizing sustainable and environmentally sensitive firewood harvesting may help to alleviate these concerns. A program recognizing good hardwood range management by landowners may give the public additional assurance that environmental standards of protection are being met. Both landowners and the general public indicated that the highest priority for future educational efforts should be directed to this area.

This survey showed that a vast majority of the landowners who responded were not being reached by educational programs. Of those who were reached, however, Cooperative Extension was the leading source of educational advice. The question has been raised as to whether an aggressive educational program by Cooperative Extension can make a difference in improving hardwood range management practices. Our data, taken before the beginning of an expanded educational outreach, should be useful in measuring participation in future programs and changes in management practices resulting from the educational effort.

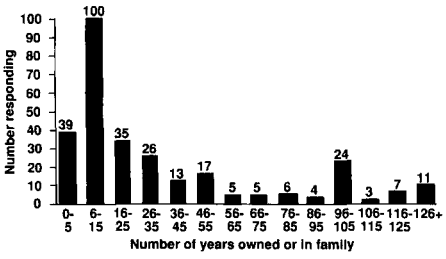

Fig. 1. A large number of landowners surveyed in Calaveras County reported they or the family had held their property for many years.

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