

Pollarding—Age-Old Practice Permits Grazing in Pays Basque Forests

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PROBABLY no other section of Europe is as steeped in tradition as the Basque country. Nestled in the Pyrenees Mountains of southwestern France and northeastern Spain, Pays Basque has never been completely dominated by either of those countries. Basque language, customs, habits and racial purity are unique today in having remained nearly unchanged for many centuries, although Pays Basque has never reached sovereignty.

It is not surprising that a people so independent and resourceful as the Basques have their own agricultural pursuits, especially adapted to local conditions. Pollarding is one of these unusual practices.

Sometimes thought of as high coppice or topping, pollarding allows multiple use of forested lands. Trees are pollarded at a height of eight feet (two and a half meters) above ground level (Fig. 1), usually done for the first time when trees are about twenty-five years old. Axes are used for cutting rather than saws, because sawteeth, when dragged back and forth across the cut, will pull the bark loose and prevent most of the dormant buds from growing. In two or three years the pollards are crowned with profuse numbers of branches, from which all but eight or ten of the larger, most vigorous and best positioned branches are thinned out.

The first of the three uses derived from Pyrenees forests is to provide

grazing for domestic animals. By all odds, the great percentage of this mountainous nation is best suited to forests. The wood produced here, although important in Basque economy, is secondary to the need for pasturage. It is, in fact, the urgency of the need for pasture that long ago prompted the development of pollarding, through which both requirements are met simultaneously.



FIG. 1. This veteran tree was recently pollarded and the young branches are now growing into stovewood bolts, out of reach of grazing animals. *Photo by Chas. M. Genaux.*

Second of the uses coming from pollarded stands is the constant supply of young, sound stovewood bolts for domestic consumption. In a cycle varying from twelve to fifteen years, trees are cut back to the pollards, the entire

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yield being used domestically. The ordinary method of fuelwood production through tree selection and cutting is impractical here. Forest reproduction is eliminated by the grazing animals, and were the knotted, knarled veteran

forested areas is the production of litter material. Bracken fern (*Pteridium aquilinum*), which grows abundantly throughout the Pyrenees, has no value for feed, but here again the ingenious Basques have found a way to utilize



FIG. 2. Grazing animals were kept out of this pollarded grove long enough to allow oak reproduction to grow out of reach. Photo by R. H. Eastman.

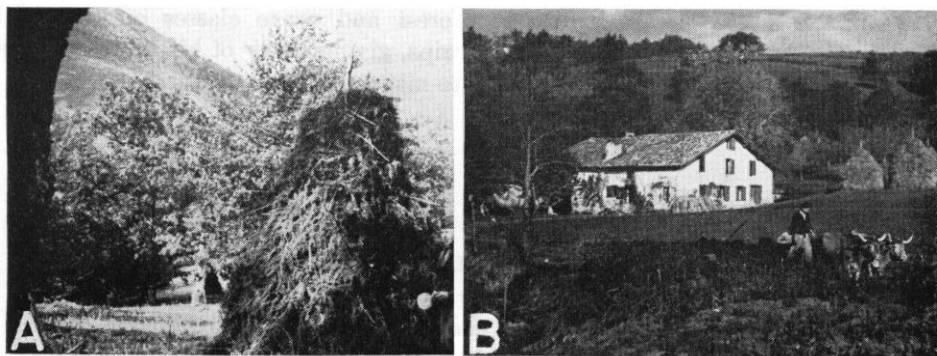


FIG. 3. Use of bracken fern. A. Ferns cut and stacked for drying. Before winter sets in, they will be hauled to the farmstead for use as floor litter in the livestock barns. Photo by H. R. Huff. B. Every Basque farm has its compost pile where soiled litter decomposes into excellent fertilizer. Photo by A. P. French.

trees removed for wood, replacement would be impossible. It is necessary from time to time to curtail grazing for three or four years to allow reproduction to take place and the young trees to grow out of reach of the animals (Fig. 2).

The third use obtained from Basque

this ever-present plant. Ferns are cut in the autumn, poled for drying (Fig. 3A), and later carted to the stock barns for floor litter. Used litter is stacked in compost piles and becomes the source of rich fertilizer and soil conditioner (Fig. 3B).

Relatively little of the Basque country is suitable for farming. Arable land consists mainly of small level or gently rolling areas, intensively cultivated. Some sites, level enough for tillage, have very unfertile soil, coarse in texture and low in humus content. This mantle type, called "cold soil" by the Basques, requires application of rather large quantities of organic material over a period of years to build up fertility sufficient for crop production. Litter compost serves this purpose admirably.

Maintenance of steady production of stovewood, forage, and litter material, through pollarding, apparently has reached a balance that has remained constant through the centuries. Excessive use of any one of the three resources would have serious consequences in the Basque economy.

Originally the forests were primarily of Pyrenean oak (*Quercus tozza*) and pedunculate oak (*Q. pedunculata*). About fifty years ago a leaf disease known as white rot (*Oidium* spp.) spread through the region, seriously damaging the native

oaks, especially the young leaves of early spring. The French waters and forest service later began trials of several exotic oaks in a search to find one that would not only meet the requirements for pollarding but would withstand the leaf disease. Outstanding among those tried, the American northern red oak (*Q. borealis*) appears to be well adapted to the open stands of the Basque country. Because it greens out late in the spring, northern red oak is highly resistant to white rot. It is easy to transplant, and although it has an unusually long life, it is a rapid grower. Where Pyrenees plantings have been made with this oak, the cutting cycle for pollarding can be shortened by four or five years.

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POPULATION AND LAST FRONTIERS

Unquestionably one of the great factors of change is the explosive upsurge in population in virtually all countries, resulting in a doubling of the world population within the last century, or an increase of more than a billion people. Further, these increases are continuing, with the prospect, barring some cataclysm, of a world population of three billion or more people at the end of the century—only fifty years from today. Already one result of these increases has been that the habitable and cultivable areas of the earth are now largely occupied, leaving certain tropical and very northerly regions as the last remaining frontiers.—From Annual Report of The Conservation Foundation. For the year 1949.