

Impact of family farming practices in the environment [S]

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Traditionally, family farming has contributed to the preservation of biodiversity and the environment while also contributing to decrease poverty and social inequalities, especially in developing countries (FAO, 2014). Nonetheless, there has been a growing adoption of intensive agricultural practices like the widespread use of synthetic fertilizers and pesticide crop spraying by family farmers. Therefore, in this study we wanted to establish the technical itinerary of family farming, in the North and Center of Portugal, and to assess their potential impact on the environment and understand which practices should be promoted or abandoned to make family farming more sustainable and to reduce its negative impacts. To that end, we interviewed family farmers using a checklist questionnaire that included questions related to the socio-demographic characteristics of the farmer and his family, farm description, technical itinerary and perceptions towards sustainable farming practices and pesticide use risks to the environment and health. Based on the results, we were able to determine that several practices related with soil management, like liming, absence of soil/water/leaf analysis and the non-use of composting may result in inefficient use of soil nutrients and lead to inappropriate use of fertilizers. On a positive side, many farmers use crop rotation, green and animal manure, the latter originating mostly from their own farm and thereby reducing the need of non-organic fertilizer inputs. Regarding pest management, almost all farmers use pesticides on a regular basis, whilst only a minority use biological or biotechnological pest control methods, even though about two thirds of all farmers recognize pesticides to be harmful. In a significant number of cases, farmers use pesticides without respecting the legal limits and safety intervals, originating health risks to the farmers and consumers and, at the same time, contributing to endanger the biodiversity of their farms.