

Control of creeping thistle by stubble cultivation

Problem

Creeping thistle can rapidly spread, especially in crop rotations that contain a high number of cereal crops without perennial grass-clover leys. It reduces crop yields by competing for water and nutrients.

Solution

Creeping thistle populations can be successfully reduced by repeatedly undertaking stubble cultivation after an early maturing crop and cultivating a densely growing catch crop.

Outcome

Multiple cultivations lead to a repeated physical damage of the thistle. Each time it regrows, it uses further nutrients until it is weakened and a new crop will out-compete it. This method is also effective against other root-spreading weeds such as couch grass and bindweeds.

Applicability box

Theme

Weed management

Geographical coverage

Central Europe

Application time

Between end of June and beginning of August, in very dry weather

Required time

2-3 stubble cultivations

Period of impact

Succeeding crop

Equipment

Skim plough or wing share cultivator

Best after

Grains or other early maturing crops like rapeseed

Practical recommendation

- After harvesting grains, perform stubble cultivation with a skim plough or a completely flat-cutting wing share cultivator at a depth of 7-10 cm.
- After the thistle plants have re-emerged (maximum 10 cm), repeat the cultivation 1-2 times while increasing the working depth (figure 1).
- Sow a dense, fast-growing catch crop such as vetch or fodder radish after the stubble cultivation to further weaken the thistles (figure 2).

This method only works on dry soils and in dry weather; in wet conditions, it can lead to an increase in thistles!

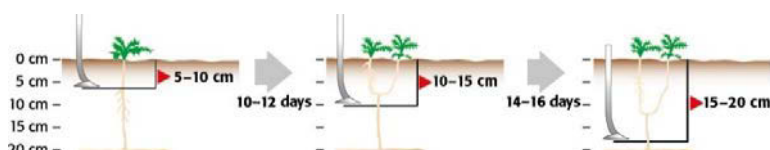


Figure 1: Increasing cultivation depth with every step.

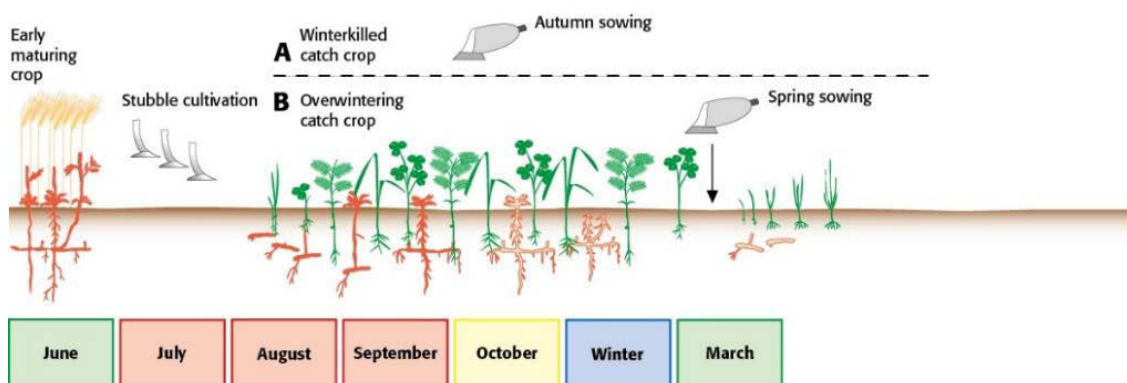


Figure 2: Suppressing the thistles with a winterkilled or an overwintering catch crop after stubble cultivation.