

Kendall, Liam K. et al. (2020), Self-compatible blueberry cultivars require fewer floral visits to maximise fruit production than a partially self-incompatible cultivar. *Journal of Applied Ecology*

Data description

R script and datasets used to estimate floral visitor abundance, single and multiple visit pollinator effectiveness and pollination dependence in three types of blueberry: northern highbush (*Vaccinium corymbosum*), rabbiteye (*V. virgatum*), and southern highbush (*V. corymbosum* hybrid).

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File list and variable information

Analyses of floral visitor abundance

Dataset: floral visitor abundance JAPPL-2020-00197.csv
R code: floral visitor abundance JAPPL-2020-00197.R

Variables (columns within dataset):

Year: Year of survey
VAR: Blueberry type (NH = Northern Highbush, RE = Rabbiteye, SH = Southern Highbush)
Site: Survey site
S_Date: Survey date
Time: Survey time (1 = 10am, 2 = 12pm, 3 = 2pm)
Duration: Survey duration (in minutes)
Species: Floral visitor species: (Other = *T. carbonaria* in SH or RE, *B. terrestris* in NH)
Abundance: Count of floral visitors

Analyses of single visit pollinator effectiveness (fruit set)

Dataset: fruit set single visit experiments JAPPL-2020-00197.csv
R code: fruit set single visit experiments JAPPL-2020-00197.R

Variables (columns within dataset):

Species: Blueberry type (Blue Rose = Northern Highbush, Powder Blue = Rabbiteye, Snowchaser = Southern Highbush)
Block: Sampling site
Year: Year of sampling
Date: Date of single visit observation
Row: Crop row within block

Plant.number: Plant number within crop row
RP: (Row Plant) ID of plant within block
Tag: Individual treatment flower ID
SPEC.COM: Floral visitor species (Other = *T. carbonaria* in SH or RE, *B. terrestris* in NH) or unpollinated control (UP)
FS: Fruit set (0 = no fruit set, 1 = fruit set)
Pick.date: Date that fruit were picked
Fresh.wgt: Fruit weight (grams)

Analyses of multiple visit pollinator effectiveness (fruit set and fruit weight)

Fruit set

Dataset: fruit set multiple visits experiments JAPPL-2020-00197.csv
R code: fruit set multiple visits experiments JAPPL-2020-00197.R

Fruit weight

Dataset: fruit weight multiple visits experiments JAPPL-2020-00197.csv
R code: fruit weight multiple visits experiments JAPPL-2020-00197.R

Variables (columns within dataset):

Species: Blueberry type (Blue Rose = Northern Highbush, Powder Blue = Rabbiteye, Snowchaser = Southern Highbush)
Block: Sampling site
Year: Year of sampling
Date: Date of single visit observation
Row: Crop row within block
Plant.number: Plant number within crop row
RP: (Row Plant) ID of plant within block
Tag: Individual treatment flower ID
SPEC.COM: Floral visitor species composition (HB: *Apis mellifera*, SB: *Tetragonula carbonaria*, BB: *Bomus terrestris*, MX: mixture of HB and SB (rabbiteye or southern highbush) or HB and BB (northern highbush). NA = Flowers without visits (unpollinated controls).
Sumvisits: Number of visits to individual flower
FS: Fruit set (0 = no fruit set, 1 = fruit set)
Pick.date: Date that fruit were picked
Fresh.wgt: Fruit weight (grams)
Visitor1 – Visitor15: Species identity of each individual visit (B = *B. terrestris*, H = *A. mellifera*, S = *T. carbonaria*)

Analyses of pollination dependency (hand pollination experiments) (fruit set and fruit weight)

Fruit set

Dataset: fruit set pollination experiments JAPPL-2020-00197.csv
R code: fruit set pollination experiments JAPPL-2020-00197.R

Fruit weight

Dataset: fruit weight pollination experiments JAPPL-2020-00197.csv

R code: fruit weight pollination experiments JAPPL-2020-00197.R

Variables (columns within dataset):

Species: Blueberry type (Blue Rose = Northern Highbush, Powder Blue = Rabbiteye, Snowchaser = Southern Highbush)

Block: Sampling site

Year: Year of sampling

Date: Date of single visit observation

Row: Crop row within block

Plant.number: Plant number within crop row

RP: (Row Plant) ID of plant within block

Tag: Individual treatment flower ID

Pick.date: Date that fruit were picked

TREATMENT: Experimental pollination treatments (No pollination, Cross pollination, Open pollination, Self pollination)

FS: Fruit set (0 = no fruit set, 1 = fruit set)

Fresh.wgt: Fruit weight (grams)