

**LIFE + AGRICARBON.
SUSTAINABLE AGRICULTURE
IN CARBON ARITHMETICS**

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Abstract: *This project is an EU funded project in partnership with AEAC.SV, ECAF, UCO and IFAPA (www.agricarbon.eu). The objective of this project is to promote sustainable agriculture (conservation agriculture, CA; precision agriculture, PA), to mitigate climate change due to reducing GHG emissions, increase resilience and adapt to the new climate conditions foreseen within the global warming. The study is implemented in 3 farms of 30 hectares each, distributed along Andalusia, in South Spain.*

Not only field work performed has been useful to obtain supportive data for publications, but also technology transfer activities, such as field days, courses, or even the final Green Carbon Conference, have been a relevant strand within the project.

The joint use of CA&PA, captured up to 35% more CO₂ compared to tillage. Moreover, the absence of tillage made CA and PA reduce soil's emissions between 56% -218%.

Regarding energy use, the implementation of CA&PA in the testing farms, where the current crop rotation is wheat-sunflower-legume, resulted in cuts by 13.8% in wheat, 21.6% in sunflower and 24.4% in the legume when compared to tillage. These savings caused lower CO₂ emissions, corresponding to 199.1 kg ha⁻¹ for wheat, 63.6 kg ha⁻¹ for sunflower and 107.1 kg ha⁻¹ for legume.

In the mentioned rotation, yields show no major differences between sustainable agriculture and tillage.

Dissemination has been successful as well: over 1,100 farmers trained in 10 field days and over 40 publications released.

Keywords: *conservation agriculture, precision agriculture, climate change, energy, yield*