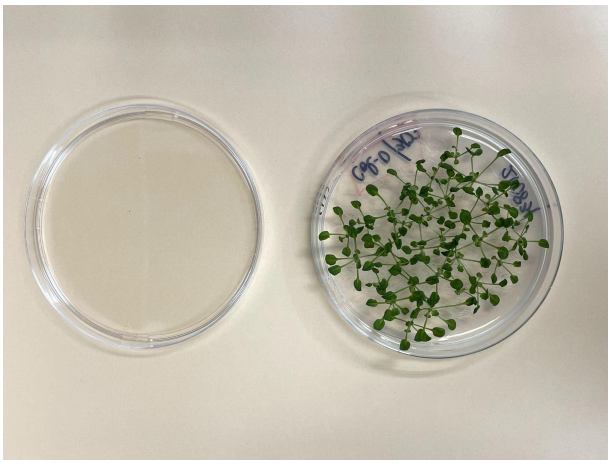
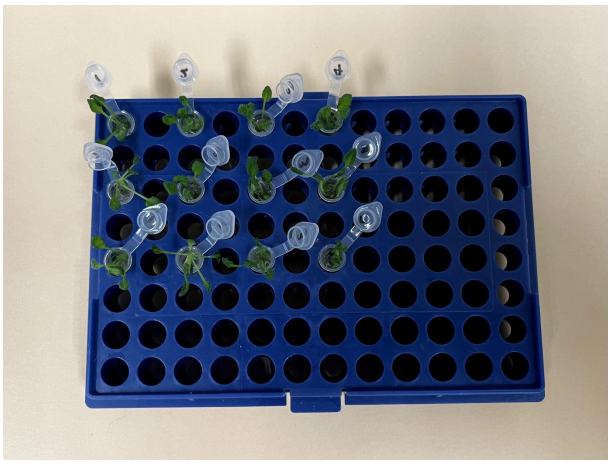
Sep 19, 2021 (Sun)

- RNAi experiment (Arabidopsis thaliana)

  Arabidopsis plants that grew on the plate labeled 210831 were divided into four groups (three plants in each group).
  Each group was treated with four ways of dsTrxz 0, 0.1, 1, and 10 ng/l (solvent was Milli-Q) (each plant was dipped into a PCR tube containing 200 µL of the solution in the root).

Group	dsTrxz concentration
1	0
2	0.1 ng/L
3	1 ng/L
4	10 ng/L



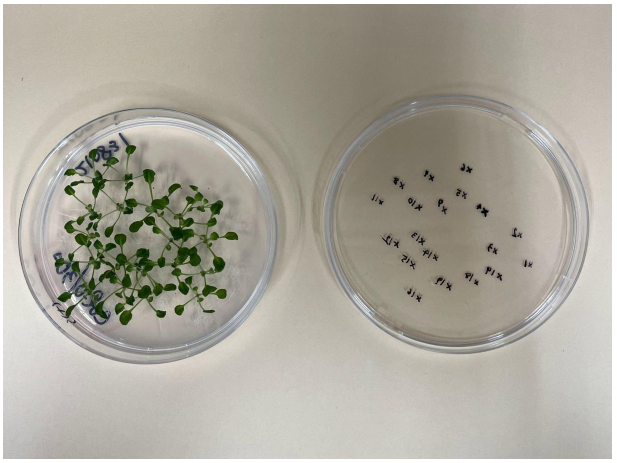


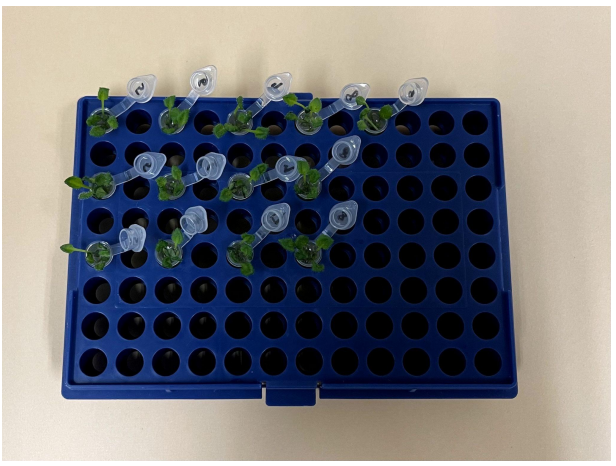
Sep 20, 2021 (Mon)

- RNAi experiment (Arabidopsis thaliana)

Arabidopsis plants that grew on the plate labeled 210831 were divided into five groups (three plants in each group for groups 5-8, and one plant in group 9 only).
Each group was treated with five ways of Hyponex 0.1 %, dsTrxz 0, 0.1, 1, 10 ng/l and 1 ng/µl (solvent was Milli-Q) (each plant was dipped into a PCR tube containing 200 µL of the solution in the root).

Group	dsTrxz concentration
5	0
6	0.1 ng/L
7	1 ng/L
8	10 ng/L
9	1 ng/µL





In addition, one Arabidopsis plant each from Group 2 and Group 3 was on the verge of dying. This was probably because the roots were not immersed in water, either because the water had been sucked up or due to evaporation.

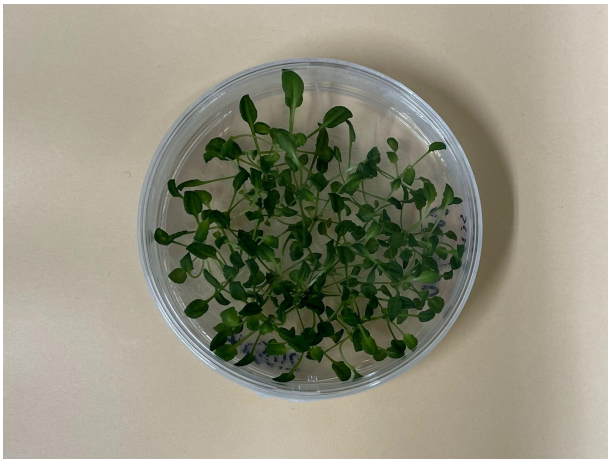
Thereafter, Milli-Q will be added to the PCR tubes when the amount of water decreases.

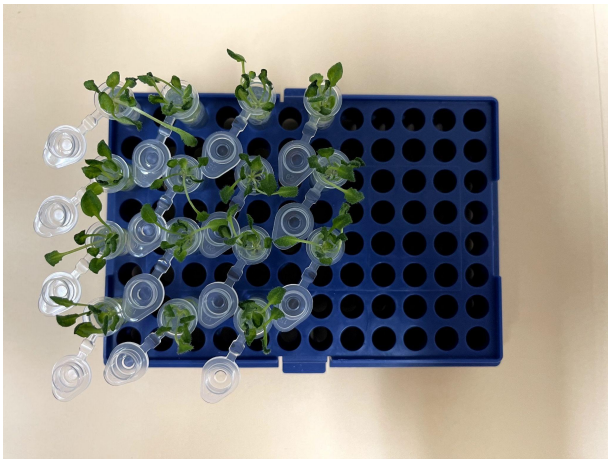
The photo below shows Arabidopsis thaliana of groups 1~4 on day 1/7:

Sep 22, 2021 (Wed)

- RNAi Experiment (thrips)

  Fifteen Arabidopsis plants that grew on the plate labeled 210824 were each transferred to a tube and immersed in 700 μL 0.1% Hyponex solution.





- RNAi experiment (Arabidopsis thaliana)

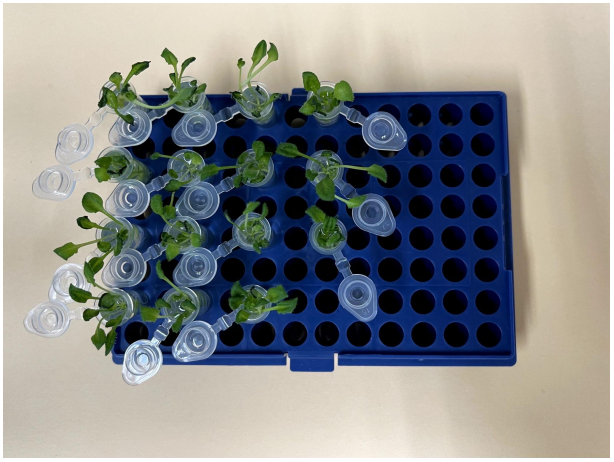
The photo below shows Arabidopsis thaliana of groups 1~4 on day 3/7:

The photo below shows Arabidopsis thaliana of groups 5~9 on day 2/7:

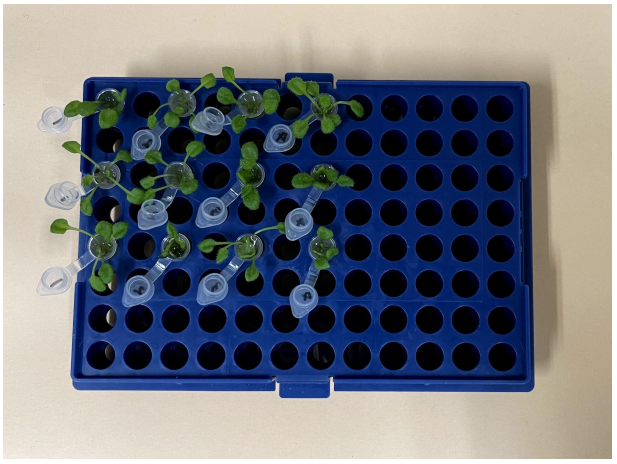
Sep 23, 2021 (Thu)

- RNAi Experiment (thrips)

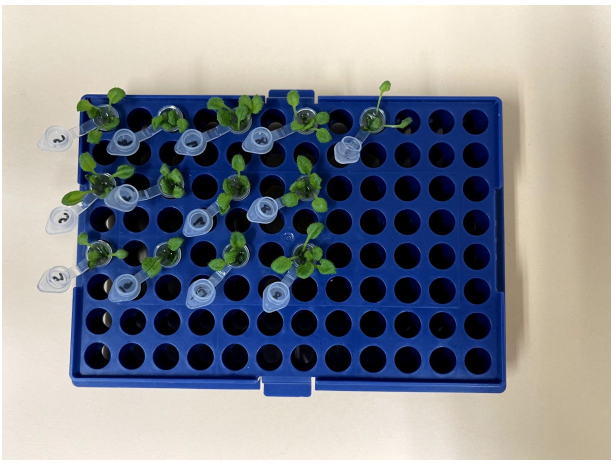
The photo below shows Arabidopsis thaliana that I moved yesterday.:



  - RNAi experiment (Arabidopsis thaliana)The photo below shows Arabidopsis thaliana of groups 1~4 on day 4/7:



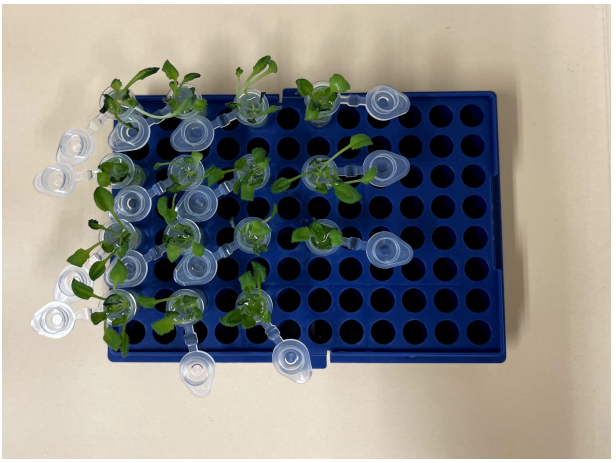
The photo below shows Arabidopsis thaliana of groups 5~9 on day 3/7:



Sep 24, 2021 (Fri)

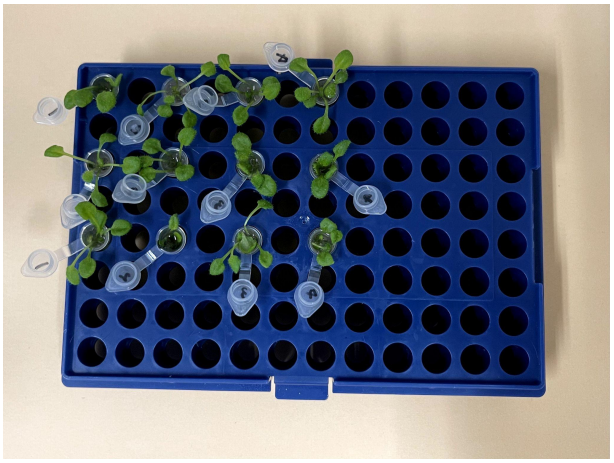
- RNAi Experiment (thrips)

The photo below shows Arabidopsis thaliana that I moved on Sep 22:

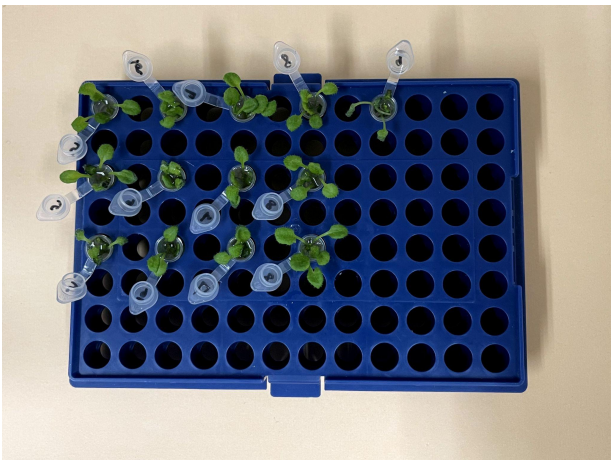


- RNAi experiment (Arabidopsis thaliana)

The photo below shows Arabidopsis thaliana of groups 1~4 on day 5/7:



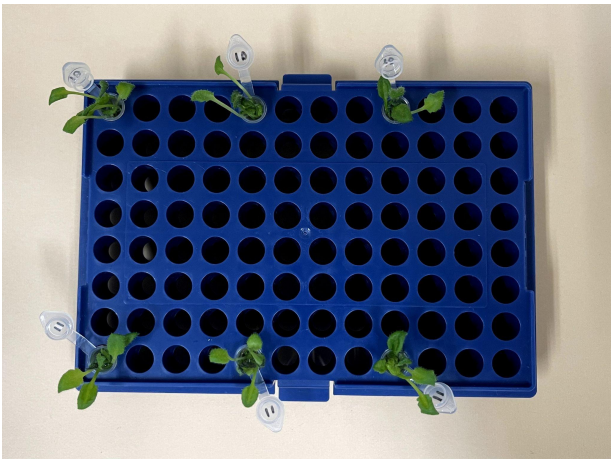
The photo below shows Arabidopsis thaliana of groups 5~9 on day 4/7:



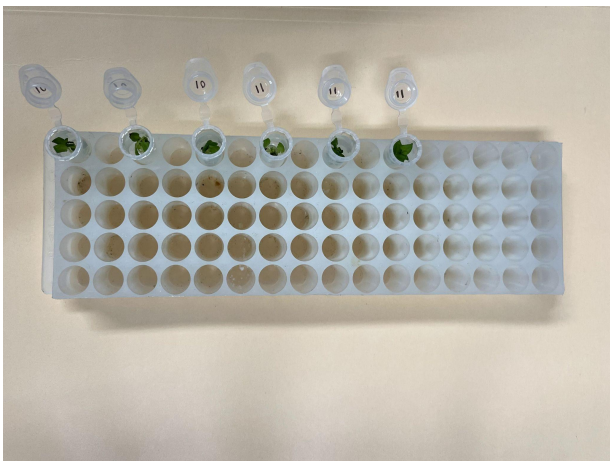
Sep 25, 2021 (Sat)

- RNAi Experiment (thrips)

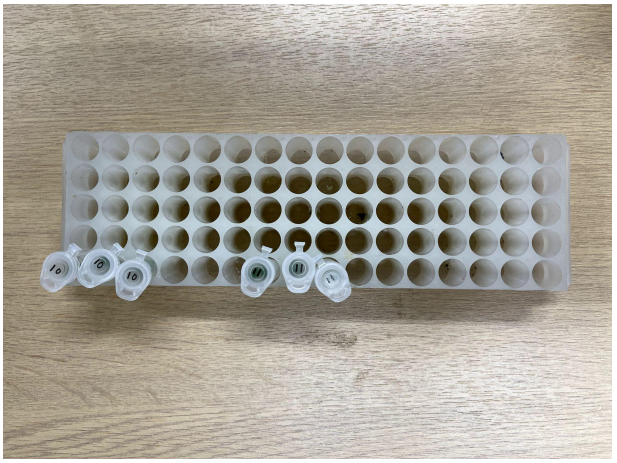
  I pipetted 200 µl of dsRNA solution (*vATPase-B*, 176.4/150-fold dilution of the second E. coli-produced dsRNA solution) into a PCR tube.
  I inserted an Arabidopsis root into the PCR tube so that it is immersed in the solution, and left it at room temperature.



After 5 hours, I transfered Arabidopsis to another Milli-Q-filled PCR tube and placed it in a 1.5 mL tube (1.5 mL tube number: 11).

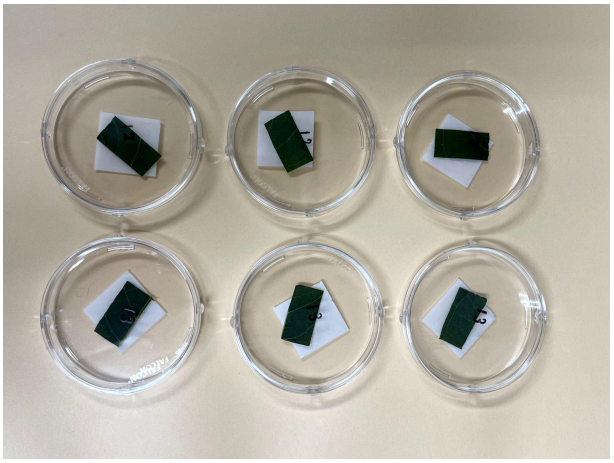


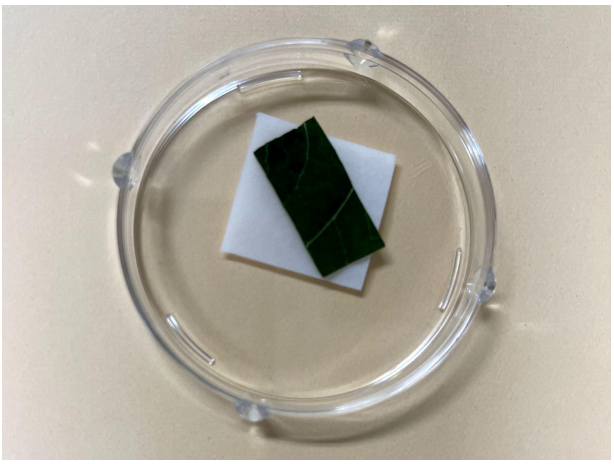
I placed about 8 adult insects in the 1.5 mL tube.



- I conducted it three times.
- I performed the same experiment three times by changing dsRNA olution to Milli Q (1.5 mL tube number: 10).

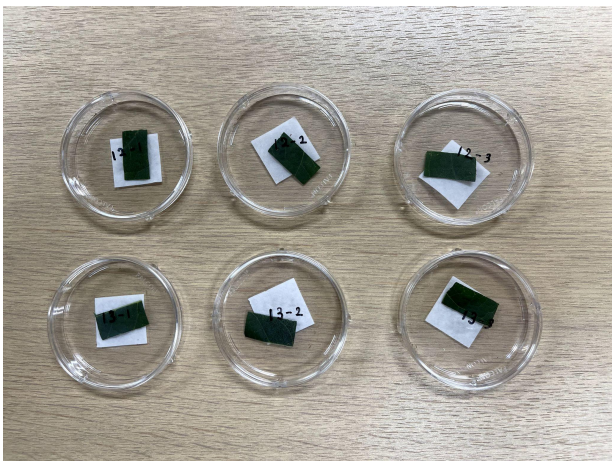
I pipetted 200 µl of dsRNA solution (*vATPase-B*, 176.4/150-fold dilution of the second E. coli-produced dsRNA solution) into a PCR tube
I inserted the petiole of the primary leaf of Phaseolus vulgaris into the PCR tube so that it is immersed in the solution and left it at room temperature.
Two hours later, I cut the soaked bean leave into a 1 cm x 2 cm rectangle (three leaf fragments were cut from each leaf)
And I cut the filter paper into a 2 x 2 cm^2 square and moistened it with Milli-Q. I placed them in a Petri dish.





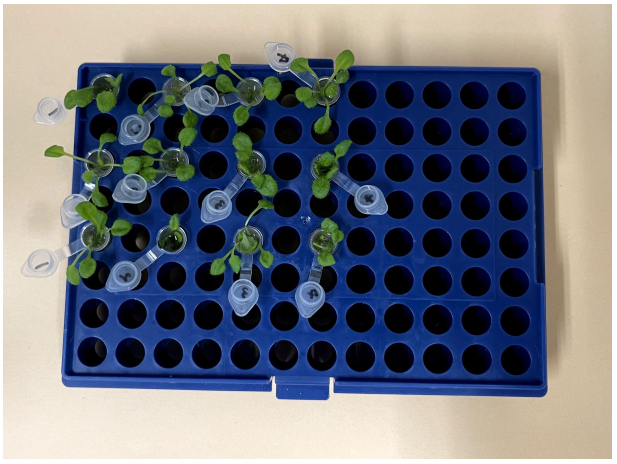
I placed about eight adult insects in that Petri dish.

- I conducted it three times (Petri dish number: 13-1, 13-2, 13-3).
- I performed the same experiment three times by changing dsRNA solution to Milli Q (Petri dish number: 12-1, 12-2, 12-3).

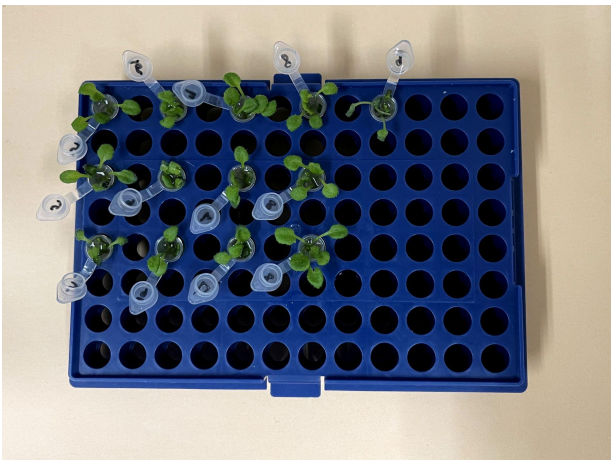


- RNAi experiment (Arabidopsis thaliana)

  The photo below shows Arabidopsis thaliana of groups 1~4 on day 6/7:



The photo below shows Arabidopsis thaliana of groups 5~9 on day 5/7:



Sep 26, 2021 (Sun)

- RNAi Experiment (thrips)

  I checked the total number and mortality of the insects in 12 and 13 Petri dishes. I also confirmed the degree of damage.

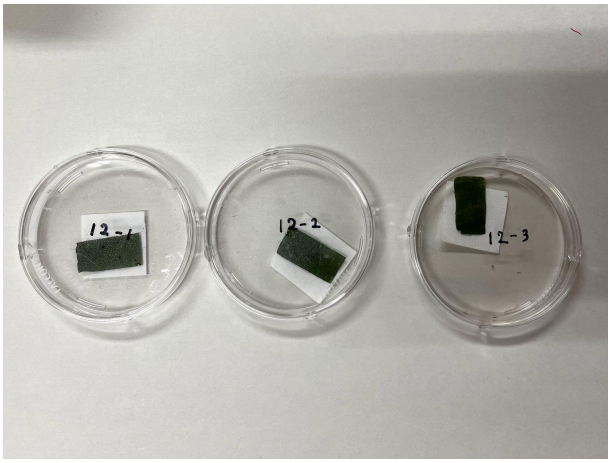
Petri dish number	Number of thrips killed	Degree of leaf damage
12-1 (Milli-Q)	0% (0/11)	1
12-2	0% (0/12)	1
12-3	0% (0/19)	1
13-1 (dsRNA)	16.7% (1/6)	1
13-2	0% (0/12)	1
13-3	0% (0/12)	1

*The degree of leaf damage is 1 if the feeding damage scar is less than 1/3 of the leaf, 2 if it is more than 1, 1/3, and 3 if it is more than 2/3.

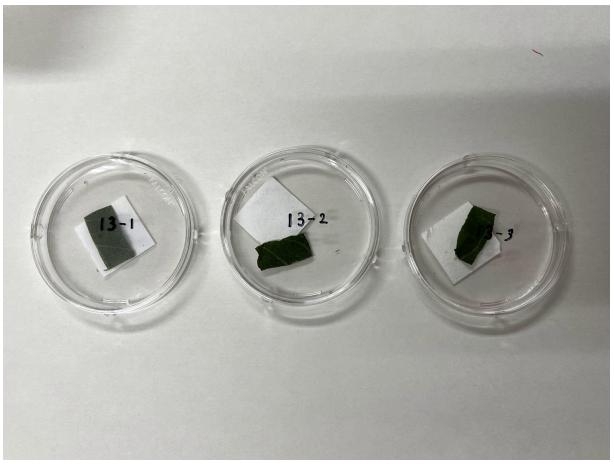
Mortality rate (%)

12 (Milli-Q): 0-0-0
13 (dsRNA): 16.7-0-0

The photos below show insects and leaves in Petri dishes (Petri dish numbers: 12-1, 12-2, 12-3).



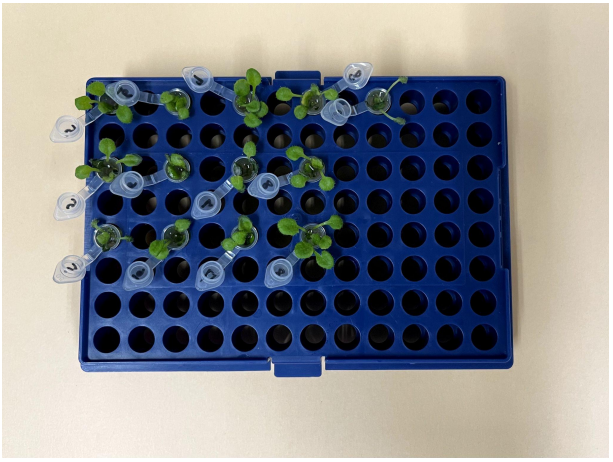
The photos below show insects and leaves treated with dsRNA solution in Petri dishes (Petri dish numbers: 13-1, 13-2, 13-3).



- RNAi Experiment (Arabidopsis thaliana)

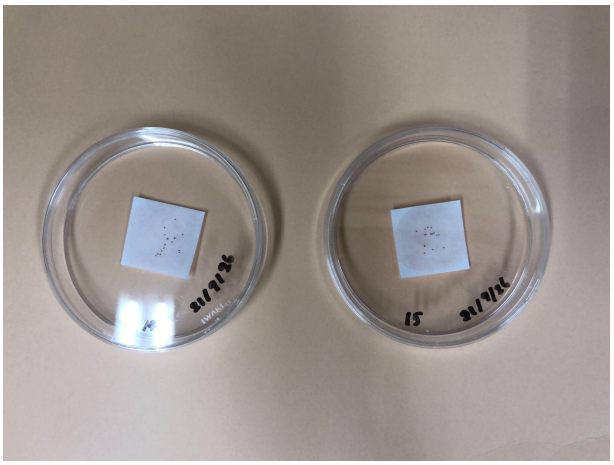
  The photo below shows Arabidopsis thaliana of groups 1~4 on day 7/7:

The photo below shows Arabidopsis thaliana of groups 5~9 on day 6/7:



I placed a 3 cm square piece of filter paper in the center of the Petri dish (Petri dish number: 15):
I scattered Seventeen Arabidopsis seeds on the filter paper of the Petri dish and pipetted 50 µl of 100 ng/µl dsRNA (*Trxz*) on top of them.

- I performed the same experiment by changing dsRNA solution to Milli Q (Petri dish number: 14).



Sep 27, 2021 (Mon)

- RNAi Experiment (thrips)

  I checked the total number and mortality of the insects in 12 and 13 Petri dishes. I also confirmed the degree of damage.

Petri dish number	Number of thrips killed	Degree of leaf damage
12-1 (Milli-Q)	0/11	1
12-2	0/12	1
12-3	2/19	-
13-1 (dsRNA)	1/6	1

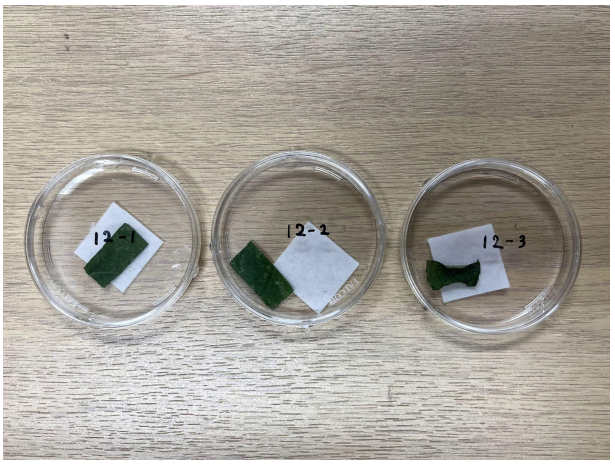
13-2	3/12	-
13-3	1/12	-

Mortality rate (%)

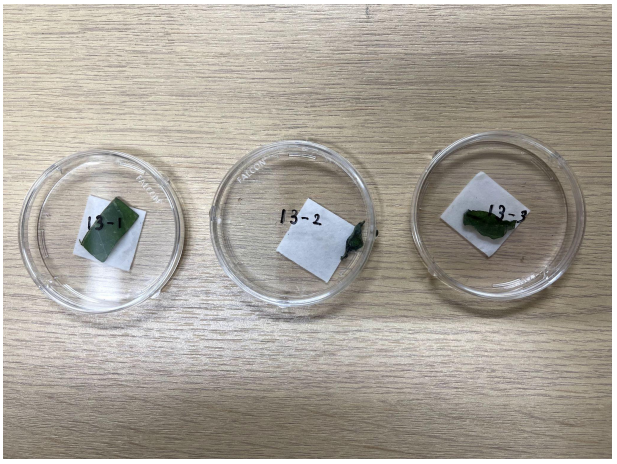
12 (Milli-Q): 0-0-10.5

13 (dsRNA): 16.7-25-8.3

The photos below show insects and leaves in Petri dishes (Petri dish numbers: 12-1, 12-2, 12-3).



The photos below show insects and leaves treated with dsRNA in Petri dishes (Petri dish numbers: 13-1, 13-2, 13-3).



- RNAi Experiment (Arabidopsis thaliana)

  The photo below shows Arabidopsis thaliana of groups 5~9 on day 7/7:

I pipetted 400 µL Milli-Q into petri dishes 14 and 15, respectively.

Sep 28, 2021 (Tue)

- RNAi Experiment (thrips)

I checked the total number and mortality of the insects in 12 and 13 Petri dishes. I also confirmed the degree of damage.

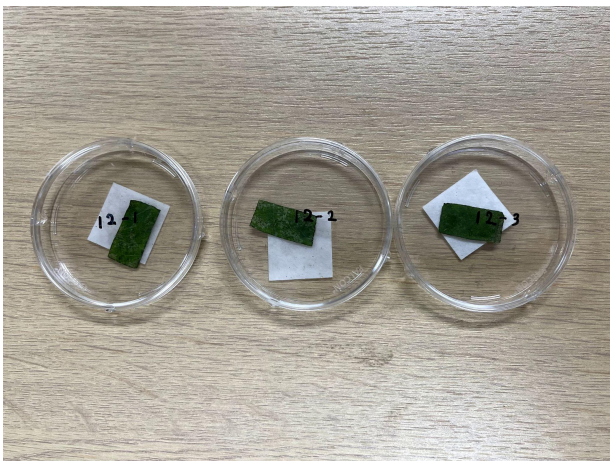
Petri dish number	Number of thrips killed	Degree of leaf damage
12-1 (Milli-Q)	1/11	2
12-2	0/12	2
12-3	3/19	1
13-1 (dsRNA)	2/6	1
13-2	4/12	-
13-3	3/12 *We couldn't find one	1

Mortality rate (%)

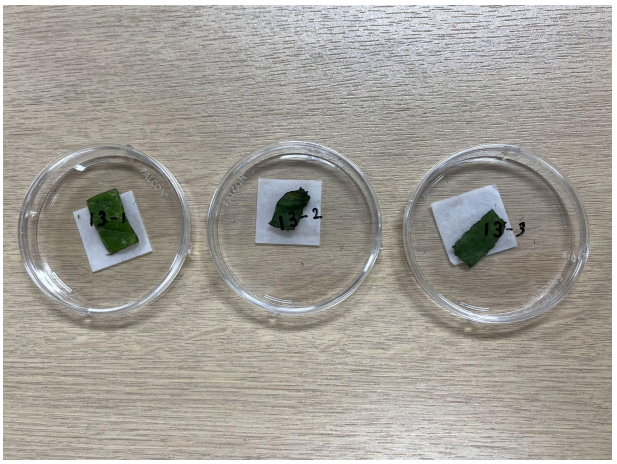
12 (Milli-Q): 9.1-0-15.8

13 (dsRNA): 33.3-33.3-25

The photos below show insects and leaves in Petri dishes (Petri dish numbers: 12-1, 12-2, 12-3).



The photos below show insects and leaves treated with dsRNA solution in Petri dishes (Petri dish numbers: 13-1, 13-2, 13-3).



- RNAi Experiment (Arabidopsis thaliana)

  Arabidopsis thaliana in Petri dishes 14 and 15 have not sprouted.

Sep 29, 2021 (Wed)

- RNAi Experiment (thrips)

  I checked the total number and mortality of the insects in 12 and 13 Petri dishes. I also confirmed the degree of damage.

Petri dish number	Mortality rate	Degree of leaf damage
12-1 (Milli-Q)	27.3% (3/11)	3
12-2	0% (0/12)	3
12-3	55.6.% (10/18) *We couldn't find one	-
13-1 (dsRNA)	33.3% (2/6)	2
13-2	50% (6/12)	-
13-3	36.4% (4/11)	1

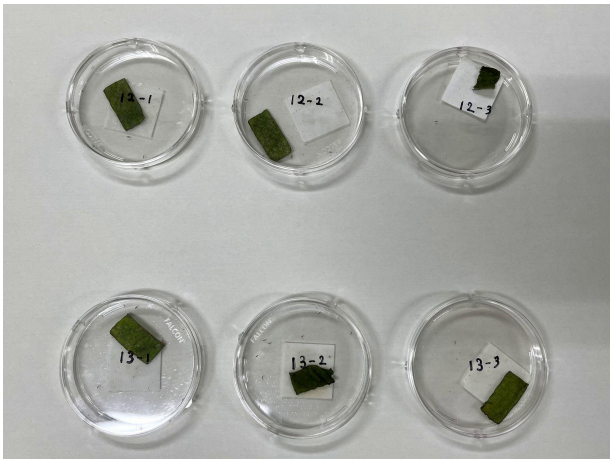
	*We couldn't find one	

Mortality rate (%)

12 (Milli-Q): 27.3-0-55.6

13 (dsRNA): 33.3-50-36.4

The photos below show insects and leaves in Petri dishes (Petri dish numbers: 12-1, 12-2, 12-3, 13-1, 13-2, 13-3).



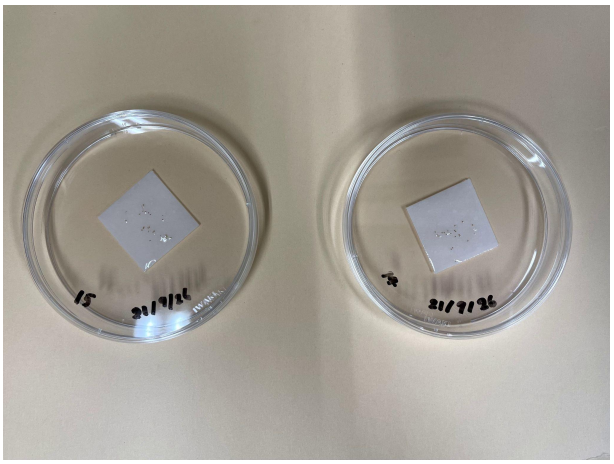
- RNAi Experiment (Arabidopsis thaliana)

  I pipetted 400 µL Milli-Q into petri dishes 14 and 15, respectively.
  Arabidopsis thaliana in Petri dishes 14 and 15 have not sprouted.

Oct 2, 2021 (Sat)

- RNAi Experiment (Arabidopsis thaliana)

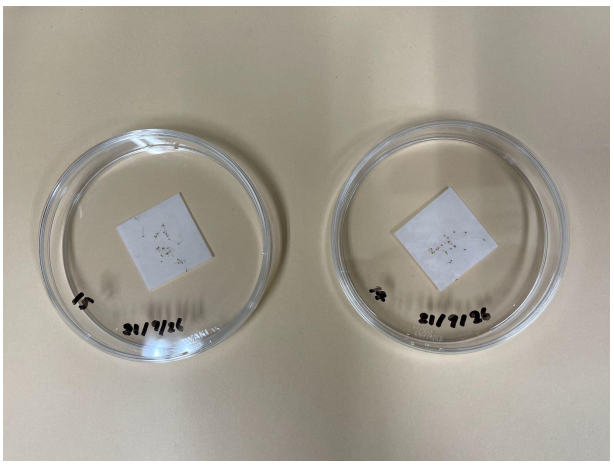
  I pipetted 400 µL Milli-Q into petri dishes 14 and 15, respectively.
  Some Arabidopsis thaliana in Petri dishes 14 and 15 have sprouted.



Oct 4, 2021 (Mon)

- RNAi Experiment (Arabidopsis thaliana)

  I pipetted 400 µL Milli-Q into petri dishes 14 and 15, respectively.



Oct 6, 2021 (Wed)

- RNAi Experiment (Arabidopsis thaliana)

  I pipetted 400 µL Milli-Q into petri dishes 14 and 15, respectively.