



EU POLLINATORS INITIATIVE

A review of Member States actions to tackle the decline of wild pollinators

GERMANY



STRATEGY



Insect strategy [2019]



INITIATIVES



Rural



Urban



Private sector



NATIONAL RED LISTS

Threatened species



41%

Wild bees [2011]



35%

Butterflies & moths [2011]



RAISING AWARENESS



Citizens



Schools children



Farmers & beekeepers

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Germany has a national insect protection plan ("Aktionsprogramm Insektenschutz") which sets actions and targets for wild pollinators in relation to agriculture, river restoration, pesticide use, protected areas, light pollution, funding and other issues. The government provides funding for pollinator initiatives and awareness raising campaigns. In the federal state of Bavaria, a citizen's initiative has led to legislative changes to increase bee-friendly farming and the ecological network, including a commitment that at least 30% of the agricultural area is managed organically by 2030.

The red list of bees published in 2011 assesses nearly 50% of wild bees in Germany are endangered, and the red list of Lepidoptera that 35% of the butterflies and large moths are endangered. Standardised wild bee identification methods are being developed and there is a publicly available database of all wild bee species in Germany. An increasing number of regions and cities are launching their own surveys and regional red list projects to assess the state of their pollinator populations and measure progress.

The German rural development programmes offer agri-environment options for farmers to sow annual flowering plant strips or areas on arable and grassland, and controls on the ploughing up of grassland have been tightened in most of the federal states. National funding is available for pollinator projects, several of which are creating pollinator-friendly habitats with farmers. Less evidence was found of initiatives to reduce pesticide use in agriculture that might benefit pollinators, but cities and towns are taking measures to become pesticide free zones.

Campaigns such as Deutschland summt! and Projekt Wildbienenschutz have greatly increased the German public's interest in pollinators, and cities and local regions are launching pollinator campaigns and initiatives. Several private sector companies are engaging in pollinator protection. The beekeeping sector has several initiatives for wild pollinator conservation.



STRATEGIES FOR WILD POLLINATORS OR ANY OTHER SIMILAR PLANS

The German coalition government published its insect protection plan in 2019 ("[Aktionsprogramm Insektenschutz](#)"). The environment ministry's [plan](#) includes nine action areas:

- CAP post 2020 will contain targets, indicators, actions addressing insects needs – restoration and management of extensive grassland, maintenance and restoration landscape features and farmland habitats such as hedges and field margins (Kleinstrukturen), diverse crop rotations and fallow / non-productive areas requirement, support for organic farming
- Insect-targeted restoration measures in the national river restoration programme "[Blaues Band Deutschland](#)"
- More focus on insect protection in the proposed national plan for protected areas "[Aktionsplan Schutzgebiete](#)"
- Restrictions on fertiliser and pesticide use including an aim to phase out glyphosate and reduce pesticide use on & next to roads to a minimum, and a critical review of pesticide approval process
- Actions to reduce light pollution
- National funding for pilot/model projects (100 million Euros annually) including through the federal biodiversity funding programme ([Bundesprogramm Biologische Vielfalt](#))

In the federal state of Bavaria, the citizen's initiative '[Artenvielfalt - Rettet die Bienen](#)' succeeded in mobilising 18.4% of the region's citizens to register their support for a series of legal proposals to help bees, including a target of 30% of organic farmland by 2030, a large scale ecological network, and stricter restrictions on fertiliser and pesticide use. The regional government has [adopted the legal proposal](#) and has also adopted a second proposal that complements the citizen's initiative¹.

The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and Federal Ministry of Food and Agriculture (BMEL) are funding pollinator initiatives and running awareness raising campaigns as part of the national biodiversity strategy ("[Strategy on Conservation and Sustainable Use of Biodiversity for Nutrition, Agriculture, Forestry and Fisheries](#)").

Wild bee nest sites are the subject of legal protection in Germany ([Bundesnaturschutzgesetz – BNatSchG](#)), although the law is not applied to most construction or maintenance activities.

A number of German cities and regions have produced their own pollinator strategies or action plans (see the section on Initiatives tackling causes of pollinator decline).

1 [Gesetzentwurf zur Änderung des Bayerischen Naturschutzgesetzes zugunsten der Artenvielfalt und Naturschönheit in Bayern \("Rettet die Bienen!"\)](#)



IMPROVING KNOWLEDGE OF POLLINATOR DECLINE, ITS CAUSES AND CONSEQUENCES

RED LISTS ON POLLINATORS AND DATA ON POLLINATOR POPULATIONS

The latest red list of bees in Germany, published February 2011, indicates that 41% of the 557 assessed bee species are threatened whilst 2.5% are too data deficient to be categorised (Westrich et al 2011). The latest red list of butterflies and moths (Lepidoptera) in Germany, published 2011, indicates that 35% of the 1,724 assessed macro-lepidopteran species are threatened (only 48 are too data deficient to be categorised but 61 are classified as extinct or lost) (Binot-Hafke et al 2011). The red list also assesses other pollinators in the Hymenoptera, Diptera, and Coleoptera groups (Binot-Hafke et al 2011). The next national red lists will be published in 2020. Each of the federal states publishes their own red lists.

The Stuttgart Entomological Society expert work group [Wildbienen-Kataster](#) has created and maintains a [database and checklist](#) of all wild bee species in Germany (Scheuchl et al 2018). It describes 585 wild bee species present in Germany.

POLLINATOR MONITORING SCHEMES

The German [butterfly monitoring scheme](#) has been going since 2005 coordinated by the Helmholtz Centre for Environmental Research (UFZ) together with the Society for Butterfly Conservation (GfS). Volunteers walk weekly transects of on average 0.5km and record abundance and species occurrence. It included 447 transects in 2014. Trends have been published annually since 2012. The latest publication shows the trend for 2005-2011.

A number of initiatives are working to improve knowledge of wild bees in Germany and to establish systematic wild pollinator monitoring programmes, for example:

- The Federal Ministry of Food and Agriculture (BMEL) is funding the [development of a nationwide bumblebee monitoring scheme](#) by the Thuenen Institute (2019-2022).
- The [BienABest wild bee protection initiative](#) is developing a [method of live identification](#) of as many wild bee species as possible, standardised according to national guidelines, and [training young scientists](#) to apply these methods. The project is coordinated by the Association of German Engineers (VDI) and Ulm University, and funded by the government through the Federal Agency for Nature Conservation (BfN) from May 2017 to 2023.
- The [Hamburg wild bee red list survey](#) covers species occurrence, extinction probability assessment; and conservation status assessment (range and distribution, population status,

threats) of 175 wild bee species and 215 wasp species. It is the result of a three-year systematic sampling effort of all key habitat sites within the Hamburg city federal state boundaries; followed by a threat assessment of all species using the IUCN red list criteria. The list will be published in 2020.

- The [Berlin wild bee red list survey](#) currently includes 317 species, of which almost half are threatened.
- The [Arbeitsgemeinschaft Stechimmen Schleswig-Holstein](#) is a working group of bee experts set up in 2016 to map all species of Hymenoptera – Aculeata (wild bees and wasps) and compile all species information in a central database. This will be used to update the Schleswig-Holstein regional red list (dating from 2001) (Michael Kuhlmann personal communication).

RESEARCH INITIATIVES

The federal ministries (BMUB and BMEL) are funding pollinator initiatives - at the end of 2017, the BMEL had funded 22 R&D projects for pollinators totalling around €15 million.²

Many research groups in Germany are active in pollinator research, including the following:

- Georg-August-Universität Göttingen - [Agroecology group](#) of [Prof. Dr. Teja Tscharntke](#), including Dr. Peter Batary, [Dr. Annika Haß](#), Dr. Jacqueline Loos, and the [Functional Agrobiodiversity group](#) of Prof. Dr. Catrin Westphal.
- University of Freiburg – [Nature Conservation and Landscape Ecology group](#) of [Prof. Dr. Alexandra-Maria Klein](#).
- UFZ (Helmholtz Centre for Environmental Research) - [Department of Community Ecology](#) - [Prof. Dr. Josef Settele](#); [Dr. Oliver Schweiger](#).

The [Institute for Bee Protection](#) was set up by BMEL in 2016 to investigate risks to honeybees and wild bees including pesticides, as well as how the design of agricultural and urban landscapes affect bee health and productivity. BMEL research confirmed the synergistic impacts between neonicotinoids, pyrethroids and EBI-fungicides on honeybee mortality (Wernecke et al 2019).

A series of recent publications have documented a dramatic decrease in insect abundance and species richness in Germany, including pollinator groups:

- Biomass, abundance and number of arthropod species in grasslands declined by 67%, 78% and 34%, respectively, between 2008 and 2017 (Seibold et al 2019)
- Decline of 75% of flying insect biomass in protected areas between 1989 and 2016 (Hallmann et al 2017)
- Decline of butterfly species richness of 10% between 2005 and 2016, with same trend both inside and outside Natura 2000 (Rada et al 2018)

² Personal communication, 06/10/17, Björn Ingendahl, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

TAXONOMICAL EXPERTS ON POLLINATORS

Germany has many taxonomic experts on the main pollinator groups, including the members of the following organisations:

- Stuttgart Entomological Society 'Wildbienen Kataster'
- Society for Butterfly Conservation (GfS)
- Deutsche Entomologische Gesellschaft
- Arbeitsgemeinschaft Stechimmen Schleswig-Holstein
- Zoological Museum Kiel University

There is however a shortage of wild bee experts to meet the demands of the expanding conservation initiatives.



INITIATIVES TACKLING THE CAUSES OF POLLINATOR DECLINE

ACTION PLANS ON SPECIES AND HABITATS

Species and habitat action plans are used by some federal states to steer conservation actions, particularly for certain species and habitats protected by the Habitats and Birds Directives.

Examples that have some connection to wild pollinators:

- Schleswig-Holstein programme for orchids, species-rich meadows and reintroduction of plant species ([Orchideen](#), [Bunte Wiesen](#), [Wiederansiedlung](#))
- Berlin's habitat network programme ([Biotopverbund](#)) uses four species of pollinators as indicator species of habitat quality (*Andrena nycthemera*, *Osmia mustelina*, *Papilio machaon*, *Zygaena filipendulae*)

FARMER AND LANDSCAPE INITIATIVES, AS WELL AS LOCAL LEVEL STRATEGIES

Wild pollinators, their habitats and their life cycles hardly played any direct role in the implementation decisions of the CAP 2014-2020 in Germany. However, all of the German RDPs include agri-environment options for annual flowering plant strips or areas on arable and grassland. Some federal

states specify local seed mixes or higher subsidies for approval by a nature conservation authority or a landscape care association or for interventions on high quality arable land.

Grassland is now better protected from ploughing up to arable by the revision of permanent grassland protection regulations at the federal state level to make conversion subject to Environmental Impact Assessment (EIA). However, the environmentally sensitive grassland protection designation (part of greening) only covers some permanent grassland within Natura 2000 (SACs/SCIs, not SPAs), and does not provide any additional protection for grassland outside Natura 2000 sites.

The national programme in support of the German Biodiversity Strategy funded by the German environment ministry (BMEL) ([Bundesprogramm Ökologische Vielfalt](#)) includes several funding options that mention benefits for pollinators. Projects creating pollinator-friendly habitats with farmers include:

- programme for increasing ecological diversity in organically farmed orchards ([Praxisprogramm zur Erhöhung der ökologischen Vielfalt in ökologisch bewirtschafteten Erwerbsobstanlagen](#)), coordinated by the University of Hohenheim.
- An initiative in the Rhine valley region ('[Summendes Rheinland – Landwirte für Ackervielfalt](#)') run by a foundation (Stiftung Rheinische Kulturlandschaft) since 2013 is encouraging farmers to improve pollinator habitats by planting summer cover crops as nectar and pollen sources.
- [BienABest](#) is creating wild bee foraging and nesting habitats in agricultural landscapes.

The federal state of Bavaria has launched a regional pollinator programme ([Blühpakt Bayern](#)). The environment ministry are investing 3 million Euros into projects creating flower-rich habitats on public spaces ("[Natürlich Bayern](#)"). The programme is being directed by the German Landcare Association (Deutscher Verband für Landschaftspflege DVL). The environment ministry has also set the target of doubling the agricultural area under nature conservation contracts (currently 90,000 ha).

The city of Freiburg has reduced land lease prices in the peri-urban areas as an incentive mechanism to encourage pollinator-friendly alternatives to intensive agricultural management - mowing instead of mulching and grazing cattle on grass instead of feeding silage (Wilk et al. 2019).

In Hannover, the Environment and Urban Green Spaces Department has presented a Bee Protection Plan, which will be incorporated into the existing local Biodiversity Strategy to facilitate collaboration and deliver focused action addressing pollinator decline (Wilk et al. 2019).

Many other German cities and regions are taking action to manage their green spaces for pollinators, and/or create pollinator habitat (see section on awareness-raising).

MEASURES ON PESTICIDES

The German coalition government [insect protection plan](#) proposes a new national law ('[Insektenschutzgesetz](#)') to set rules on pesticide and fertiliser use, including restrictions on their use in protected areas and habitats and minimum distances to water. At the time of writing, this is still being discussed. The national action plan for sustainable use of pesticides (2013) sets the goal of

reducing the risks of pesticide use to non-target organisms by 30% by 2023 (compared to average of 1996 – 2005 period), measured by the SYNOPS risk indicator. The NAP also sets a goal of reducing risk to pollinators but without a quantified target or timeline. An expert group on pesticide use and biodiversity ([Arbeitsgruppe Pflanzenschutz und Biodiversität](#)) was established.

In September 2018, Restriction NB6613 banned the simultaneous use of neonicotinoid insecticides with fungicides in the EDI class (including the azoles) due to the increased toxicity of the mix to bees.

The use of plant protection products on land that is not used for agriculture, horticulture, garden or forestry is prohibited as a matter of principle, unless the regional government grants an exception (e.g. for use on the railway network). A growing number of cities and towns in Germany have taken measures to be pesticide free, for example [Baden-Wurtemberg pesticide-free towns](#) include Freiburg, Heidelberg, Singen and Konstanz.

The federal state rural development programmes provide agri-environment options to support integrated pest management, for example *Trichogramma* use in maize or pheromone use in fruit production, and this is expected to reduce pesticide use and benefit pollinators. No evidence of impacts was found.



RAISING AWARENESS, ENGAGING SOCIETY-AT-LARGE AND PROMOTING COLLABORATION

TRAINING AND AWARENESS RAISING CAMPAIGNS

The German federal environment ministry (BMU) has launched a [nationwide awareness raising campaign for insect protection](#), featuring wild pollinators, with a series of amusing postcards and social media images distributed widely during July and August 2019. Previously it ran a campaign with German garden centre businesses to raise awareness of bee-friendly balcony and garden plants, focused on honeybees ([‘Jetzt Bienen füttern!’](#)).

City or regional public sector initiatives in Germany include those that are part of the Deutschland summt campaign and others:

City or region	Initiative aim
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Bayern summt	The Bavarian State Ministry for Environment and Consumer Protection is funding Bayern summt! Many towns and local regions in Bavaria have signed up to the initiative (see below).
Berlin Bee Strategy	<p>Berlin's strategy published in April 2019 identifies actions to transform green spaces management (through a charta, handbook, and implementation pilots), commitments from large public landowners (water, transport etc), to develop a Berlin bee-friendly plants list, to promote wild bee conservation in the city's nature reserves and evaluate the impact of honeybee hives in nature reserves, to further reduce pesticide use in public spaces and inform private citizens about the impacts of pesticides on bees (with a bee-friendly label for private gardens and allotments and training for allotment managers), measures in Berlin's public forests, promotion of bee-friendly green roof plantings and insect friendly outdoor lighting, and awareness-raising programmes.</p> <p>In the project 'Mehr Bienen für Berlin – Berlin blüht auf', three of the city districts are already transforming their green spaces management to be wild bee friendly, based on management plans tailored to each site. Actions are supported by the Deutsche Wildtier Stiftung.</p>
Bienenstadt Braunschweig	The city of Braunschweig plans to plant or restore 16ha of land for wild pollinators. The Julius Kühn-Institut (JKI) is providing scientific advice to ensure that the areas really do benefit the species. It is co-funded by the city, the federal state of Niedersachsen, and the German environment ministry. The planting will include hay meadows, diverse shrubs and trees, orchard meadows, and pollard willows. The areas are also expected to help adaptation to climate change. The project is looking for partners who commit their land to the initiative - so far, they include a housing cooperative and the company BIHOPHAR. The measures for wild pollinators are also expected to benefit birds and bats.
Frankfurt summt	The initiative is promoting beekeeping in the city and bee-friendly gardening and organises events and seminars aimed at gardeners.
Hamburg summt	The Naturlich Hamburg project aims to increase the diversity of vegetation in the city's green spaces as well as the natural areas of the outer city. It aims to create a coherent green network throughout the city region. It is funded by the German environment ministry and the city.
Hannover summt	The initiative is building networks, carrying out education activities, and managing some demonstration sites for pollinators. It includes professional and hobby beekeepers.
Leipzig summt	The initiative is promoting alternative management of the city's green spaces in the Masterplan Grün to benefit pollinators.

Lüneburg summt	The initiative promotes community and individual actions to plant pollinator-friendly gardens and street green, and raises awareness with information, free seeds, events etc.
München summt	The city began by promoting honeybee hives in the city, but is now promoting actions for wild pollinators including setting up nest aids and insect friendly gardens. The initiative also holds regular talks on pollinator decline.

Many public sector initiatives are under the umbrella of the [Deutschland Summt](#) campaign. This is an initiative targeted at cities supported by a foundation with various partners. The aims of this initiative are to increase awareness of bees and people's dependence on them for a functioning ecosystem, and to make city habitats more suitable for honeybees and wild bees. Awareness-raising is mostly aimed at inhabitants of towns and cities and includes websites with information on honeybees and wild bees, an information pack for schools and nurseries ([Bienenkoffer](#)), a national plant competition to encourage the planting of bee-friendly plants (['Wir tun was für Bienen'](#)), and wild bee show gardens and information stands at public [events](#).

Towns and local regions (Landkreise) have joined the Deutschland summt! campaign in these federal states:

Baden-Württemberg: [Mühlacker summt](#)

Bayern (Bavaria): [Landkreis Aschaffenburg summt](#) , [Alzenau summt](#), [Beilngries summt](#), [Landkreis Dachau summt](#), [Landkreis Ebersberg summt](#), [Ebern summt](#), [Eichstätt summt](#), [Grafing summt](#), [Illertissen summt](#), [Ingolstadt summt](#), [Pfaffenhofen summt](#), [Rupertiwinkel summt](#), [Schweinfurt summt](#) - city and Landkreis, [Treuchtlingen summt](#), [Vierkirchen summt](#)

Brandenburg & Berlin: [Neuenhagen summt](#)

Nordrhein-Westfalen: [Kampf-Lintfort summt](#), [Langenfeld summt](#), [Rheinberg summt](#)

Schleswig-Holstein: [Geesthacht summt](#)

The federal state of Bavaria pollinator campaign ("[Blühpakt Bayern](#)") is funding an award ("[Blühender Betrieb](#)") for businesses, public companies and schools that make their own land pollinator friendly according to a set of criteria.

Many other awareness raising initiatives are being run by NGOs and citizen/expert groups including:

- The **BienABest** project is promoting the benefits of wild bee biodiversity and raising awareness of actions for their protection among the general public, including on social media to reach young people.
- The **NGO BUND** is running an initiative which includes information leaflets on bees and provision of flower seeds to create '[bee oases](#)'. They have also run a petition for a national pollinator action plan in Germany (['A Place to Bee'](#)).

- The work group **Wildbienen-Kataster** with the city of Crailsheim promotes the creation of bee habitats in private gardens ([‘Stadtbiene-Projekt Förderung von Wildbienen’](#)).
- The work group [Projekt Wildbienenenschutz](#) is an initiative to increase awareness of wild bees, bumble bees and hornets via the project website, talks and exhibitions. Funding comes from the online nature protection shop ‘Naturschutzcenter’.

EDUCATIONAL CAMPAIGNS AND MATERIALS ON WILD POLLINATORS

The Deutschland summt! initiative has published a book ([Wir tun was für Bienen](#)) which informs citizens about what they can do for pollinators (Hemmer & Hölzer 2017).

The Baden-Württemberg Ministry of Rural Areas and Consumer Protection publishes the Bee Pasture Catalogue ([Bienenweidekatalog](#)) with regular updated versions, aimed at farmers and land managers (Albinger et al 2018).

The Lower Saxony environment ministry publishes a guide to creating compensation areas and restoration habitats for honeybees and wildbees ([Bienen brauchen Blütenvielfalt](#)), aimed at local authorities and land managers who are creating biodiversity compensation and offset areas associated with urban developments.

CITIZEN ENGAGEMENT CAMPAIGNS

The work group Wildbienen-Kataster runs the ‘Wild Bee of the Year’ campaign, public excursions and a citizen science project mapping the Violet Carpenter Bee (*Xylocopa violacea*) and the Large Scabious Mining Bee (*Andrena hattorfiana*).³

The State Institute of Bee Science Baden-Württemberg of the University of Hohenheim offers [seminars on wild bees](#) for interested people.

PRIVATE SECTOR INITIATIVES FOR WILD POLLINATORS

- ‘Biodiversity in Good Company’ Initiative e. V. ([‘Die Lieferkette Lebt’](#)) is a campaign of the [German business and biodiversity platform](#), which has a membership of 30 leading German businesses. The campaign promotes the integration of biodiversity conservation in businesses production chains, with an annual award competition.
- The cooperatively organised [REWE Group](#) of European trade and tourism businesses has had an active [biodiversity conservation initiative](#) for over 10 years. It is engaged in a variety of projects focused on enabling local activities by growers, municipalities, associations and others to communicate with a broad customer base (urban shoppers, hobby gardeners, etc.). Under the PRO PLANET label for apples ([PRO PLANET-Äpfel](#)), producers have planted flowered areas

³ Personal communication, 02/10.17, Hans Schwenninger, Wildbienen-Kataster

(437 ha to date) and set up large pollinator nesting aids (3000 to date). The group's monitoring results show a doubling of the number of wild bee species on these sites.

- [ALB-GOLD](#) is a food company that produces pasta products. The company promotes biodiversity actions to the farmers who produce their cereals, and have engaged a consultancy to measure the impact on insects (Institut für Agrarökologie und Biodiversität (IFAB)). They have created a wildflower meadow, herb garden, and other habitats for insects and other biodiversity on their 8.34 ha of [company land](#). They publish a series of [booklets](#) about pollinators and wild plants (wild bees, butterflies, insects).
- [Reckhaus](#) company produces sprays and traps for indoor insect control (clothes and food moths, flies, fruitflies, mosquitos etc) based on biopesticides. Their InsectRespect(c) label guarantees that the company will create an insect habitat area that offsets the impact of the products on insects.
- The '[bee careful](#)' initiative of the Schwartauer Werke (part of the Hero Group) since 2014 promotes research about bee health and awareness to its staff and customers, mostly focused on honeybees and beekeeping but increasingly also wild bees and other insects as they are part of the preservation of biodiversity (Initiative in DE, NL, CZ, FR, ES, CH, UK, Turkey).
- Lidl supermarket chain ([Lebensräume zum Schutz von Wildbienen und Förderung der Artenvielfalt](#)) promotes customer awareness of the importance of wild bees and encourages its suppliers and warehouses to create wildflower habitats on their land. Suppliers have already created over 210 ha and the logistics centres aim to create over 15 ha. The campaign is in cooperation with the University Hohenheim and the Heinz Sielmann Stiftung (foundation).

APICULTURE SECTOR INITIATIVES FOR WILD POLLINATORS

The NGO Mellifera e. V. was set up by beekeepers. It has launched the [Netzwerk Blühende Landschaft](#) network, and has acquired funding for numerous model projects to create pollinator-friendly habitats with farmers, local authorities and beekeepers. The network and two research institutes [assessed the Baden-Württemberg federal state agri-environment programme for pollinator benefits in 2010](#), and proposed improvements.

The German Professional Beekeepers Association e.V. (DBIB) is a member of the BEE FRIENDLY Association, which developed, manages and secures the [Bee Friendly label](#). The label sets out requirements for different types of products (dairy products, fruit and veg, cosmetics, etc.) that protect domestic honeybees as well as pollinators more widely. It defines 27 measurable criteria, a list of qualifying practices and 3 skill levels corresponding to the successive stages of an improvement process to bee-friendly production systems.

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Educational materials

Farmers and land managers and citizens

The Baden-Württemberg Ministry of Rural Areas and Consumer Protection publishes the **Bee Pasture Catalogue** with regular updated versions, aimed at farmers and land managers:

Albinger, et al (2018) Bienenweidekatalog: Verbesserung der Bienenweide und des Artenreichtums. Baden-Württemberg Ministerium für Ländlichen Raum und Verbraucherschutz, Stuttgart, Germany.

<https://fachdokumente.lubw.baden-wuerttemberg.de/servlet/is/105070/?COMMAND=DisplayBericht&FIS=200&OBJECT=105070&MODE=METADATA>
TA. Language: German.

This guidance aimed at farmers describes the following actions for farmers on arable land:

- Sowing of flower mixtures
- Growing flowering crops
- Mixed cultivation
- Growing of catch crops and the use of under sowing
- Non-application or reduction of herbicide use
- Conservation and maintenance of field margins (conservation headlands)
- Sparsely vegetated strips in arable fields
- Bee banks
- Margin habitats and small biotopes

It describes the following actions for farmers on grassland:

- Conservation/Maintenance of species- and flower-rich grassland
- Support of pollinators in intensively used grassland, e.g. mowing after flowering of *Taraxacum* agg.
- Avoidance of animal losses during mowing
- Re-establishment of flower-rich grassland

The Lower Saxony (Niedersachsen) Ministry of Food, Agriculture, Consumer Protection and Land publishes a **guide to creating compensation areas and restoration habitats** for honeybees and wild bees, aimed at local authorities and land managers who are creating biodiversity compensation and offset areas associated with urban developments.

Niedersächsisches Ministerium für Ernährung, Landwirtschaft, Verbraucherschutz und Landesentwicklung (Hrsg.): "Bienen brauchen Blütenvielfalt - mach mit!" Leitfaden Kompensations- & Grünflächen zum Wohle der Honig- & Wildbienen. [Download](#) PDF (7 MB).

Citizens

[Ulmers Wildbienenwelt](#) – webpages created by publishing company Eugen Ulmer (language = german):

- [Wildbienenfinder](#) – guide to identifying the more common wild bee species, with fiches on each species, searchable by body size, flight season, nesting location.
- [Wildbienen Pflanzenfinder](#) – searchable guide to plant species used by wild bees as food, with over 500 fiches
- [Wildbienen gerechter Garten](#) – gardening tips for creating and planting wild bee friendly gardens, balconies and terraces.