

STEP-project Fact Sheet

Pollinators Support Farm Productivity



Pollinating insects contribute to agricultural production in 150 (84%) European crops

These crops depend partly or entirely upon insects for their pollination and yield

The value of insect pollinators is estimated to be €22 billion a year in Europe

Wild bees and other insects are important pollinators, as well as honeybees

Status and trends of European pollinators
STEP-project
www.step-project.net



Bumblebees are important pollinators in several crops.
Photograph
Maj Rundlöf

Insect pollinators are essential for the productivity of a wide range of economically important European crops by increasing yield and improving crop quality (Box 1). While managed honeybees can provide pollination services for some crops, it is the wild pollinators such as bumblebees, solitary bees and hoverflies which may be the most important pollinators across Europe. For instance in the UK, there are only enough honeybees to pollinate a third of the crops needing this service, with wild pollinators doing the majority of the work.

Box 1: Crops that benefit from insect pollination

- Fruits – apple, orange, tomato, pear, peach, melons, lemon, strawberry, raspberry, plum, apricot, cherry, kiwifruit, mango, and currants
- Vegetables – carrot, onion, pepper, pumpkin, field bean, courgette, French bean, eggplant, squash, cucumber and soy bean
- Industrial crops – cotton, oilseed rape, white mustard, and buckwheat
- Seeds and nuts – sunflower, almond and chestnut
- Herbs – basil, sage, rosemary, thyme, coriander, cumin and dill
- Forage crops for animals – alfalfa, clover and sweetclover
- Essential oils – chamomile, lavender, and evening primrose

Pollinators are under threat

There have been dramatic declines in the number of managed honeybees and wild bees in Europe over the last few decades. Across Europe an average of 16% of honeybee colonies were lost between 1985 and 2005 with even greater losses recorded in England, Germany, Czech Republic and Sweden. Bumblebees and solitary bees have also been in decline in many parts of Europe. The reasons for these declines are diverse and include loss of flower habitats, pests and diseases, and over-use of agro-chemicals. At the same time more crops that require pollination are cultivated.

Wild pollinators increase yields and reduce risk

- Wild bees can buffer against loss of honey bees. Europe has more than 2,500 species of wild bees. Reliance on a single pollinator such as honeybees is a very risky strategy; if diseases or other factors cause honeybees to decline then in the absence of other pollinators, crop production will decrease. Wild bees provide “insurance”, reduce variation in yield among years, and can pollinate crops when honeybees have been lost or hives are expensive to hire.
- For several crops, wild bees are more efficient at pollinating than honeybees, such as Mason bees on apples, and bumblebees on beans.
- Bumblebees can ‘buzz’ pollinate crops such as tomato, peppers, and blueberries which honeybees cannot pollinate.
- Mason bees and bumblebees can forage in crops in colder wetter conditions when honeybees are unable to fly.
- Farms supporting healthy communities of wild pollinators can reduce input costs by avoiding the need to hire honeybee hives.

What can you do to help pollinators?

- Select Agri-Environment Scheme options which support wild pollinators such as flower margins or habitat creation.
- Use agro-chemicals in a pollinator-friendly way: try to avoid those pesticides known to have negative impacts on bees, reduce the use of herbicides which suppress flowering plants.
- Leave uncultivated flower rich patches in farmland where pollinators can benefit from flowers and nesting resources.
- Plant mass-flowering crops (e.g. oilseed, clover and field beans) as part of rotations to provide extra nectar and pollen for bees and other insects.

STEP stands for “Status and trends of European pollinators” (No. 244090-STEP-CP-FP) and is a European project working to conserve pollinators and manage the pollination services they provide. Find out more: www.STEP-project.net



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England: <http://www.naturalengland.org.uk/our-work/farming/funding/es/default.aspx>

Scotland: <http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/Environment/Agrienvironment>

Wales: <http://www.ccg.gov.uk/landscape--wild-life/managing-land-and-sea/land-management/agriculture/agri-environment-schemes.aspx>

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