

Reduction or targeted use of fertiliser, pesticides and herbicides in agriculture



On fertilized areas biological diversity is often missing. © Thomas Max Müller/pixelio.de

Involved sectors

Forestry, Water management, Nature protection

Affected habitats

Grassland, Arable land

Description

Appropriately managed agricultural spaces can act as stepping stone biotopes and connecting areas in a biotope network. As a rule, these areas, if they are to fulfil their function, must be managed extensively and in an ecologically compatible way. Non-use, or at least highly targeted use, of fertilisers, herbicides and pesticides encourages the development of appropriate characteristics and, even if no biotope networking strategy is in place, can help to introduce more biological diversity in the landscape matrix.

Impact

Impact in particular on

Insects

Ecological impact

Reduction of fragmentation or creation of new valuable habitats

Large, intensively managed agricultural spaces contribute to landscape fragmentation. Reduction of inputs on these areas or extensivisation, especially with appropriate distribution of the areas concerned, can mitigate this impact.

Improvement or preservation of habitats	Non-use, or at least reduced use, of fertilisers, herbicides and pesticides preserves species diversity and enhances agricultural areas in ecological terms.
Element of ecological network	Especially if embedded in an overall concept, these areas serve as connecting elements and stepping stone biotopes.
Other	Can help to protect the hydrological regime and soils (erosion).
Time of realisation for measure	Immediate: The impact of non-use or reduction occurs immediately; the impacts on water and soil are more long-term in nature.
Impact scope	Very localised (plot): The impacts can be felt on the area concerned and in the locality (biodiversity).

Implementation

Implementation period	Days: Generally entails a reduced workload.
Frequency	Recurring

Economic and legal aspects

Costs	Very low (less than 1'000 EUR): Cost savings result from reduced use; possibility of subsidies.
Socio-economic impacts	High: Positive impacts on water, soils, health. Farmers may experience reduced yields.
Sources of financing	Other private sources, Public: local, Public: regional, Public: national, Public: European
Legal situation	The use of fertiliser, pesticides and herbicides in agriculture is regulated by legislation pertaining to agriculture and nature conservation.

Further information

Evaluation	As part of biotope networking projects, these measures are only genuinely effective with proper planning and the involvement of many farmers. In Switzerland, however, positive experience has been gained in a number of projects, although compensation payments for farmers also play an important role here.
Information	Switzerland: Agricultural and nature conservation authorities, e.g. in Switzerland: http://www.bafu.admin.ch/