

**Bayram G, Turk M, Çarpıcı EB, Çelik N (2009)** The effect of aeration and application of manure and fertilizer on the hay yield, its quality and botanical composition of the abandoned range. *African Journal of Agricultural Research* 4 (5):498-504.

#### Abstract

The research was carried out in order to investigate the effects of aeration, organic and commercial fertilizers on hay yield, hay quality and botanical composition of an abandoned old range. The experiment was carried out in strip plot design with four replications. Six levels of fertilizers and three levels of aeration were used as treatments. The two-year results indicated that all of the fertilizers increased the hay yield and the effects of commercial fertilizers were higher than those of the organic types. Effects of fertilizers on crude protein content were negative. Fertilizers decreased the dry weight proportions of legumes but increased those of grasses. The effects of fertilizers on hay quality were of contradiction. Aeration decreased crude cellulose content of hay. Aeration with tined harrow decreased hay yield and crude protein. Springed cultivator decreased the proportion of legumes but increased that of grasses. Both commercial and organic fertilizers can be proposed to strengthen and sustain a vegetation of abandoned ranges of Sub-Mediterranean climate such as in the research conditions. However, commercial fertilizers were more effective than organic ones as far as hay yield was concerned. Thus, commercial fertilizers could be prioritized in fertilization of these types of vegetations. On the other side, no clear effects of aeration methods were found in this study. This kind of researches requires long-term studies.