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Effects of Traditional Agroforestry Systems on Forest Structure: Case Study in the West Forests of Iran

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Abstract

Zagros forest in the west of Iran with an area of 5 million ha accounts for almost 40% of country's forests. More than 1.5 million people lives in this area. The forests with easy access located in gentle alps are used for non irrigated understory farming and for firewood whereas forests on steep slopes and at high altitudes are used for feeding livestock.

In order to study the effects of these forest management practices on the forest structure, two forest regions were selected: in the first region understory farming was practiced while in the second region this was not the case. In each region 30 plots were established. Results indicated that in forests where understory farming was practiced only *Quercus persica* occurred whereas in forest without understory farming *Acer monspessulanum*, *Amygdalus* sp., *Ficus* sp., *Pistacia mutica*, *P. khinjuk*, *Daphnia* sp. and *Cratagus* sp. occurred in addition to *Quercus persica*. In forest with understory farming 28% of the trees had seed origin and 72% had coppice origin. In forests without understory farming 60% of trees had seed origin, 34% had coppice origin and 6% were shrubs. Understory farming significantly reduced canopy cover and abundance of undergrowth plants. However, these farming lands located on gentle slopes, contribute significantly to the livelihoods of local peoples.

Keywords: Agroforestry, forest structure, traditional forest management, Iran