

SoildiverAgro project

Adoption of new management practices to increase crop production and quality

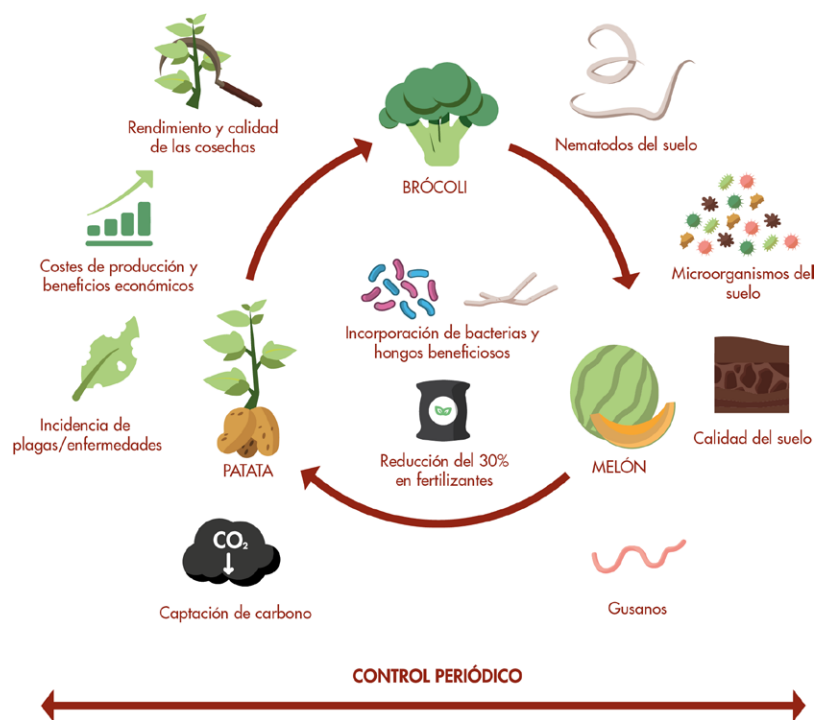


THE WHAT AND WHY

Crop Diversification and Soil Biodiversity

Crop diversification is an agricultural management strategy that includes practices such as crop rotation, multiple cropping, mixed cropping, and agroforestry. Crop diversification may be employed by smallholder farmers to reduce their vulnerability in the face of a global environmental change providing economic, social, nutritional, and environmental benefits. This strategy may provide, therefore, an alternative way of generating income and food as well as it can be used to mitigate the effects of a changing climate improving the resilience of the agrosystems. At the same time, the strong links between the above- and below-ground diversity has been well established. Plant diversity can influence soil conditions and have positive impacts on soil below-ground communities and processes while substituting for many costly agricultural inputs. Meanwhile, soil

biodiversity performs ecosystem services and provides soil functions that are essential for plant growth and agricultural productivity. Crop diversification could become an essential tool for sustaining production and ecosystem services in croplands and should be considered an important management strategy in the context of soil sustainability and food security. In Southeast Spain, farmers have become aware of the benefits of crop diversification, although mostly through rotations, and they are including rotations in their cropping schedules, with the aim to reduce the incidence of soil-borne diseases, increase soil fertility and improve soil porosity and water retention. However, intercropping and agroforestry strategies in these areas are still an uncommon practice.



1. Case study 1 infographic of the crop rotation carried out in Cartagena (Spain).

KEYWORDS

Crop diversification, crop rotation, agroforestry, soil, biodiversity.

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