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Abstracts for the Oral Talks



11:30**Changes in soil chemical properties after prescribed fire in a mountain area covered by shrubs**Fonseca, Felícia¹ (ffonseca@ipb.pt) Figueiredo, Tomás², Nogueira, Clotilde³

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Currently, forest fires are a serious problem in the Mediterranean ecosystems. The abandonment of the rural areas has led to the accumulation of biomass fuel. One of the techniques applied in the management of vegetation in forest areas is the prescribed fire, which aims to reduce the combustible load guaranteeing a reduction of the risk of fire. Its application in strategic areas intends to gradually replace the fires that occur during the summer period for less intense burnings carried through winter. The fire temporarily reduces or eliminates the vegetal covering of the ground and several alterations may occur in the physical, chemical, mineralogical and biological properties of the soil. This work aims to evaluate the temporal evolution of the effect of prescribed low severity fire in mountain areas covered with shrubs in some soils properties. The study took place in Aveleda, within the area of the Montesinho Natural Park, Northeast Portugal, which possesses a surface of about 75000 ha, being approximately one-third occupied by shrubs. Sampling took place in an area with approximately 5 ha, occupied by shrubs, which was subjected to controlled fire. In eleven different locations, randomly scattered, soil samples were collected before the controlled fire at different depths: 0-5 cm, 5-10 cm and 10-20 cm. To monitor the development of the properties in time, soil samples were once again collected in the same places, two months, six months and three years after the prescribed fire. Three years after the prescribed fire, and at depth of 0-5 cm, it turned out that the soil pH values were similar to those seen before the fire. However, the same was not verified with the values of the exchangeable bases, extractable potassium and electric capacity that differ from the observed ones before the fire. It also appears that the controlled fire, affects the chemical properties differently throughout the soil profile.