

Practice SQ n° 12

COVER CROP MIXING GRASSES AND LEGUMES

Introduction

Category: Good Practice (GP)

Practice identity card

#cover crop, grasses

#SQ, food, feed, fibre, oil, industrial, Good Practice (GP), France

Short description

➔ Between two main crops is sown a mixture of grasses - oats, rye, buckwheat, Moha - and legumes - often forage species, instead of a bare soil. The cover crop is destroyed during its vegetative step before the seed formation.



Implementation process

Which practice is considered as the standard in this region? Bare soils are still present during the winter period.

What was the on-farm issue/challenge/opportunity that led to the implementation of the practice? To prevent soils from erosion and leaching thanks to the leaf and the root areas with the caption of a part of the mineral nitrogen still stored in the soil after the harvest. To fix soil structural issues like packing or slaking crust thanks to the root action and to the earthworms' activity improved by the organic matter provided by the cover crop. To maintain or increase the soil organic matter content and to balance the mineralisation impacts. To break the chain of parasites or diseases.

How long did it take to implement the practice and which are the measures needed to monitor: This practice needs two more interventions after harvest during the autumn and winter period. No specific measure to be taken.

Logistics

- **Logistic aspects to consider:** This practice requires to buy or to product seeds for the cover crop and two operations of seeding and destroying.
- **Skill/education level required:** rather low

Agronomical traits

- **Can the practice be applied to a multitude of cultivation techniques?** This practice is designed for the crop rotations with a long intercrop period - Rapeseed / Corn for example.
- **Targeted crop categories:** food, feed, fibre, oil, industrial
- **Soil types suitable for the practice:** peaty, sandy, clay, loamy, chalky, silty
- **Expected effect on crop yield:** similar
- **Expected effect on crop quality:** similar
- **Expected effect on crop quality variation:** increase
- **Which costs may increase due to the practice?** unskilled labour, fuel, storage, energy
- **Which costs may decrease due to the practice?** fertilizers, pesticides
- **Expected long-term/indirect economic benefits of the practice:** Better organic matter content - better soil structure - better resilience against hydric stress - better availability of nutrients - better water quality.
- **Expected effect on the leaching of nutrients:** decrease/decrease/decrease

Administrative context

- **Does the practice qualify for subsidies?** It is a possibility with local programs applied to water catchment areas
- **Status of the legal framework that regulates the practice:** well-developed
- **Are there any policy barriers complicating the practice's application?** Rules about cover crops from transcription of Nitrate directive are not good agronomical rules enough
- **Does the practice involve the use of hazardous substances?** No
- **Is the practice compliant with EU organic farming practices?** Yes
- **Is the practice supported by Eco-schemes?** Yes
- **Are there any gaseous emissions to be considered upon application of the practice?** No
- **Greenhouse gas (GHG) reduction potential of the practice:** negative: GHG emissions may increase due to the implementation of the practice
- **Expected effects from the practice on the time occupation of the farmer?** moderate increase
- **May the practice contribute to a better public image of agriculture?** Yes, with a positive effect on the landscape by keeping a vegetal presence during a longer period
- **May the practice improve the farmer's self-image?** Yes

Contact

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Eu member state: France

Find out more

Source of information French COP workshop on September the 4th 2024 at Angers + written sources

Additional info/links:

Article (in French) : IMPACT OF INTERMEDIATE CROPS ON THE CHEMICAL AND BIOLOGICAL PROPERTIES OF SOILS (IMPACT DES CULTURES INTERMEDIAIRES SUR LES PROPRIETES CHIMIQUES ET BIOLOGIQUES DES SOLS) - https://agriressources.fr/fileadmin/user_upload/Auvergne-Rhone-Alpes/177_Eve-agriressources/fertisols/RESSOURCES/Ameliorations/Nov2015-Comifer-Gemas-ARTICLE-LABREUCHE-



[impacts-couverts-sols.pdf](#)

D2.3
Results of the GP & RI collection
process

Brochure (in French) : FOR OPTIMIZED MANAGEMENT OF SOIL FERTILITY (POUR UNE GESTION OPTIMISÉE DE LA FERTILITÉ DES SOLS) - <https://agriressources.fr/fertisols/>