



Project  
presentation

Yifan Wu,  
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# Project presentation

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# Dataset description

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The dataset is the agronomic traits that were measured in a sorghum field experiment with two levels of nitrogen treatment and around 400 genotypes. Hopefully we will also find the sub-population information of these genotypes as an additional categorical attribute.

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:

**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)

**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)

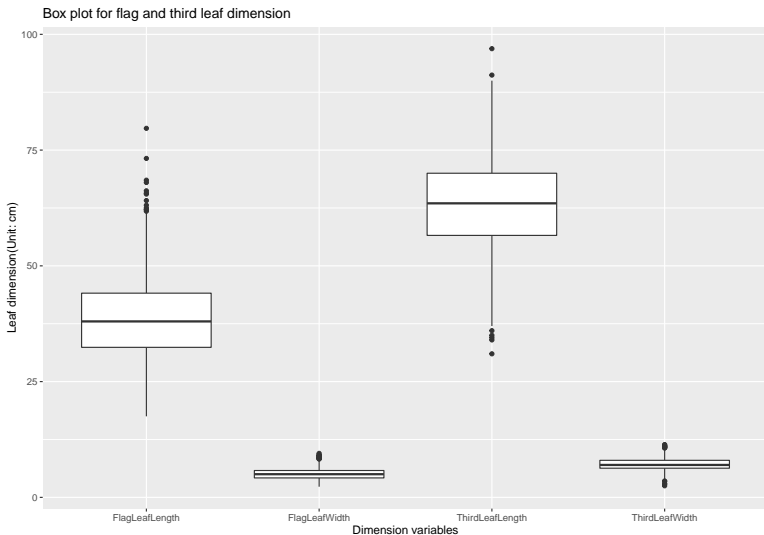
**ThirdLeafWidth:** The mean value of the third leaf's width for each 10 individual sorghum plants(unit: cm)



# Check for the properties in different variables

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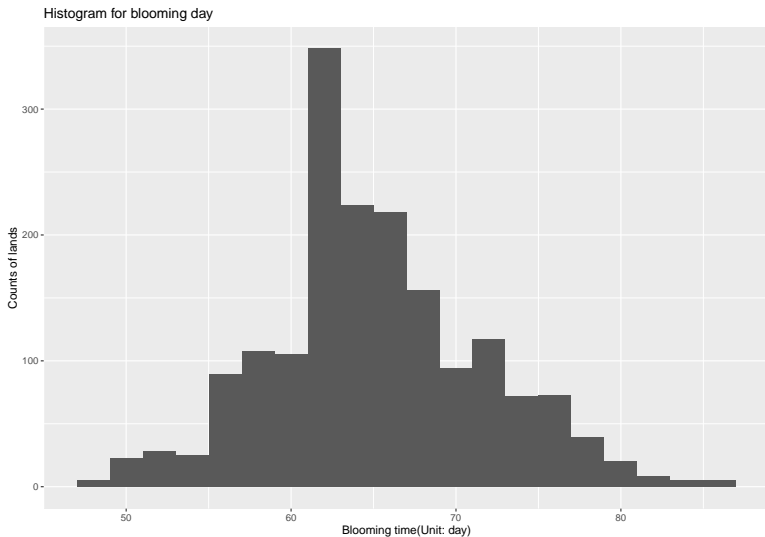




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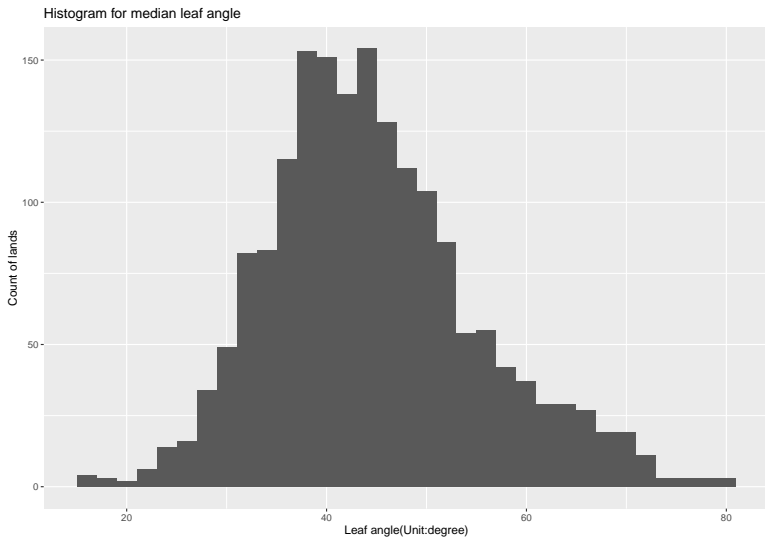




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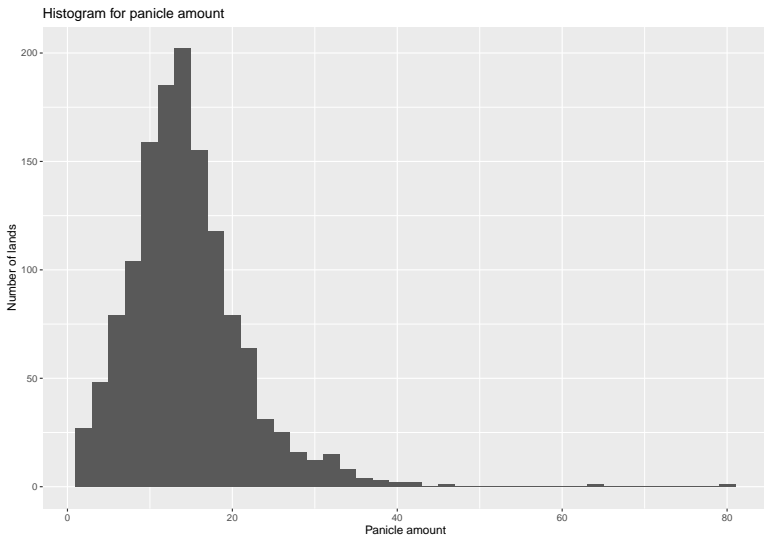




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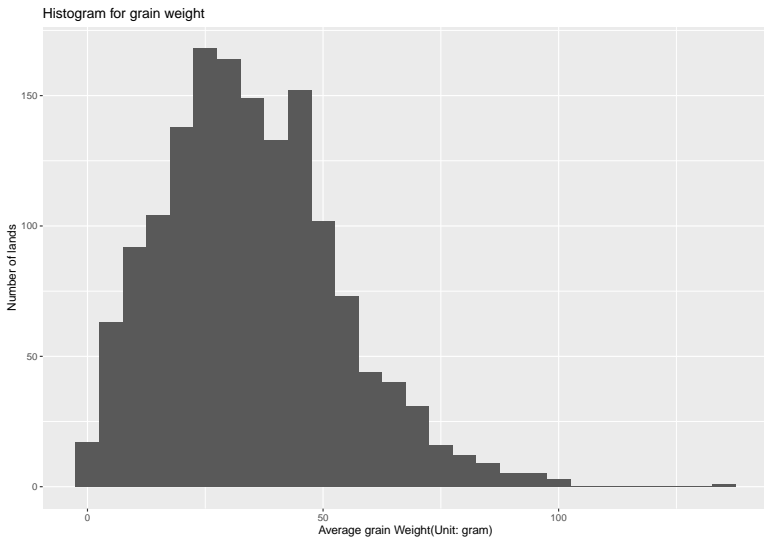




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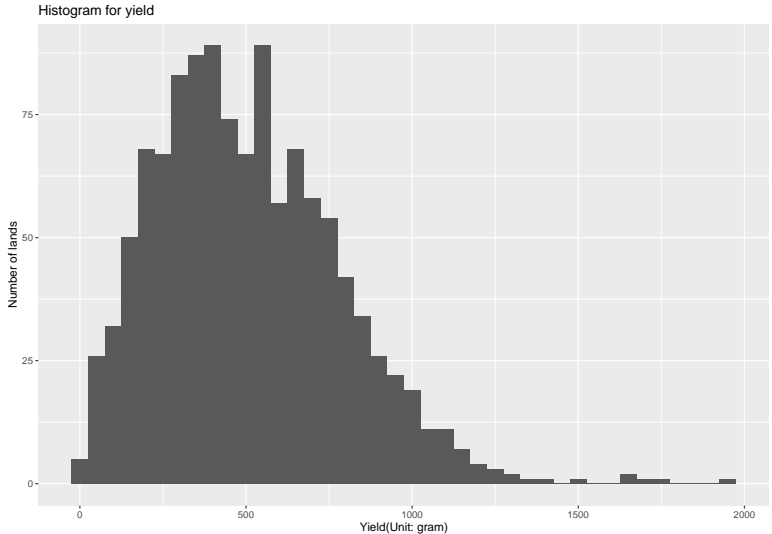




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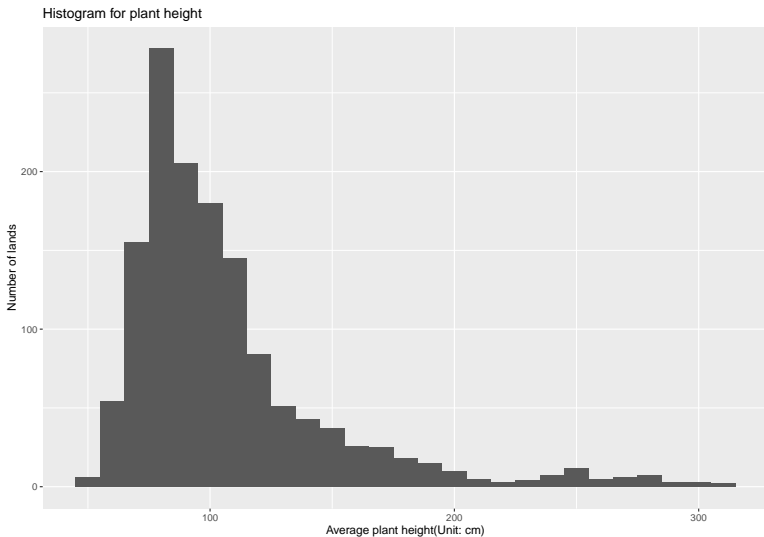




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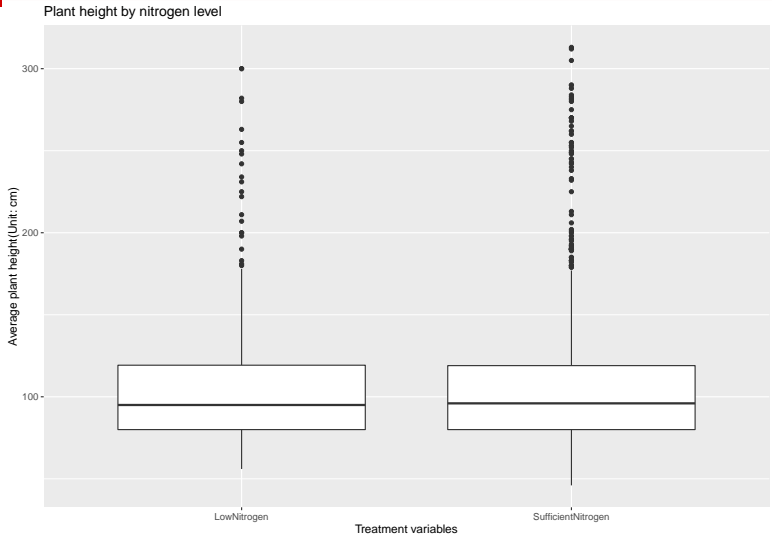




# Explore the effect of the nitrogen treatment with plant height

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Plant height by nitrogen level

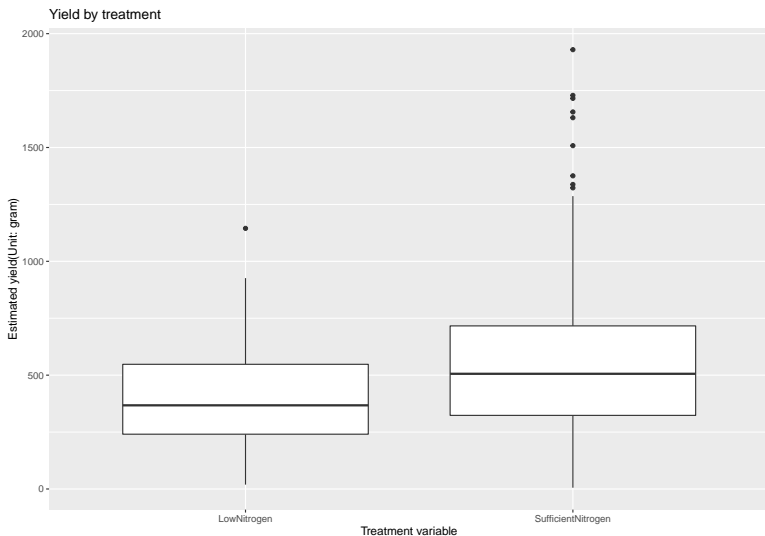




# Explore the effect of the nitrogen treatment with yield

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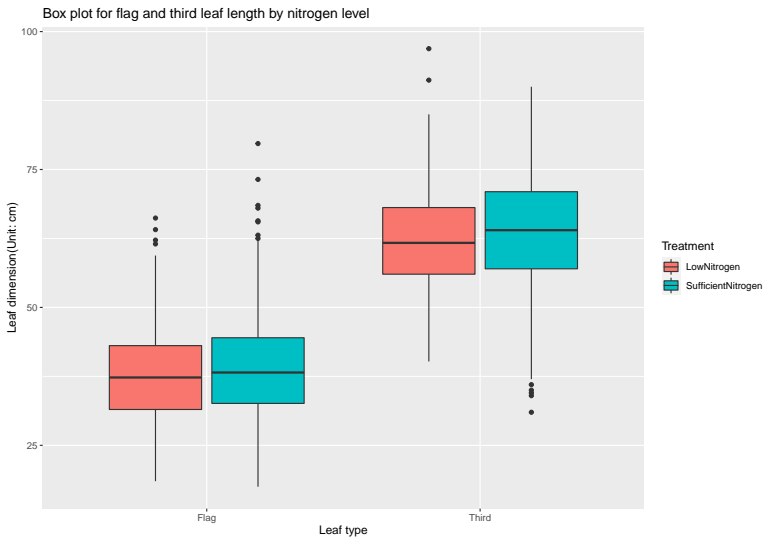




# Explore the effect of the nitrogen treatment with leaf length

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# Explore the effect of the nitrogen treatment with leaf width

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