

# Biodiversity-promoting measures in arable farming



## Wide row with flowering undersowing

### Description of the measure

Cereals sown in a lower seed density with a flowering undersowing

- Drill gaps in seed rows (min. 30 cm)
- Reduce the seed rate to 70% of the conventional density. Sowing of the undersown crop is possible at the same time as the cereals; scattering or surface application, then rolling on for better soil contact
- on min. 15 m width
- Reduced and adjusted fertilisation (fertilisation 50-70 % of the rest of the farms average/area-specific level); max. N surplus: 10kg N/ha
- No application of synthetic pesticides
- Undersowing consists of 10 low-growing species, predominantly legumes such as yellow clover, horned clover, red clover or camelina.
- tillage from 31st of Aug at the earliest, but ideally left over winter

Location: Sites with high rainfalls and good rainfall distribution, areas without weed pressure and without root weeds; no previous biodiversity measures such as flower strips, fallows or legumes.

### Effects on biodiversity

When crops have an undersowing of diverse, flowering herb mixtures, insects benefit from the food supply during the flowering season. Open patches of soil provide breeding habitat for soil-borne insects. In winter, insects can hibernate, small game can find shelter and birds can feed on the seed stands.

### Other positive effects

In addition to increasing soil fertility and improving soil structure, undersowing also serves to reduce erosion.

- Improvement of soil structure and build up of humus
- Keeping water on the field
- Reduction of erosion
- Improvement of the trafficability of the area
- Forage use possible
- Nitrogen fixation

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## Further recommendations

For the success of undersowing and stubble seeding, the amount of precipitation must be taken into account.

## Sources

<https://www.oekolandbau.de/landwirtschaft/pflanze/spezieller-pflanzenbau/zwischenfruechte/untersaaten/>

<https://orgprints.org/id/eprint/15102/2/Zwischenfruechte.pdf>

<https://www.rheinische-kulturlandschaft.de/massnahmen/a4a-extensive-aecker-lichtaecker/>

Coordinator

Further partners

