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Using Goats to Control Brush Regrowth on Fuelbreaks

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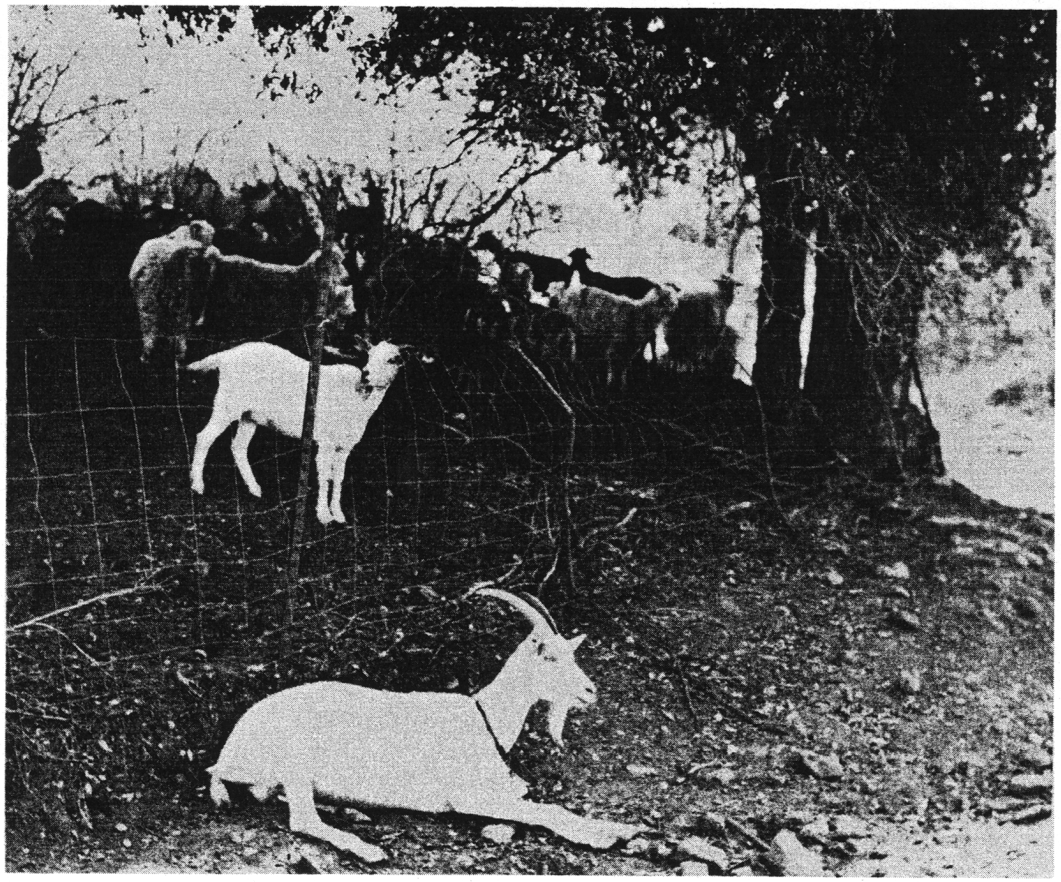

IN BRIEF...

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Fuelbreaks offer a promising approach to the control of wildfires. On these wide strips through brushfields and around communities, vegetation of low volume and low growth is maintained to contribute to firefighting safety and provide a place for backfiring. After mature vegetation has been removed on fuelbreaks, herbicides have been the primary tool for controlling brush regrowth. But the continued use of chemicals is threatened by political and environmental considerations. Using goats to control this regrowth appears to be a promising alternative.

Goats have been accused of destroying the resource, but they generally reap the blame for prior mismanagement involving overgrazing by other animals, indiscriminate use of fire, and baring of the soil by various means. Goats can utilize woody vegetation on which other livestock would starve, and so they are usually present during the final stages of land degradation. Test results show that properly managed goats eliminated or controlled woody vegetation at the same time that herbaceous vegetation reoccupied the site.

Goats will eat a wider variety of plants than other classes of livestock, but unless they are subjected to grazing pressure, will only eat plant parts that are in a favorable growth stage from species they relish. Goat diets, when averaged over a year, usually contain at least half browse, the rest grasses and forbs. During spring, goats seek out the lush herbaceous growth, then concentrate more and more on browse through the other seasons. Forbs are taken more or less in proportion to their abundance.

Goats are least selective on first-year brush regrowth, and become more selective as the brush is older. In mature stands, much or most of the brush is out of their reach.

Goats ate first-year regrowth of chamise, desert ceanothus, California bush buckwheat, and Eastwood manzanita, but scarcely touched 5-year-old plants of these species, except in bedding grounds or other places of confinement. Mountain mahogany and scrub oak were most-favored species in the 5-year-old brush stands.

For fuelbreaks, Spanish goats have some advantages over Angoras. They are larger, and better able to fend off predators, and the marketable kids are larger. They are somewhat better browsers than Angoras, and are more hardy. With good feed, and intensive management, Angoras may be more profitable, however.

Recommended stocking rates for goats are 0.5 to 3 acres (0.2 to 1.2 ha) per goat the first year after clearing, depending on the amount of regrowth, and reduced stocking thereafter. Larger numbers of goats may be used for short periods. Stocking rates that continuously or two or three times annually remove all leaves and small twigs will kill small shrubs in 2 years, and most larger ones in 3 or 4 years.

An economically viable breeding goat herd would be at least 1500 goats. Buying wethers or nonfertile nannies in spring and selling them in fall should achieve management objectives, but a subsidy would probably be needed.

The question of whether goats should be herded or fenced for control is still a moot one. Some combination of practices is probably the best. Getting good herders and good dogs is a problem.

The supply of water and food helps determine whether goats can utilize an area. Fuelbreaks are frequently in dry and remote areas where water must be provided by hauling, development of springs or wells, and piping the water to where it is needed. Supplemental feeding appears to be a desirable practice during the winter, particularly for pregnant animals. Any livestock feed available can be used.

Mountain terrain offers other problems. Roads are frequently not good, especially during the winter. Rough, steep terrain encourages injury or lameness, and remoteness from urban amenities discourages herders.

Goats in southern California have been lost to cold, stormy weather and to predators. Kids are particularly sensitive to cold, wet weather, and protection should be provided for nannies and their kids. Predator losses have not been large when the goats were herded, and the herder could occasionally shoot at a coyote stalking the goats. Poison plants have not caused losses on the Cleveland National Forest, but with goats under grazing stress, poison plants are a potential source of losses.

The inability to show an economic return has restricted use of goats on wildlands. The owner-operators have not been experienced local livestock producers, banks have refused to lend sufficient funds for an economic size unit, and the market for goats is uncertain. Some form of subsidy by the using agency will probably be necessary.