Slide Formatting Guide

BIOE 498/598 PJ

Spring 2021

Title Slide

- Assignment Name
- Names/e-mail addresses for all group members

Introduction and Research Questions

- What is the system and the key variables?
- What questions are you trying to answer (big picture)?

Description of the Data

- Input factors, units, and ranges

- Response units and range

- Number of observations and replicates; if there were duplicates, say how many were averaged.

- Are the data complete?
  - How many observations are incomplete?
  - Are any combinations untested, or what fraction were tested?

Methods

- What approach did you take?
  - **Example:** *We build a statistical model that predicts X using Y and Z.*
- Avoid jargon and technical terms. Simply explain the overall approach.

Results

- ▶ Results are factual based on the data and/or model.

- ▶ Write the results in words, including the effect sizes.

  - ▶ **Example:** *Applying fertilizer in January increased yields 1.1-fold over treating in April*

- ▶ Only describe the practically or statistically significant results. This avoids you needing to say "significantly" for every result.

  - ▶ **Exception:** Mention any effect that you expected to be significant but wasn't.
  - ▶ **Example:** *No change in yield between broadcast and plowed applications.*

Conclusions

- ► Conclusions are subjective based on your interpretation of the results and/or judgement.
  - ► **Example:** *Treating in January increased yield by 10%, but this benefit needs to be compared to the costs of accessing the fields early.*
- ► If asked, include next steps or follow-up experiments/analyses.
  - ► **Example:** *We estimate another 8 runs are needed to determine if time of application and method of application interact.*