Flowering insectary strips

Description of the measure

Insectary strips are annual or perennial flowering strips for which the seed choice depends on the beneficial insects to be promoted.

Implementation

- One unit every 30 - 50 m to encourage immigration of beneficial insects into crop (can be attracted over approx. 60 m)
- Min. 2 m width
- Possible in cereals or vegetables

Location

- Fields without problematic weeds
- Not adjacent to permanent grassland because of too high slug pressure
- Biodiversity measure as previous crop unfavorable

Seeds should be adapted to the beneficial organisms to be promoted. Examples:

Beneficial insect	Beneficial plant species	Pest
Hoverflies	Umbelliferous plants such as wild carrot, composite plants such as cornflower, yarrow or marigold, buckwheat	Aphid, whitefly
Ichneumon wasps	Wild carrot, camomile, yarrow	Cabbage owl, cabbage white butterfly, cabbage moth
Ladybug	Compositae, White campion, Stinging nettle	Aphid, whitefly
Lacewing	Phacelia, borage, mustard	Various pests
Spiders	Mallow, viper's bugloss, comfrey, mullein	Various pests

Sowing

- Preparation of a fine-grained but firm seedbed
- Sowing with a combined/simple seeder or fertilizer spreader
- Must not be sown too densely for light-demanding species
- Rolling the seed improves soil contact and germination
- Sowing in spring (end of April - middle of May)

Maintenance

- If possible, avoid topping; If necessary due to very high weed pressure, implement as early as possible (mow to >10 cm)
- Ideally maintain the strip of beneficial weeds until the following spring

Effects on biodiversity

Beneficial strips provide flowers, nectar and pollen for wild bees, bumblebees and other insects. They serve as retreats and overwintering sites for insects, birds and small game.

Further positive effects

Natural pest control occurs due to the increase in beneficial insects. This can reduce the use of pesticides. For example, a 75 % reduction in aphids can be achieved compared to fields without beneficial strips, and a 60 % reduction in damage from cereal leave beetles. They also contribute to biotope connectivity when they link forest edges, field edge structures, and meadows. Furthermore, soil structure and humus build-up are favored. In species-rich mixtures, different root formation, depth as well as exudation contribute to a promotion of soil life. In addition, the water storage capacity of the soil and the field is visually enhanced.

Further recommendations

In principle, it should be noted that this measure should not be considered in isolation. Margin structures, hedges, fallows, and diverse crop rotations also contribute to the reduction of pests and provide valuable overwintering habitats for beneficial insects.

In years with a high incidence of pests, e.g. whiteflies, there is also a strong increase in beneficial insects such as hoverflies. Some of the hoverfly larvae and pupae can remain on the crop, which becomes a problem especially when the vegetables are packed.

For further reading: *Blühstreifen für Bestäuber und andere Nützlinge – Agridea: https://agridea.abacuscity.ch/abauserimage/Agridea_2_Free/2616_3_D.pdf*

Sources: *orgprints.org/id/eprint/30478/1/Luka-etal-2016-bluehstreiefn-AgrarforschungSchweiz-D.pdf • www.fibl.org/fileadmin/documents/shop/2500-schaedlingsregulierung-kohl.pdf*
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