



Role of hedgerows in agrosilvopastoral management of mountain Mediterranean areas

E. Tsatsiadis (1), I. Ispikoudis (2), and V.P. Papanastasis (2)

(1) University of West Macedonia, 501 00 Kozani, Greece (evris67@yahoo.gr, +302461056281), (2) Laboratory of Rangeland Ecology (286), Aristotle University, 541 24 Thessaloniki, Greece (ispik@for.auth.gr; vpapan@for.auth.gr / +302310992729)

Hedgerows are part of the traditional agrosilvopastoral systems in the Mediterranean region. They are widely distributed all over the mountain areas and constitute important elements of the rural landscape. Their presence is dated back to the ancient times, uninterruptedly continued up to our days. They originate and coexist with agriculture and for this reason they are closely related to human activities. Hedgerows are associated with a great range of ecological, economic and social benefits. They ensure a refuge to a high number of animal and plant species and act as corridors, allowing dispersal and movement of them among habitats. They provide shelter from wind and dust, timber, fruits and other products, forage to domestic and wild animals, aesthetic qualities and protection from soil erosion. Recent studies emphasize their functional role in rural landscapes through the flow of wind, water, nutrients, energy and biota.

In this paper, we studied an extensive network of hedgerows bordering cultivated fields in a mountainous village of western Macedonia, in northwestern Greece. The area covered amounts to about 1200 ha and is dominated by farms mainly cultivated with cereals, while vineyards and lucerne crops are also present. Hedgerows have been created and maintained by farmers. Their structure and composition vary greatly. Vegetation consists of trees, spontaneous or planted, shrubs and herbaceous species. In addition to bordering of farms, hedgerows provide several other goods and services. The most important use though is grazing by livestock, especially after cereal harvesting, in the summer and early autumn months. Thereby, they constitute a traditional agrosilvopastoral system.

Measurements included type of hedgerows (earth or stone walls), morphology such as length, width, and height as well as vegetative cover and species composition. In addition, the ecological, economic and social roles of them were investigated through interviews with their owners. It was found that hedgerows are variable and complex structures, highly valued by farmers for their multiple benefits, but not taken care any more due to the socioeconomic changes of the last decades as a consequence of extensification/intensification and consolidation of the traditional farming systems. Nevertheless, hedgerows continue to play an important role as grazing areas within an extensified agrosilvopastoral system.

Key words: Type, vegetation composition, morphology, socioeconomic changes, grazing