

Topic 9 - Biodiversity and ecosystems

OC-127 - (EEF2019-13748) - EFFECTS OF OLIVE FARM INTENSIFICATION ON PHYTOPHAGOUS INSECTS AND THEIR NATURAL ENEMIES

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Abstract Summary

Olive farms are progressively expanding in the Mediterranean region, and many have undergone a process of management intensification in recent years. Traditional farming systems involving little or no agrochemical input are rapidly giving way to intensive regimes with very high agrochemical application. However, in spite of this ongoing process of intensification, little is known of its consequences for biodiversity and associated ecosystem services, such as natural pest control. To address this issue, we compared the abundance of phytophagous insects and their arthropod natural enemies (predators and parasitoid wasps) across olive farms under different levels of management intensity, ranging from organic to superintensive regimes. Sampling was carried out in southern Portugal. Fifty-three sampling points within 34 olive farms were visited in Spring, Summer and Autumn 2017, and canopy arthropods were vacuum-sampled. Preliminary results revealed significant declines in the abundance of phytophagous insects and parasitoid wasps, whereas predator abundance did not vary across management regimes. Furthermore, farms with slow ripening and drought-tolerant olive varieties and greater amounts of herbaceous understory, typical of traditional systems, were associated with higher abundance of phytophages and lower abundance of predators.

Palavras-chave : Conservation, Agricultural intensification, Mediterranean olive farms