

Title of dataset

Different pollination approaches to compare the seed set of diploid and tetraploid red clover (*Trifolium pratense* L.)

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File list

Pollen_Viability_Day.csv

Pollen_Viability_Time.csv

Seed_numbers_in_open_pollination.csv

Seed_set.csv

Stigma_Receptivity_Day.csv

Stigma_Receptivity_Time.csv

Visitation_rate.csv

Visitation_rate_in_two_bee_treatment.csv

File descriptions**Pollen_Viability_Day.csv**

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Day, the values of 1-9 represent the day after flowering, i.e. 1 represents the 1st day after flowering and 9 represents the 9th day after flowering.

Column C: Pollen SQRT, values of pollen viability represent as viable pollen grain (%), each value is the average of three flower heads per plant. 'SQRT' means that values in this column are square-root transformed.

Column D: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R5 represents five plants from cultivar 'Rajah'.

Pollen_Viability_Time.csv

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Time, the values of 1-5 represent different daytimes within the day, i.e. 08:30, 10:30, 12:30, 14:30, 16:30.

Column C: Pollen, values of pollen viability represent as viable pollen grain (%), each value is the average of three flower heads per plant.

Column D: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R5 represents five plants from cultivar 'Rajah'.

Seed_numbers_in_open_pollination.csv

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R11 represents 11 plants from cultivar 'Rajah'.

Column C: Seed, values of harvested seed number per flower head.

Column D: Flowerhead, flower head ID 1-3 represent three flower heads per plant.

Seed_set.csv

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Treatment, treatments in the experiments of honey bee and hand pollination, 'onebee' and 'twobee' represent one bee and two bees treatments, 'hand1' and 'hand2' represent hand pollination using one pollen donor and two pollen donors, respectively.

Column C: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R11 represents 11 plants from cultivar 'Rajah'.

Column D: Floret2, the values represent the number of florets pollinated per flower head multiply by two, because each floret contains two ovules.

Column E: Seed, values of harvested seed number per flower head. The seed set can be calculated as: Seed set= Seed/Floret2.

Column F: Flowerhead, flower head ID 1-3 represent three flower heads per plant.

Stigma_Receptivity_Day.csv

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Day, the values of 1-8 represent the day after flowering, i.e. 1 represents the 1st day after flowering and 8 represents the 8th day after flowering.

Column C: Stigma, values represent as subjective assessment of stigma receptivity experiment from 0 to 3, e.g. 0 represents no bubbles and 3 represents a mass of small and large bubbles. Each value is the average of three flower heads per plant.

Column D: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R5 represents five plants from cultivar 'Rajah'.

Stigma_Receptivity_Time.csv

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Time, the values of 1-5 represent different daytimes within the day, i.e. 08:30, 10:30, 12:30, 14:30, 16:30.

Column C: Stigma, values represent as subjective assessment of stigma receptivity experiment from 0 to 3, e.g. 0 represents no bubbles and 3 represents a mass of small and large bubbles. Each value is the average of three flower heads per plant.

Column D: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R5 represents five plants from cultivar 'Rajah'.

Visitation_rate.csv

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Treatment, treatments in the experiments of honey bee and hand pollination, 'onebee' and 'twobee' represent one bee and two bees treatments, 'hand1' and 'hand2' represent hand pollination using one pollen donor and two pollen donors, respectively.

Column C: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R11 represents 11 plants from cultivar 'Rajah'.

Column D: Floret, the values represent the number of florets pollinated per flower head.

Column E: Flowerhead, flower head ID 1-6 represent six flower heads per plant.

Visitation_rate_in_two_bee_treatment.csv

Column A: Cultivar name, name of two cultivars used in the pollen viability test.

Column B: Bee, the order of bees in the two bees treatment, 1 represents the 1st visiting bee and 2 represents the 2nd visiting bee.

Column C: Plant, Plant ID used in the pollen viability test in each cultivar, e.g. R1-R11 represents 11 plants from cultivar 'Rajah'.

Column D: Floret, the values represent the number of florets pollinated per flower head.

Column E: Flowerhead, flower head ID 1-6 represent six flower heads per plant.

Note: Missing values are presented as 'NA' in the datasets.