



PollinATE: Information for Volunteers

Why do we want to study pollinators in allotments?

Insects are vitally important for pollinating many of the foods we grow but pollinator populations are in decline. Since we still know very little about exactly which insects pollinate which crops grown in urban areas such as allotments, it's not clear whether we have large enough populations to produce good yields, and whether insects in urban areas are being affected by the domestic use of pesticides. Therefore Team PollinATE would like you to help us answer the following questions:

1. Which pollinating insects visit which flowering crops grown in allotments?
2. Are the yields of food crops grown in allotments limited by a lack of insect pollinators?
3. Which pesticides are used in allotments, and on which crops?

How can you help?



Pollinator Surveys

1. First you need to print off one of our recording sheets, and **fill in the date, time and circle the weather and wind conditions** at the time of the survey. Conduct your surveys on a dry day, ideally in sunny, calm conditions.

Date:



Sunny



Cloudy



Overcast



Wind:



Leaves Still



Gently moving



Strongly moving

Time:

2. In the first column, **make a list of all the food plants that are flowering in your allotment** at that time, as well as the variety if you know it. If you have several plants of the same type, make a note of the **number of plants in flower**, and estimate the **number of flowers** or flower heads that are open.

Crops to Survey

- * Beans
- * Peas
- Aubergines
- * Tomatoes
- * Peppers
- * Pumpkins and Squash
- * Courgettes
- * Cucumbers
- * Fruit trees and bushes
e.g. *Apple, Cherry, Plum*
- * Soft fruits, berries, currants
e.g. *Strawberry, Raspberry, blackcurrants*

Plant Type and Variety (if known)	No. of Flowers/ Flower heads
Tomato (3 plants) Gardener's Delight	24
Runner bean (1 plant)	10

Count the number of open flowers on each plant.



3. Next, we would like to you to **count the number of different types of pollinating insects** that you can see on the **flowers** of each plant. This is an instant **SPOT COUNT**, so just observe each plant for approximately 30 seconds. The survey sheet has drawings and short descriptions to help you identify the different pollinator groups.

Plant Type and Variety (if known)	No. of Flowers/ Flower heads	 Beetles Wings hidden Shiny body	 Hoverflies Stripy • Large eyes Short antenna	 Flies Clear wings Short antenna	 Butterflies Large coloured wings	 Bumblebees Rounded hairy body	 Other bees Smaller • Less hairy Long antenna	 Wasps Smooth • Waist Long antenna
Tomato (3 plants) Gardener's Delight	24							
Runner bean (1 plant)	36							



Postman76 Flickr
Bumblebee visiting bean flowers



Nigel Jones Flickr
Hoverfly visiting raspberry flower
Note short antenna and large eyes



Steve Roberts Flickr
Honeybee (Other bee)
on apple blossom

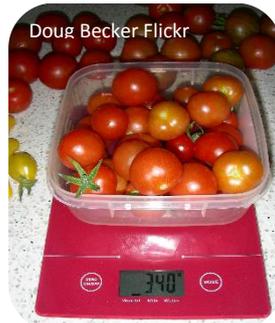
4. That's your first pollinator survey completed! **Please then visit our website (www.teampollinate.co.uk) to submit your data.** Repeat the survey **every two weeks** throughout the growing season, to help us track how the numbers of each type of pollinator changes over the course of the summer. For crops which have long flowering periods, this may mean you will survey the same plant several times which is fine.



Monitoring Yields

We'd like to understand more about how insect pollination affects the yields of food crops grown in allotments in Brighton & Hove.

To help us do this, we'd like you to **keep a record of the weight and/or number of items of food harvested from your insect-pollinated crops throughout the growing season**. These will be the same crops you survey for pollinator activity- see the list above. We have provided you with recording sheets to use on your plots, but you could also use a notebook if that's easier. If you have different varieties of the same crop, try to record these separately.



To input your data at the end of the growing season (around Sept time), please use our [online form](#) which you can access via the website.

You can also download and save our Allotment Calculator, which will tell you how much money you have saved by growing your own, and how much of your harvest is directly the result of insect pollination. At the end of the growing season, **please email the completed spreadsheet to teampollinate@gmail.com**

If you don't have access to a computer don't worry. You can post your completed forms to: *Dr Beth Nicholls, JMS Building, University of Sussex, Falmer, BN1 9QG*. Alternatively Beth can arrange to collect the forms from your site.



Pest Control Diary

We currently know very little about pests and pesticide use in urban food production and how this may affect both crop yields and pollinators. We'd like you to **keep a diary of the pests and diseases you observe on your flowering crops, and which control methods you use, in particular which chemicals you use on which crops, as well as how and when you apply them**. Our definition of pesticides includes herbicides (weed killer), fungicides, insecticides (bug killers) and slug pellets.

You can use our data sheets or a notebook to record your data, whichever is easiest, and again please submit your data via our website or post the forms to us at the above address. **Please note: We will not share your contact details with anyone else, and all data will be anonymised.**

Thank you so much for volunteering your time to help us collect important data on pollinator populations in allotments! If you have any problems with the methods, or would like to provide some feedback, please don't hesitate to contact us: teampollinate@gmail.com

