

# Biodiversity-promoting measures in arable farming



## Extensive farming / light fields

### Description of the measure

#### Location

- On sites with low occurrence of competitive species; possibly already known occurrence of (endangered) arable weeds
- Low-yielding sites, poor soils (e.g. limestone fields) or sites with pronounced relief (e.g. steep slopes and depressions)

#### Implementation

A combination of measures is necessary to maintain a species-rich plot and, above all, to further develop the potential of rare arable wild herbs on the site:

- Drill gaps between the rows and reduced seed density, reduced sowing densities of 50-70 % of conventional densities
- Reduced and adjusted fertilisation, maximum N surplus: 10 kg N/ha
- No application of synthetic pesticides
- Harrowing and hoeing is possible, but the plot should not be absolutely clean.
- Crop rotation based on cereals (>60 % cereals - 3 out of 5 years), also including legumes
- Measure can be implemented in winter cereals and summer cereals. Root crops and corn are less suitable, as they have high nutrient requirements in the early stages. However, their cultivation is not excluded within the framework of the crop rotation.
- Optimal duration of measures: at least five years
- Late cultivation of stubble fields (this way very late flowering herbs can still grow). Ideally, stubble fields should be left over winter, providing food and overwintering habitat for insects, birds and small game.

### Effects on biodiversity

Due to the lower seed density, especially light-demanding wild herbs are promoted. They have more light and less competition and can develop in a better way.

Insects benefit from flowering species in the area through increased nectar and pollen supply. Beneficial insects are encouraged.

Wild herbs also serve as food for small game and provide protection from predators.

Many farmland birds avoid tall and dense crops. Wild herbs serve both as food and as material for building nests. Insects found on and around wild herbs serve as food, especially for young birds.

#### With financial support from



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## Other positive effects

Reduced use of pesticides protects the fauna and promotes other animals (e.g. butterflies, grasshoppers, birds) in addition to beneficial insects. In addition, field work can be saved.

Cereal species and field wild herbs form a "plant society" in which mutual interactions with positive effects occur, e.g. increase in water availability, soil improvement through nitrogen fixation and good soil structure.

There is evidence that the grain can achieve better nutrient uptake when wild herbs are present.

## Further recommendations

Problematic weeds such as field thistle, field bindweed and dock can be controlled locally with a harrow. To protect the crops, selective application of pesticides with a backpack sprayer is possible in exceptional cases.

It is possible to change the plot if the weed pressure is too high.

Please note: The germination of desired low-competitive arable weeds depends on the seed potential available in the soil. If this is present, a species-rich plant society often emerges after a few years of extensification. If wild weeds remain absent even after adaptation of management, further measures for reintroduction are possible.

Extensification is listed as a measure in contractual nature conservation - e.g. via LPR contracts e.g. in Baden-Württemberg, Germany, contractual nature conservation programme in Bavaria, etc.

## Further reading

[DBU - Measures and species profiles to promote the diversity of typical species and habitats in the agricultural landscape | Publications](#)

This measure is being tested by contract farmers of the Alb Gold company in cooperation with the Lake Constance Foundation and the IFAB Mannheim:

<https://www.alb-gold.de/wir-tun-was/biodiversitaet.html>

## Sources

[DBU - Measures and species profiles to promote the diversity of typical species and habitats of the agricultural landscape | Publications](#) p.218 ff

<https://rp.baden-wuerttemberg.de/fileadmin/RP->

[Internet/Themenportal/Natur\\_und\\_Artenschutz/Naturschutzgebiete/\\_DocumentLibraries/pestizidverbot\\_anlage2.pdf](#) p. 7 f.

Coordinator

Further partners



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