

Counting butterflies in rural areas

Why count butterflies?

Butterflies are good indicators of the quality of habitats, including farmland. That's why we're asking everyone who is interested — farmers, city dwellers, nature lovers — to take 15 minutes to observe and count butterflies.

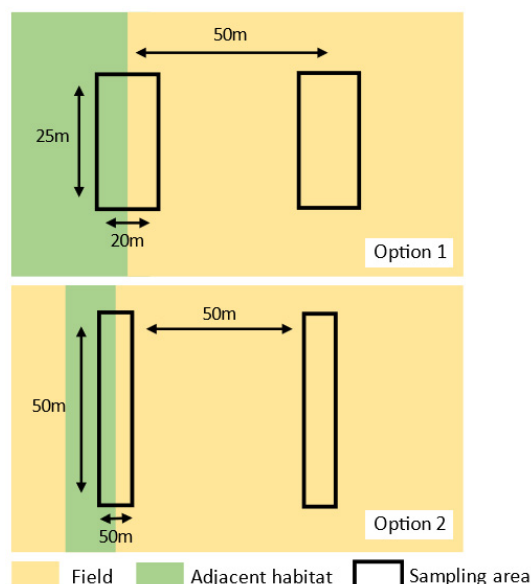
What will be done with your observations?

The butterfly data are analysed to improve our understanding of agroecological farming practices and their impact on agri-ecosystems, and to inform and shape biodiversity conservation actions in Europe. For this purpose, the Agroecology-Transect project combines the knowledge and expertise of farmers, scientists, policy makers and NGOs from all over Europe.

Undertaking the survey

WHERE?

1. **Choose a field where your observation site(s) would be located.** The field could be covered by wheat, rye, corn, rapeseed, potatoes, apples, a fallow land (unsown or unploughed), grassland, olives or a vineyard. It should be easily accessible.
2. **Choose a sampling site at the border of the field.** It can be any adjacent habitat of the selected field, such as a hedge, buffer-strip (vegetation between fields), a flower strip, forest or a woodland, or another field. A meeting point between arable land and grassland may also be selected.
3. **If possible select a second sampling site,** 100-500 meters from the first one, **optimally inside the field.**
4. The sampling site(s) should ideally be 20×25m (option 1), 10×50 m (option 2) or 5×100m if the adjacent habitat is too narrow (see figure). The exact sampling area could be adjusted where needed.



Respect the farmers: don't forget to ask for permission!

Make sure you ask permission from whoever owns your chosen field. When walking in the field, limit the damage to the crop by walking between crop rows as much as possible. If you can't obtain permission, sample only the area at the border between the field and the adjacent habitat, without entering into the field.

WHEN?

- **Between April and September, i.e. during** the main 'flight season' for butterflies.
- **At least three times** in the season, though more is better (Once in two weeks is optimal – some people do it weekly!).
- **On a warm, sunny and windless day.** Above 13°C on sunny days, 17°C on cloudy days.
- Between 10:00 and 17:00, when butterflies are most active. In summer one can start earlier.

If in doubt whether the weather is suitable, look around. If you see butterflies flying around, it's a good sign!

Before you start

Download the Butterfly Count app (Apple or Android)

If you can't or don't want to use the app, you can download and print our recording sheets at www.agroecology-transect.net/resources.

Download the app

Android



Apple



Prepare the butterfly survey

1. **Turn on** the Butterfly Count app
2. **Start a 15-min count** by clicking on "+". The timer can be paused at any time if needed, but don't forget to reactivate it.
3. **Assign a project.** Click on *Additional details>project* and select the Agroecology-Transect project. The first time, register to one of the open projects in the "all projects" tab.
4. **Select a location.** Click on "Area" and choose an existing location from the project, or add a new one (see "Register a new location")
5. **Check the weather** data under 'Additional Details'.
6. **Add photos** if the site has changed.

Start counting!

- Walk slowly around the site for 15 minutes (also back and forth).
- Record all butterflies that you see in the area.
 - ✓ Identify them to the species level if possible.
 - ✓ If you cannot identify a butterfly, note the colour and size
 - ✓ If you hesitate between species, you can record a "species complex" (e.g. *Pieris rapae/napi*).
- Record the number of individuals of each species by clicking on the number next to the species name
- Try not to count the same individuals twice. If you are unsure, note the maximum number of individuals that you can see at the same time.
- Take pictures! Especially if you need help with identification.
- After the 15 min are over, you can still edit your observation and check with a book, an app, or ask experts if uncertain.
- Upload your survey when finished.

Register a new location

1. **Click on "Area"** in an observation, after assigning it to a project.
2. **Outline the sampling area on the map.** Turn off the GPS, click on the pencil icon to edit, and then erase the GPS location point (red bin icon). Draw the sampling area with the "polygon" tool. Save by clicking on the green check mark.
3. **Click on "Add"** in the project locations tab. Give your site a unique and meaningful name.
4. **Provide additional information.** You will be able to describe the habitat type, size of the vegetation area, etc. in the app. Please also attach pictures (ideally one in each direction).

Remember to upload the observation — even if you didn't see any butterfly! That's important information too.

Please try to visit the site again. We'd need at least 3 visits during the season in order to analyse your data. This is also fun since the butterflies you see change over the course of the year!

IMPORTANT: This guide is for conducting 15-minute counts in agricultural lands within the Agroecology-TRANSECT project. If you would like to participate in long-term transect observations to support your national Butterfly Monitoring Scheme, please visit <https://butterfly-monitoring.net/> to find your national scheme coordinator.