

# Red clover: a vigorous cover crop

## Problem

Several species of living mulch can be used. Choosing the right species is far to be trivial. It is important to be familiar with using them wisely.

## Solution

Red clover, used as a cover crop, can bring many benefits to one's cropping system. A good knowledge of the characteristics of red clover is essential to control its management and make the best of it.

## Outcome

Applied research has led to a better understanding of the interactions of red clover with its environment. It can be a very interesting alternative to lucerne as a legume cover crop.



Picture 1: Red clover (Arvalis)

## Applicability box

### Geographical coverage

Europe

### Application period

All year

### Required time

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### Period of impact

Continuous

### Equipment

specific

## Practical recommendations

There are few characteristics to be considered of before implementing a red clover cover crop:

- This taproot fodder plant is perennial (2-3 years).
- Establishes quicker than other species.
- Its vigour can be a disadvantage in the year when the cover crop is established in a crop. This can be managed with a sowing density limited to 5 kg/ha and sometimes with a sowing date shifted from that of the crop.
- Adapted to humid soil, conversely to lucerne (**Table 1**).
- It is a species to be managed well in spring under wheat (late start but potentially troublesome at harvest) (**Table 2**).
- It is rather easy to regulate as sensitive to herbicides (**Table 3**).
- The cost of the seeds is quite low, which makes it a cover that can also be destroyed before sowing the next crop.
- Red clover can be integrated in all crop rotations. The only vigilance to have concerns peas, lentils and beans which are sensitive to *Aphanomyces*. In this case it is necessary to choose varieties that are totally or very resistant: Diplo, Formica, Lemmon, Lestris, Merviot.
- Red clover is a false host species of the Branched broomrape which can contribute to reduce the grain stock.

**Table 1. Adaptation to soil types**

Deep, healthy and undrained soil	Very well adapted
Fairly healthy, drained soil	Adapted
Undrained hydromorphic soil	Adapted
Acidic drying soil	Adapted
Limestone drying soil	Adapted

**Table 2. Growth dynamics according to the season**

Competition period	
Winter	Low growth/ competition
Spring	Very strong growth/ competition
Summer	Very strong growth/ competition
Fall	Medium growth/competition

**Table 3. Ease of chemical control**

In rapeseed	Easy
In wheat	Quite difficult
In maize	Quite difficult

## Practical testing/ Farmers' experiences

The red clover is not the most used among the different species in France, as a living mulch.



## Further information

- Trèfle violet : [www.fiches.arvalis-infos.fr/couverters/fiche\\_couvert.php?id\\_couvert=507&dept=75#fr](http://www.fiches.arvalis-infos.fr/couverters/fiche_couvert.php?id_couvert=507&dept=75#fr)
- [www.terresinovia.fr/documents/20126/157418/ATII\\_aphanomyces\\_2017.pdf/8714f74b-9a3e-fefe-e477-4a92a7048373?t=1553704956785](http://www.terresinovia.fr/documents/20126/157418/ATII_aphanomyces_2017.pdf/8714f74b-9a3e-fefe-e477-4a92a7048373?t=1553704956785)
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- Check the [Organic Farm Knowledge Platform](#) for more practical recommendations.

## About this abstract

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**ReMIX** is a H2020 multi-actor project that will allow designing cropping systems based on agro-ecology for the benefit of farmers and the whole EU agricultural community. ReMIX will exploit the benefits of species mixtures to design more diversified and resilient agro-ecological arable cropping systems. Based on a multi-actor approach, ReMIX will produce new knowledge that is both scientifically credible and socially valuable in conventional and organic agriculture. The project will tackle practical questions and co-design ready-to-use practical solutions. The project will span from the specification of end-user needs and the co-design of in-field and on-farm experiments to demonstrations with evaluation of new varieties and practices. ReMIX will contribute to the adoption of productive and resilient agricultural systems. The project is running from May 2017 to April 2021

**Website:** [www.remix-intercrops.eu](http://www.remix-intercrops.eu)

