



Designing spaces for birds and bats: Foraging

A practical ecological approach

Intensive farming **reduces biodiversity** by removing native trees, hedgerows, and water sources, which harms **birds and bats that naturally control pests**. However, it's still possible to **reverse this trend** through thoughtful landscape design that restores their habitats.

Understanding foraging needs

Key to supporting birds and bats

Improving foraging habitats is essential for making olive groves and vineyards more attractive to birds and bats. Most European **species rely on vegetation for food and shelter**, so increasing both crop and non-crop plant cover benefits them.

Bats

European bats are **nocturnal insectivores** that rely on diverse habitats to forage. They often **feed along linear features** like hedgerows and water bodies, which provide both **navigation aids** and abundant **insect prey**.

Birds

Many European birds forage in habitats that offer a **mix of open spaces and vegetation**, such as hedgerows, orchards, and grasslands. These areas support a variety of **insects, seeds, and other food sources**.



A new farm structure?

Increasing the **structural complexity of farms**, such as **varying crop spacing**, **maintaining older crops**, and **introducing mixed cropping**, creates better habitats for birds and bats, improving their foraging opportunities.

Key actions:



- **Retain standing and fallen dead wood:**

Dead wood serves as a **vital resource** for both birds and bats. It provides **nesting sites** for species like woodpeckers and owls, and roosting opportunities for bats. Additionally, decaying wood recycles nutrients back into the soil and supports a diverse array of invertebrates, which are **essential food sources** for insectivorous birds and bats.



- **Use hedgerows and native shrubs:**

Hedgerows act as ecological corridors, offering shelter, nesting sites, and foraging grounds for birds and bats. They also support a rich diversity of insects, providing **a steady food supply**.



- **Create or maintain water sources:**

Ponds, ditches, and riparian zones are crucial for both drinking and feeding. **Shallow water bodies** with gradual, rough-textured edges are particularly beneficial, as they support aquatic insect life and **provide accessible water** for birds and bats. Ensuring these water sources are **free from pollutants** is essential for their health.



- **Restore riparian buffers:**

Vegetated stream banks, or riparian buffers, are key habitats for many bat species and **help maintain insect diversity**. Native plants in these areas support a variety of insects, which are vital for the **diet of insectivorous** birds and bats.





- **Install insect hotels:**

These “hotels” **provide shelter** for a variety of pollinators and insects, which in turn support birds and bats. Proper **design and placement** are important to ensure they attract the desired species.



- **Build or conserve dry stone walls:**

Shelter for insects and small animals can be found in the crevices of these traditional boundaries, which also provide **perching spots for birds of prey**. In open areas, bats may use them as landmarks for navigation. Preserving such features helps enrich the landscape’s structural diversity and supports a variety of species.



- **Maintain plant diversity within and around crops:**

Allowing **flowering herbs, grasses, and native plants** to thrive among crops can increase insect populations, providing **additional food sources** for birds and bats. Diverse plantings also support a range of pollinators and other beneficial insects, contributing to overall biodiversity.

Thoughtful farm design **balancing production with biodiversity** can provide essential foraging habitats. Whether by preserving natural features or introducing targeted structures, **small changes can make a big impact** for birds, bats, and the wider ecosystem.

