

Conserve and enhance beneficials in organic vineyards

Problem

Bare vineyards are hostile environments for many beneficials since predators (e.g. predatory mites, spiders, carabids, ladybirds, hoverflies), parasitoids as well as pollinators rely on cover crops for the provided shelter and feed on their floral nectar and pollen.

Solution

Beneficials' activity can be increased by the provision of nectar- and pollen-rich plant species, such as plants from the families of Apiaceae, Asteraceae, Caryophyllaceae and Fabaceae.

Impact

Field trials in several European vineyards confirmed that sown cover crops (Picture 1) favoured the abundance of arthropods and predators. In particular, predatory beetles were more abundant in vegetated vineyards than in vineyards of bare soil.

Practical recommendation

- **Sow cover crops or allow spontaneous vegetation to develop. These measures do not only reduce soil erosion, conserve soil moisture, maintain organic soil matter and retain and recycle plant nutrients, but they also increase plant diversity and thereby provide habitats and food for beneficials and boost biodiversity.**
- **Select nectar- and pollen-rich plant species that are adapted to the region and do not interfere with the growth of grapevines (water and nutrient competition).**
- **Sow the selected cover crops at the opportune moment over the year (often autumn) in prospect of favorable weather conditions in order that sown seeds can germinate.**
- **Limit the cutting and mulching of the flowering vegetation in order that the provided nectar and pollen is at the disposal of beneficials such as pollinators, parasitoids and predators and that cover crop species can reproduce.**
- **Adapt phytosanitary measures and reduce mechanical passages in order to protect and conserve the beneficial fauna.**

Applicability box

Theme

Cover cropping, spontaneous vegetation

Geographical coverage

Vineyards in European/Mediterranean area

Application time

Autumn/spring sowing

Period of impact

Continuous (including sowing and mulching periodically)

Equipment

Basic sowing method



Picture 1: Sown cover crops within a Slovenian vineyard (© Špela Modic, KIS).

Further information

Weblinks

- Check the [Organic Farmknowledge Platform](#) for more practical recommendations.
- BIOVINE web page: <https://www.biovine.eu>

About this fact sheet and BioVine

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