

Timing of flowering in rat-tailed radishes

Modifications to Bees 'n Beans

Depending on how many plants you have got flowering, please do the following:

Only have one flowering plant

If one of your plants is way ahead of the others (*and the others look like they are likely to flower at the same time as each other*), then please make this plant the spare plant to provide pollen for hand-pollinating. You could try out hand-pollination while the other plants catch up.

Do continue to harvest pods from this plant so it keeps making more flowers but remember you don't have to count the pods that you harvest from this spare plant. Although you can certainly eat them!

If you only one plant left, see the section below the line.

Only have two or three flowering plants.

You need **four plants** for the full experiment (even if one of them is under the fleece bag). However the fourth plant is only to provide pollen for the hand-pollinated plant, so if you have grown spares in the ground then these will be fine to use as pollen plants.

Unfortunately, it is not a fair comparison to look at how many pods/seeds you get from a bagged plant that started to flower much later or sooner than the other plants, as there may be several reasons for a difference; including how many insects were about at the time.

So, if two or three of your plants are ahead of the others (*and the others look as if they will catch up*) then the best thing to do is to keep an eye on the plants that have started to flower – and to remove any individual flowers that do open. You can pinch flowers out, or cut them off.

Keep doing this until the other plants have made a flower spike, and then stop removing flowers, assign the plants to the treatments, and carry on as per the original instructions.

If you only have two or three plants left, see below:

What to do if you don't have four plants to use, or they are very unlikely to flower at the same time.

It is not possible to carry out the whole protocol with fewer than four plants – but you can contribute **really important** data on pollination rates and incomplete pollination to the study, by carrying out the modified steps below.

Modified study for 3 flowering plants only

Do not use the fleece bag. Note on the recording form that you only have 3 flowering plants. Continue with the hand-pollination and local pollination, as in the original instructions. Continue harvesting the pods as in the original instructions.

Carry out the 'spike counting' as described below.

Modified study for 2 or 1 flowering plants only

Note on the recording form that you only have 1 or 2 flowering plants. Let the insects do the work and *leave both of the plant(s) to be locally pollinated*. Continue harvesting the pods as in the original instructions.

Carry out the 'spike counting' as described on the next page.

Spike counting

When a flower goes over, it will leave a little red/brown 'spike' (about 1cm long). Even if the spike isn't going to turn into a seed pod, it will stay on the plant and just dry out.



Each flower leaves behind a little spike like these

You can count the number of these left at the end of the experiment. Harvest any pods that form, keeping a count of them, as in the original protocol. When the experiment time finishes please **count the red/brown spikes** that are left on the plant to see how many flowers it made that did not get to turn into seed pods**.

Note

I am going to ask people generally if they would be willing to count the leftover spikes on their plants at the end of the experiment to provide more information on pollination.

***I will amend the recording form to take account of all modifications.*

Please do not hesitate to contact me if you have any other questions, or any of this is unclear!

-Linda

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