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Acacias Control: a tool to reduce wildfires risk in unmanaged forestlands

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Abstract

In recent decades, changes in the wildfire regime have been caused by several factors, such as changes in land use, an increase of fuel loads in rural areas, climate changes, and the growing invasion of exotic species such as Acacias ssp. In Europe, acacias are among the most widespread invasive species, becoming an environmental issue in Southwest Europe including Portugal. According to the latest forest inventory (ICNF,2019), acacias cover about 18,500 hectares in Portugal, and it is expected that this area continues to grow significantly. This strong invasion started a few decades ago promoted by the large areas affected by wildfires (Nunes et al. 2021). High temperatures from fire effect directly the acacia seed bank in the soil, stimulating germination and resprouting. The probability that the majority of invasion by acacia occurs in private areas is very high as more than 90% of Portuguese forests are private. This situation is aggravated by the acacia control's high cost. The Acacia4FirePrev project, developed by the School of the Agriculture / University of Lisbon, is looking for viable alternatives to help manage these areas more efficiently and with fewer control costs for their owners. One of the project's tasks is the study of social involvement and the sensitization of various actors to the acacia invasion problem and its relationship with wildfires. For this purpose, a survey was developed for forest managers and owners with the aim of getting to know their practices and knowledge in the area of acacia control. The preliminary results of the survey show that respondents have some difficulty in identifying all Acacia species in Portugal. However, more than 80% of respondents consider that acacias are a serious/very serious problem, and all perform actions to control this invader. The area intervened covers the entire country. The results of the study point to the need to increase the awareness of the population about the problem of invasion of Acacias spp. This can be done, for example, by increasing the number of practical workshops in the places most affected by the invasion of acacias and the number of professional training. Furthermore, it is equally important to develop guidelines for environmental education and manuals in a clear and simple language.

Keywords: wildfires, exotic invaders, survey, forest owners, forest managers

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