Project presentation

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Dataset description

The dataset is the agronomic traits that were measured in a sorghum field experiment with two levels of nitrogen treatment. Each row represents a small pieces of land with it's unique row number and column number which contains around 10 individual sorghum plants. The explanation for each column stated below:

List of variables

Plot ID&Sorghum Accession: Unique ID for each plants
SNPDataID Unique ID
Row&Column: spatial data for sorghum plants
Block: Blocking number
Treatment: two levels of nitrogen treatment
DaysToBloom: How many days until the sorghum flower bloom(unit:day)
MedianLeafAngle: Median value of leaf angle for each 10 individual sorghum plants(unit:degree)
LeafAngleSDV: Standard deviation of leaf angle for 10 individual sorghum plants
PoorStand: If half of the sorghum plants are poor stand, if yes then the answer is Y
PaniclesPerPlot: How many panicles per plot have
PanicleGrainWeight: How much grain weight for each panicle(unit:gram)

List of variables

EstimatedPlotYield: The estimated plot yield for 10 individual sorghum plants(unit:gram)
FlagLeafLength: The mean value of the flag leaf's length for each 10 individual sorghum plants(unit: cm)
FlagLeafWidth: The mean value of the flag leaf's width for each 10 individual sorghum plants(unit: cm)
ExtantLeafNumber: The number of visible leaves on the main stalk at maturity stage.
PlantHeight: The mean value of the plant height for each 10 individual sorghum plants(unit: cm)
ThirdLeafLength: The mean value of the third leaf's length for each 10 individual sorghum plants(unit: cm)
ThirdLeafWidth: The mean value of the third leaf's width for each 10 individual sorghum plants(unit: cm)

Check for the properties in different variables

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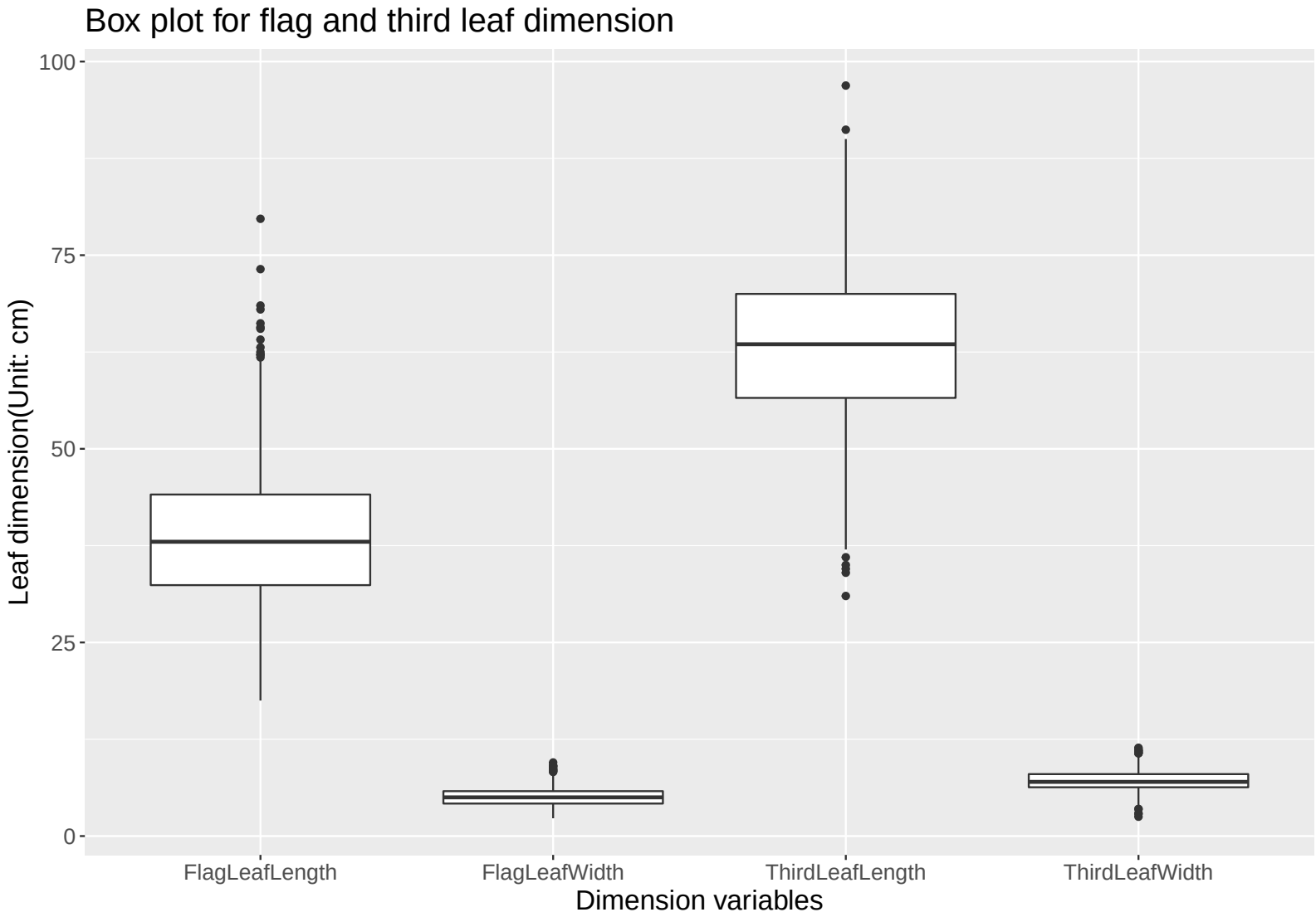

Correlation between leaf length and width

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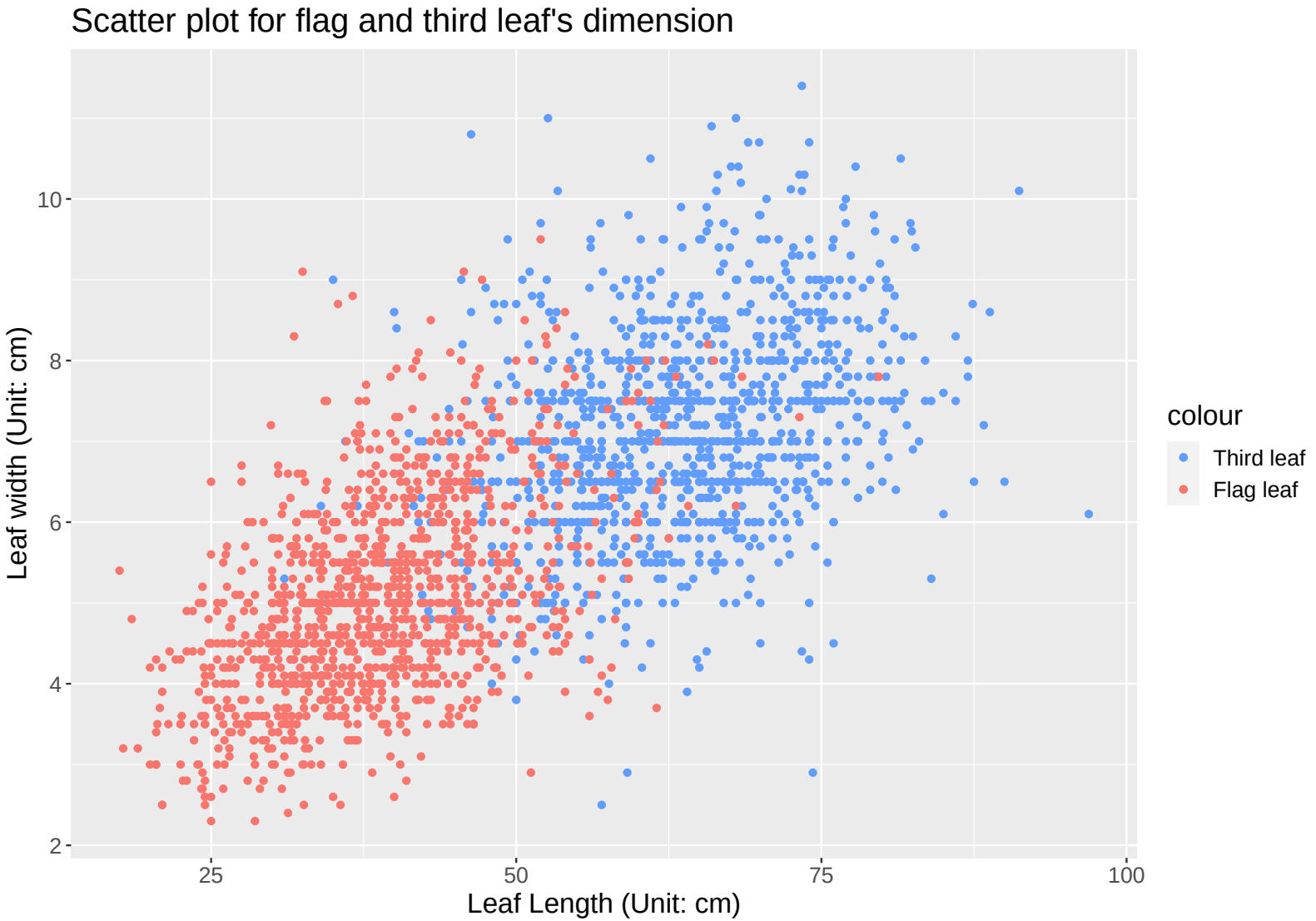
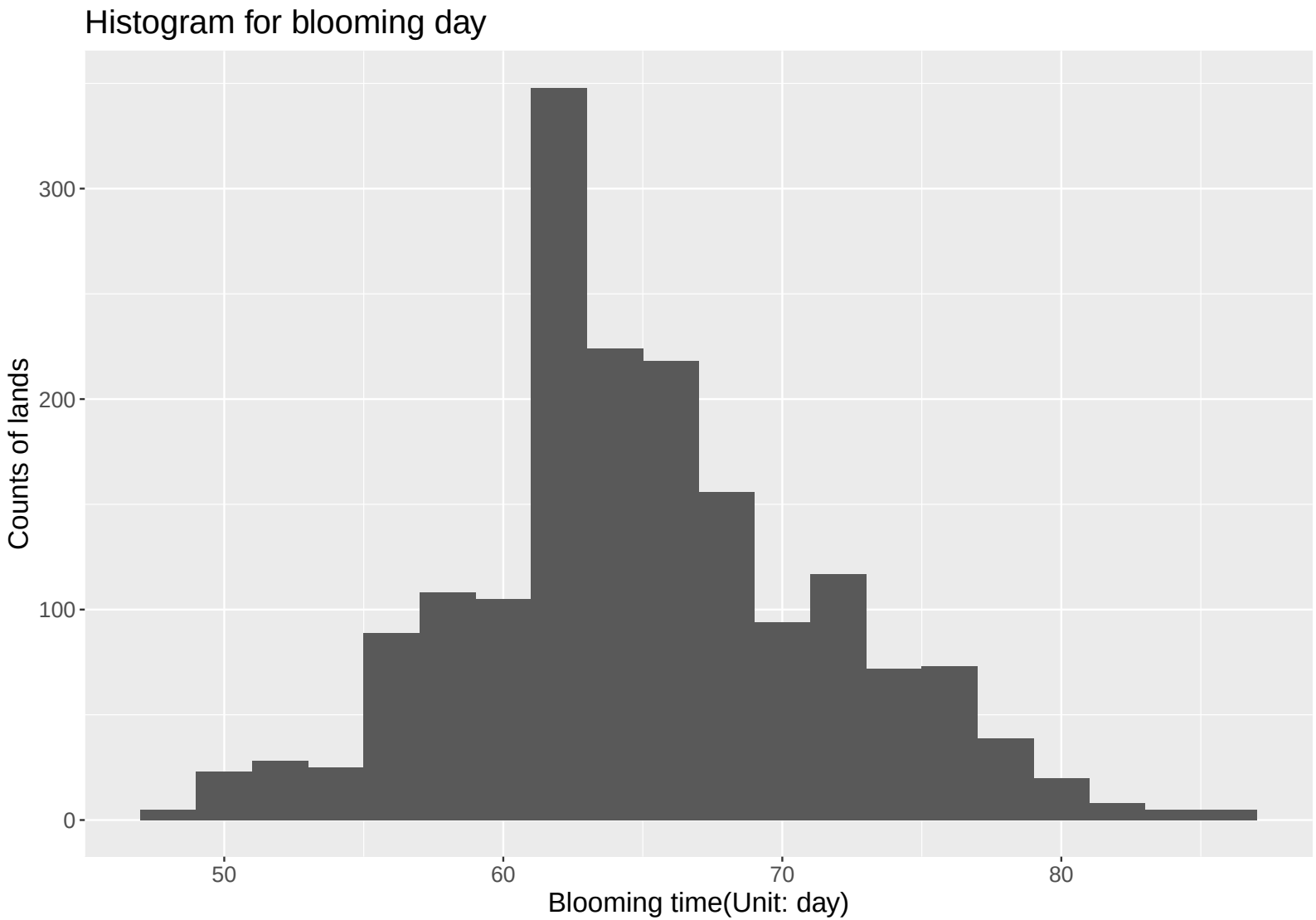


Check for the properties in different variables

- Mean:65.67 Median 65



Check for the properties in different variables

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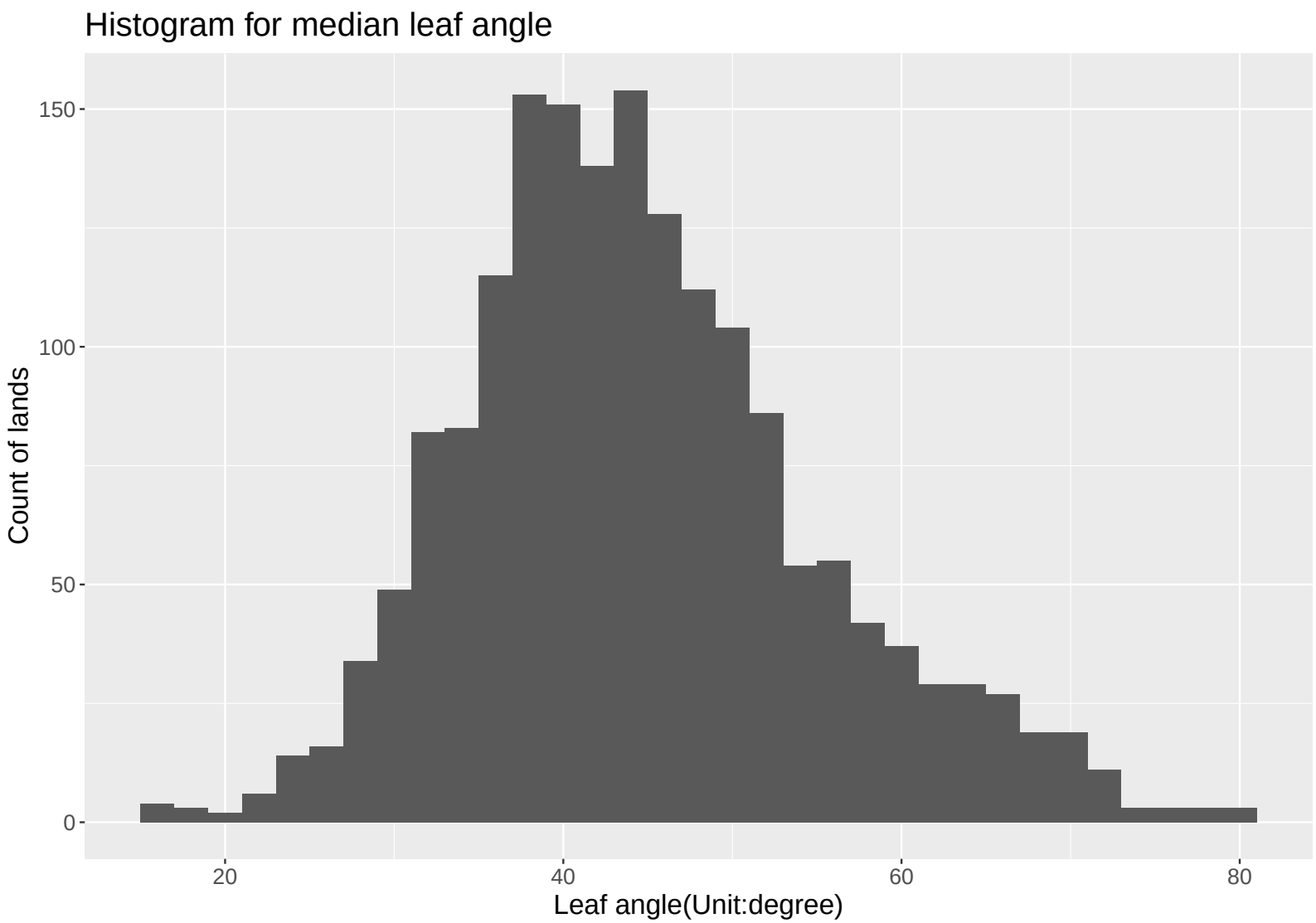
- Mean 44.66 Median 43.50



Check for the properties in different variables

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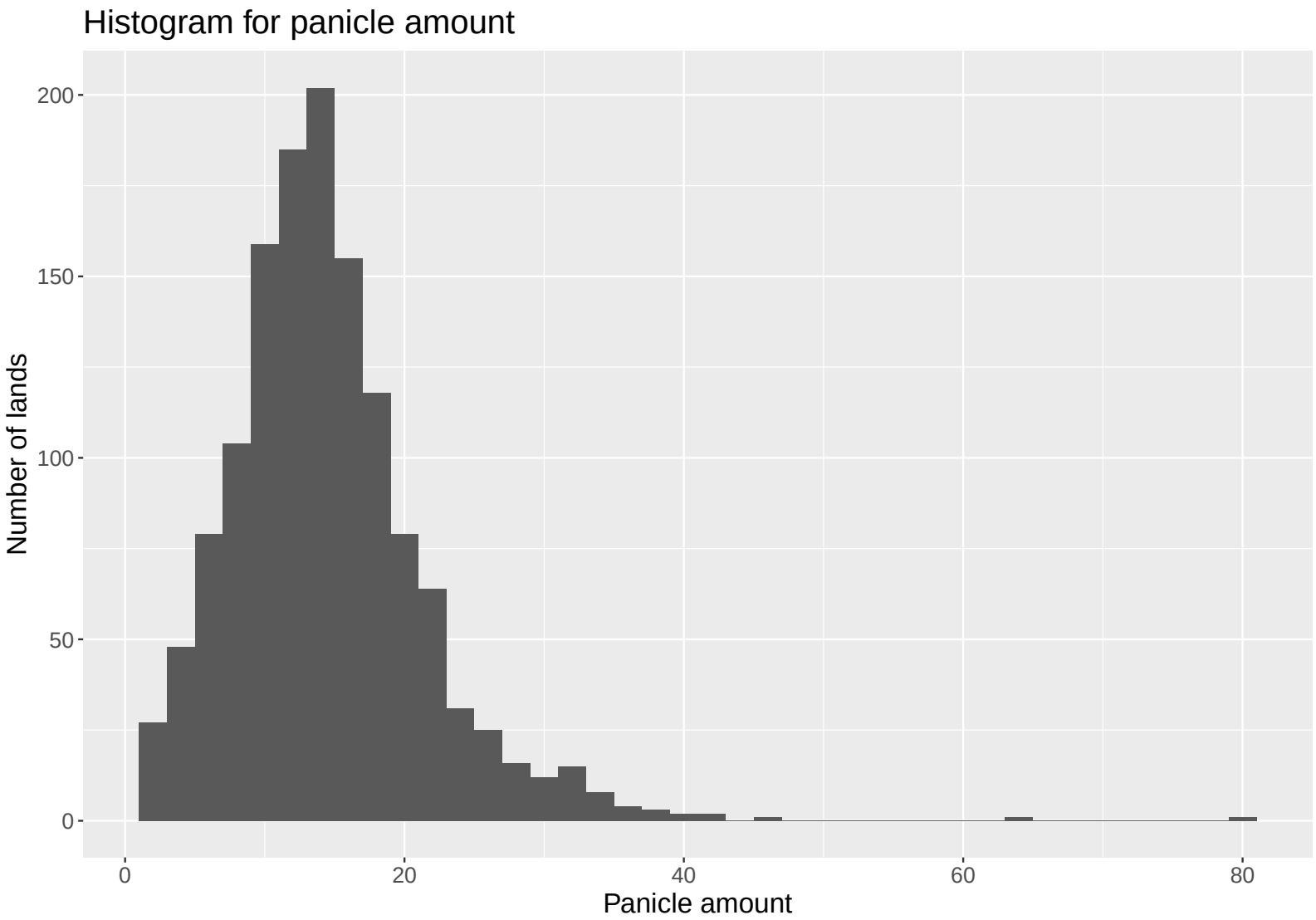
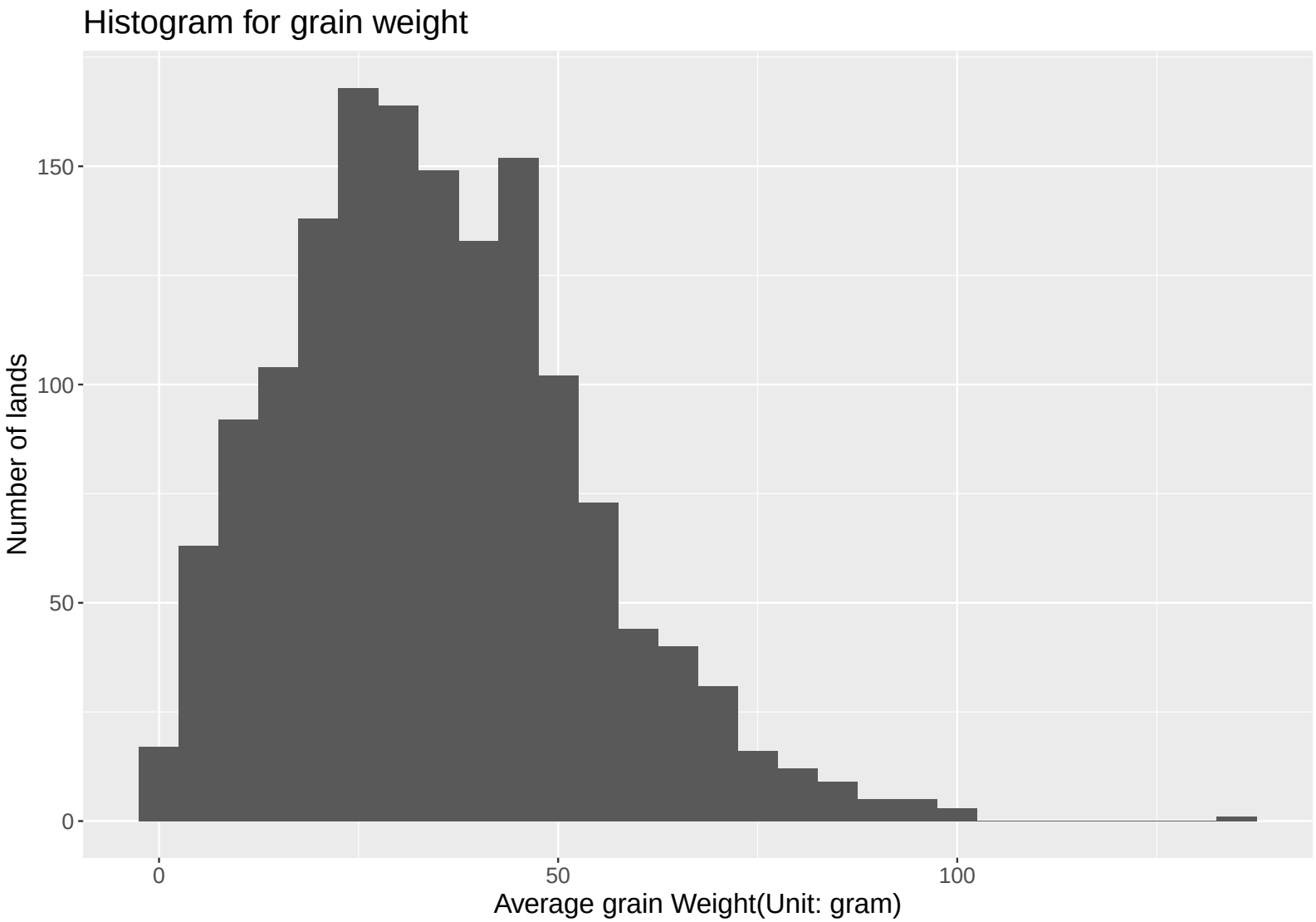
- Mean 14.89 Median 14.00



Check for the properties in different variables

- Mean 34.79 Median 33.20



Check for the properties in different variables

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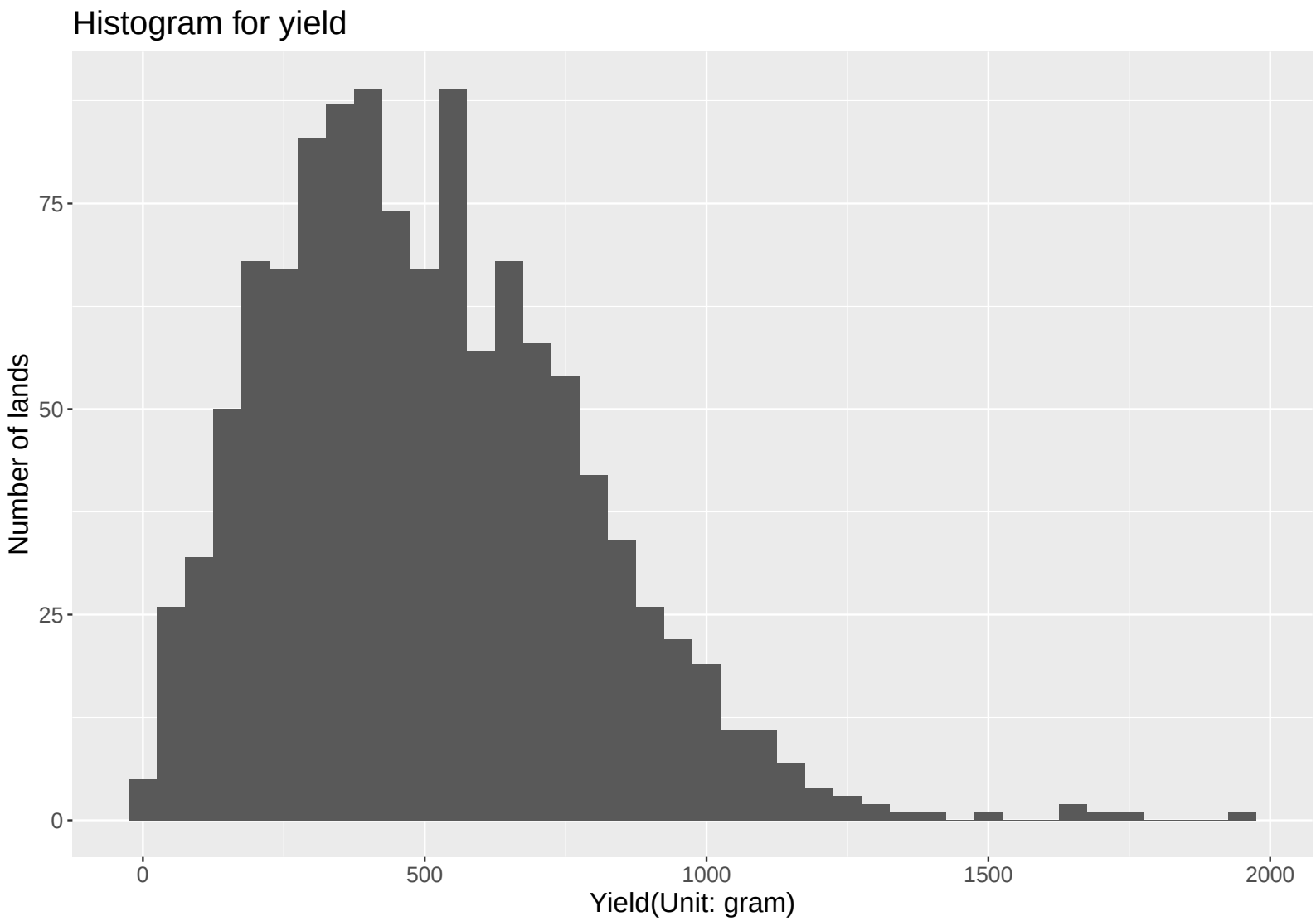
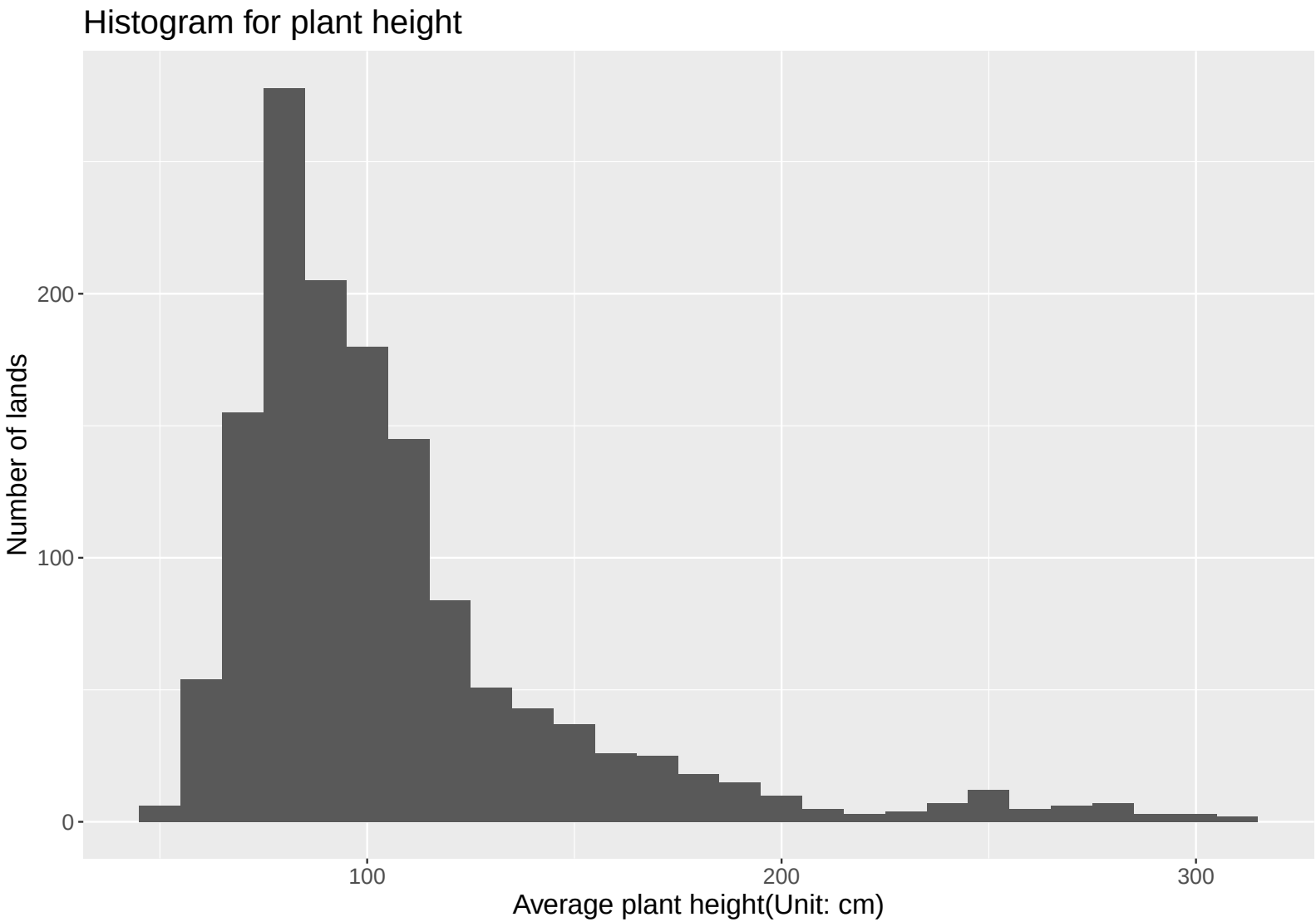
- Mean 507.5 Median 475.2



Check for the properties in different variables

- Mean 107.5 Median 95.0



Explore the effect of the nitrogen treatment with plant height

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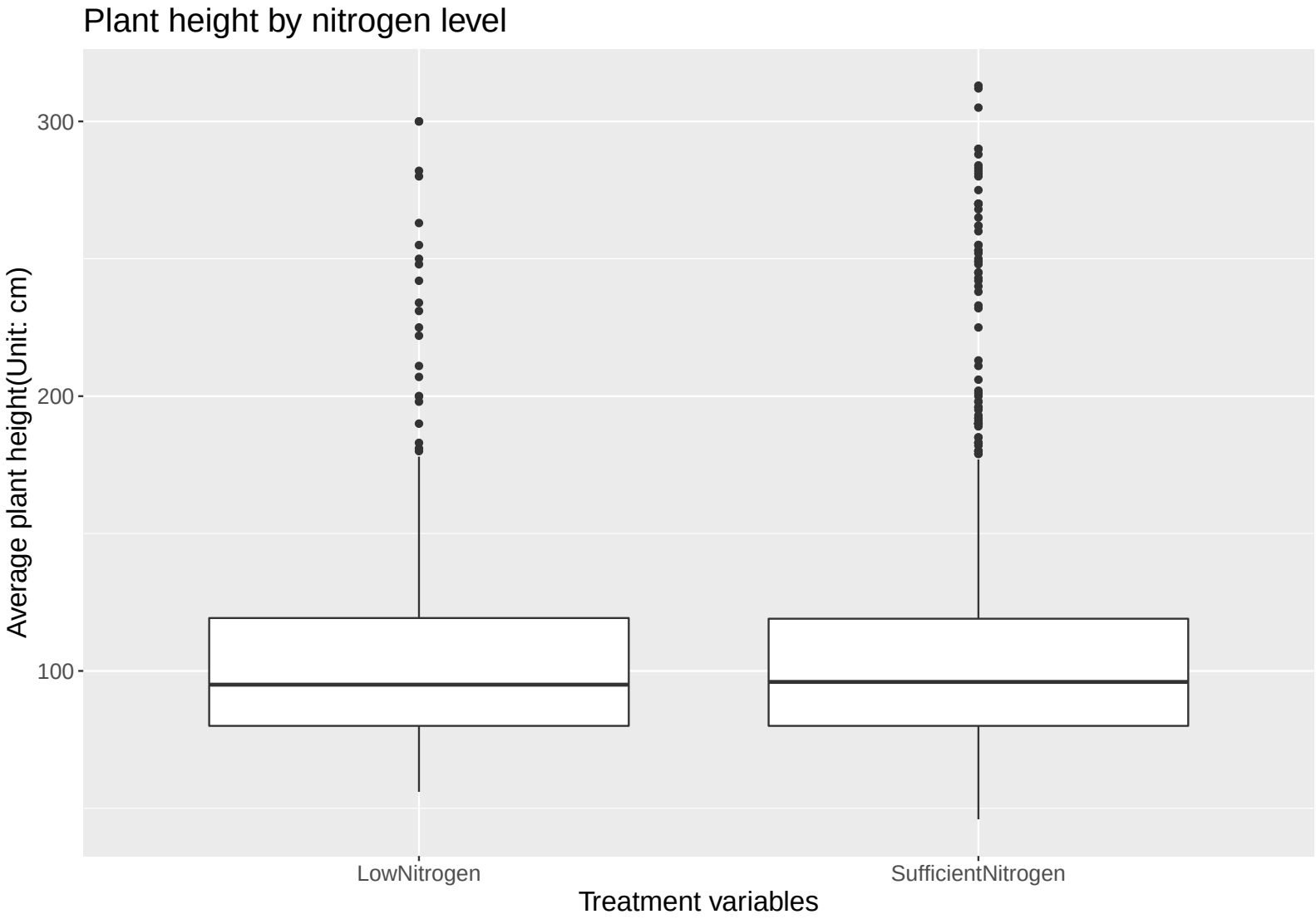

Explore the effect of the nitrogen treatment with yield

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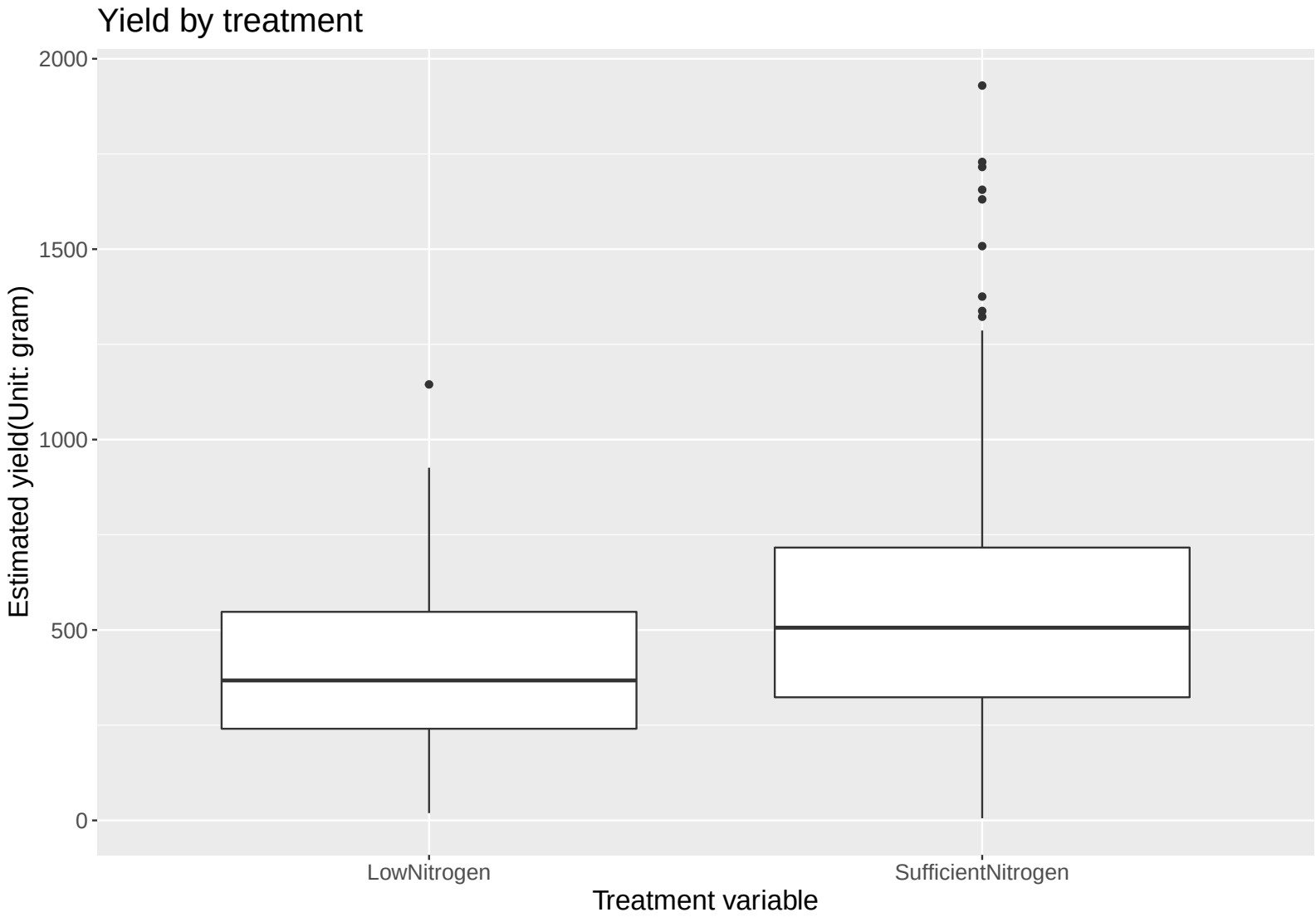

Explore the effect of the nitrogen treatment with leaf length

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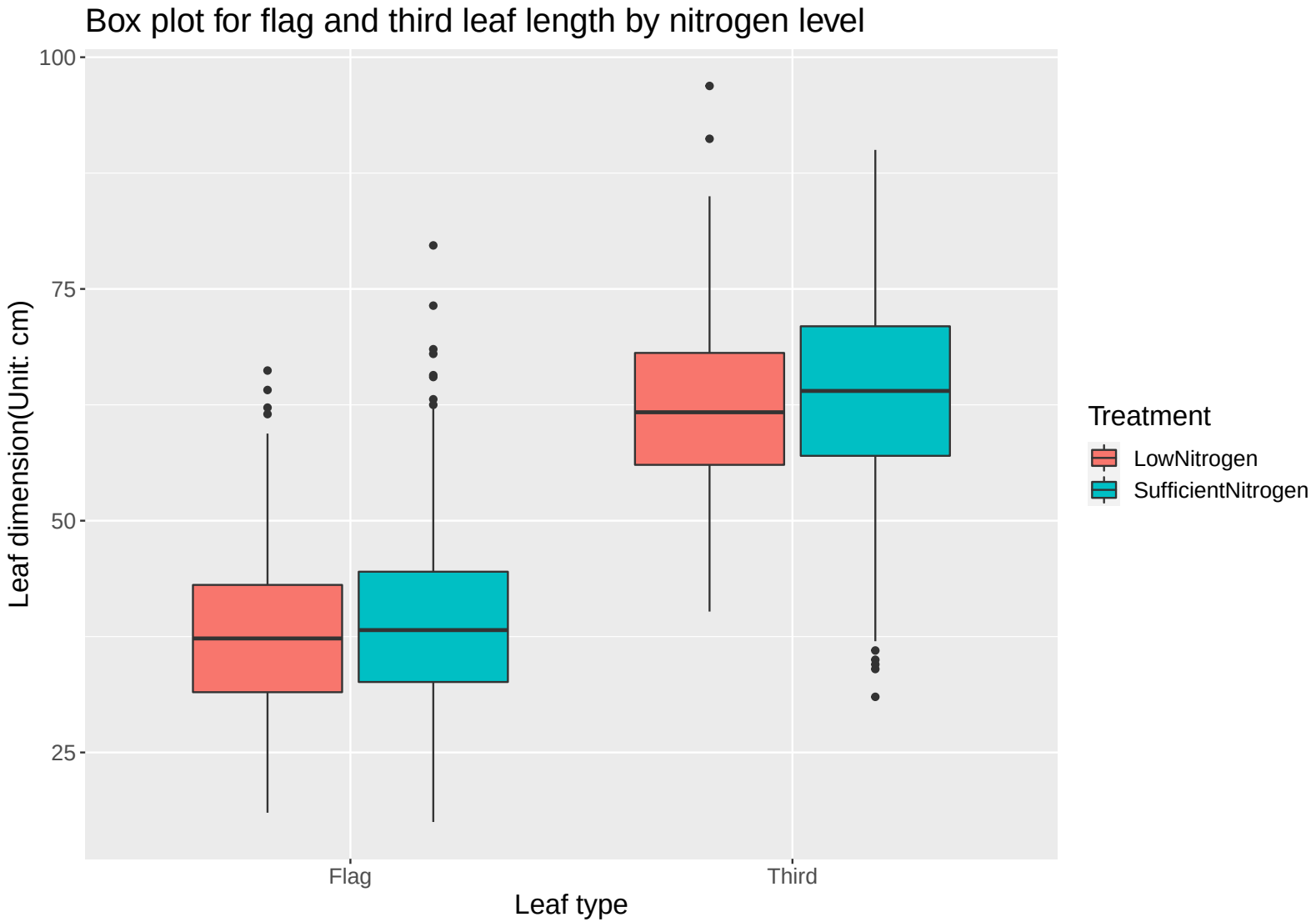

Explore the effect of the nitrogen treatment with leaf width

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