

Reduced tillage and no-till

Cultivation practices where soil disturbance is reduced to minimum.

Similar terms: shallow cultivation, stubble, winter coverage

In shallow cultivation, only very top soil is cultivated leaving plant residues that protect soil from rain drop erosion. No-tillage or direct drilling means that soil is disturbed only when planting seeds and the disturbance occurs only in the seed zone.

These methods improve soil structure by leaving the crop residues at the soil surface. This leads to better resistance over erosion, water-holding capacity and conditions for microbial activities.

Application

Reduced tillage and no-till methods are beneficial for soil types that are easily compressed such as heavy clay soil. It improves the soil pore structure, leading to better water management of the field. Both practices reduce surface run-off and sheet erosion.

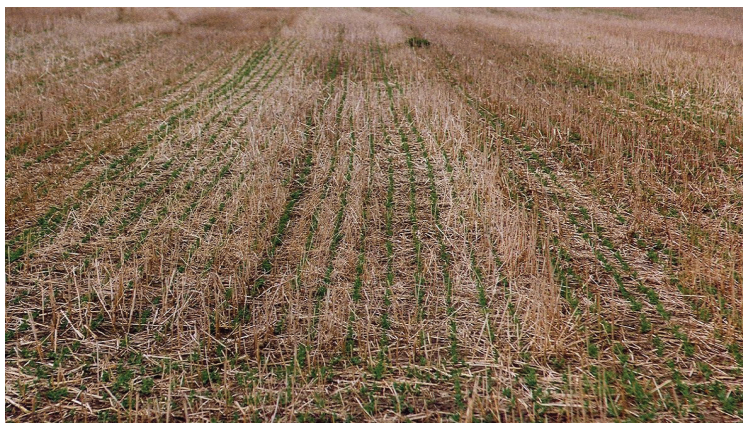
Because nutrients stay in the top layers of the soil, the amount of soluble nutrients in the surface run-off can be higher. Fields cultivation in these methods can also dry up slower compared to ploughed field.

Maintenance

- Reduced tillage and no-till methods are less labor intensive than traditional cultivation methods

Economics

- Cheaper than conventional cultivation
- Special machinery might be needed



Pea field, no-till farming, Switzerland.
Photo: Volker Prasuhn

Further information:

[University of Massachusetts Amherst – Reduced tillage](#)
[Baltic Deal – Reduced tillage](#)

Sources: 1) Baltic Deal. ([Link](#))

2) Reduced tillage – University of Massachusetts Amherst. ([Link](#))