

## Background

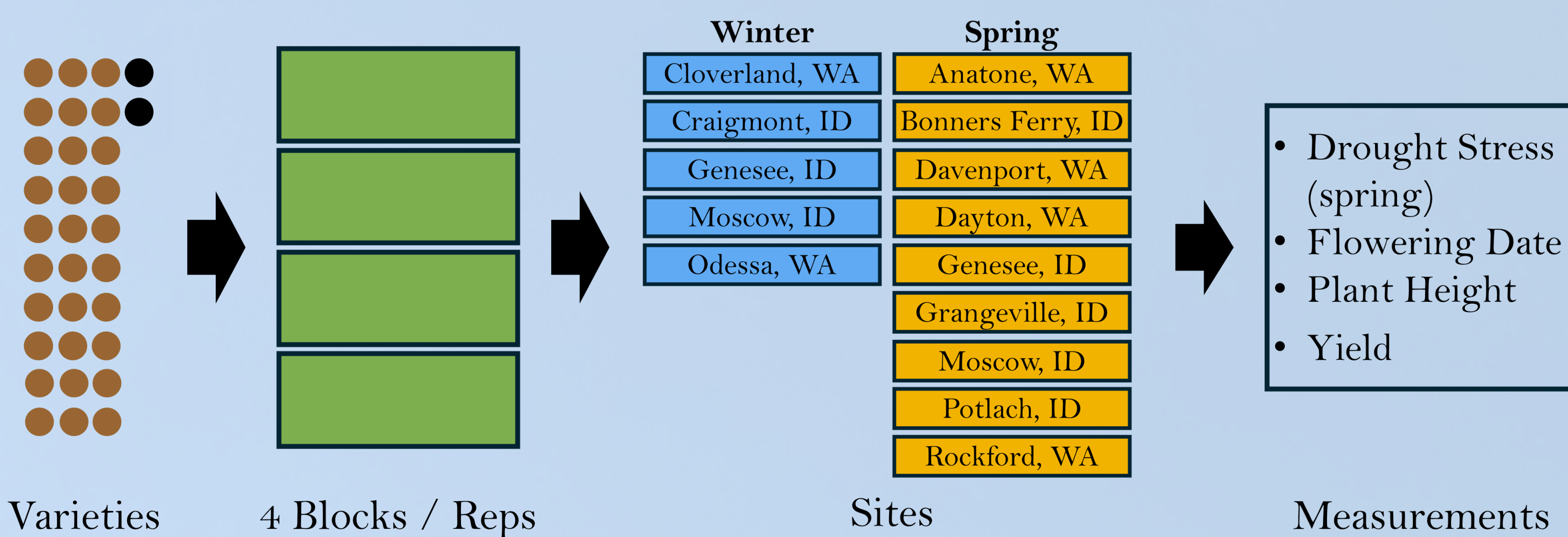
- The Inland Pacific Northwest is a region of the United States east of the Cascades and West of the Rocky Mountains
- Due to the Cascades rainshadow, the region has a substantial annual rainfall gradient, and its diverse topography creates numerous microclimates
- Canola (*Brassica napus*) is a popular crop in the area because it fits well in wheat rotations, and helps control grassy weeds
- Due to genetic variation, some canola varieties may be better suited to the various microclimates of the Inland Pacific Northwest than others

## Objectives

- Determine which regions of the Inland Pacific Northwest are best suited for growing winter and spring canola
- Determine which winter and spring canola varieties perform best across the region
- See how the University of Idaho Canola Breeding Program's unreleased breeding lines compare to commercially available canola cultivars

## Methods

- Winter of 2024 through summer of 2025
- Tested 30 winter and 32 spring canola varieties
- Small plot experiment (Fig. 1)
- Varieties from industry cultivars and UI-bred canola cultivars
- Randomized complete block design with 4 replications
- Sites: 5 winter, 9 spring
- Recorded mid-summer drought stress for spring cultivars
- Recorded yield, flowering date, and plant height for both



**Figure 1.** Experimental Design flowchart, showing varieties, reps, sites, and measurements.

## Key Findings

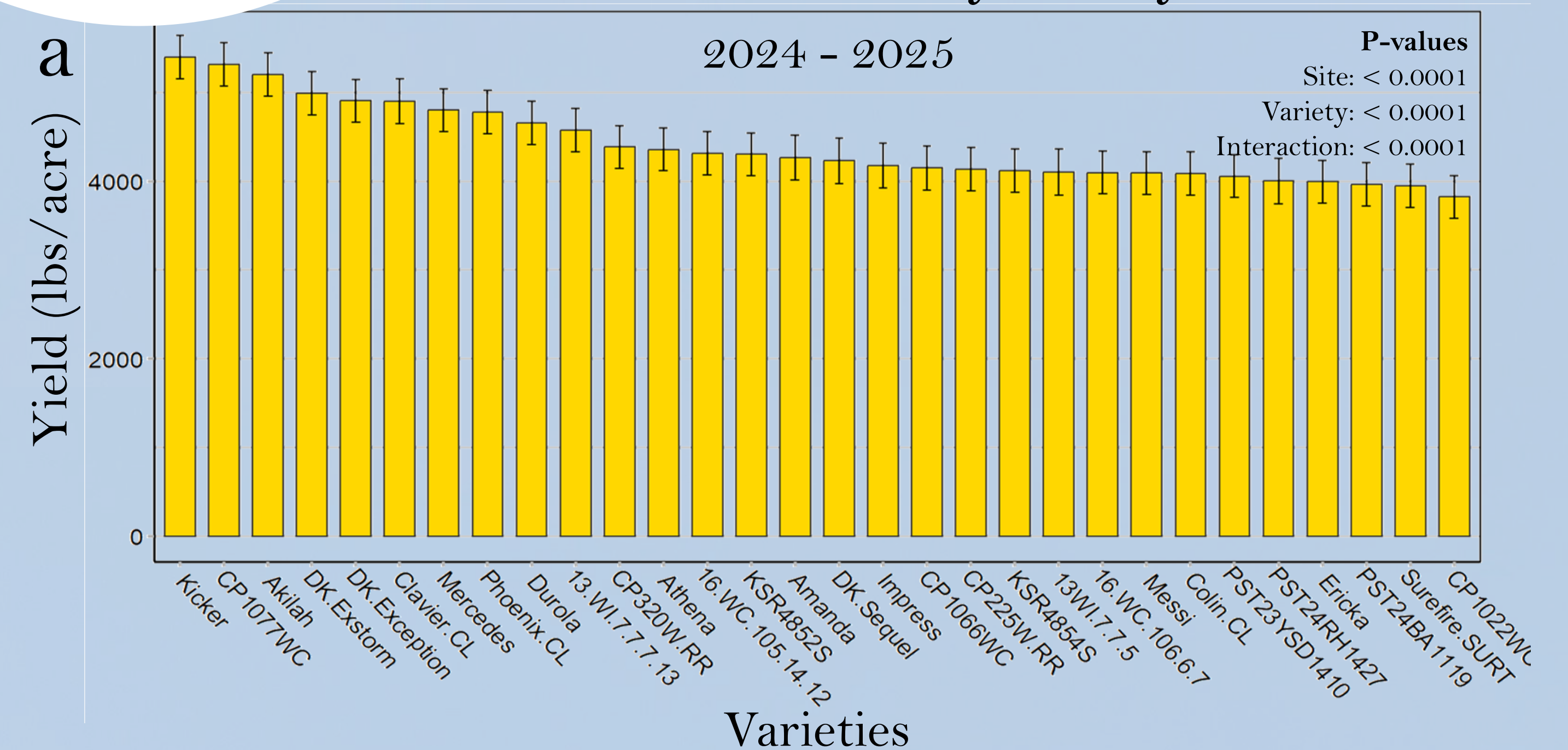
- Some varieties performed better than others
- Site impacts which varieties perform best, showing a genotype-by-environment interaction (Fig. 2)
- To determine which canola varieties perform best in your region, look at the site-specific data provided at the University of Idaho Canola, Rapeseed, and Mustard Breeding Program and The Pacific Northwest Canola Association websites or in the fliers below

## Results

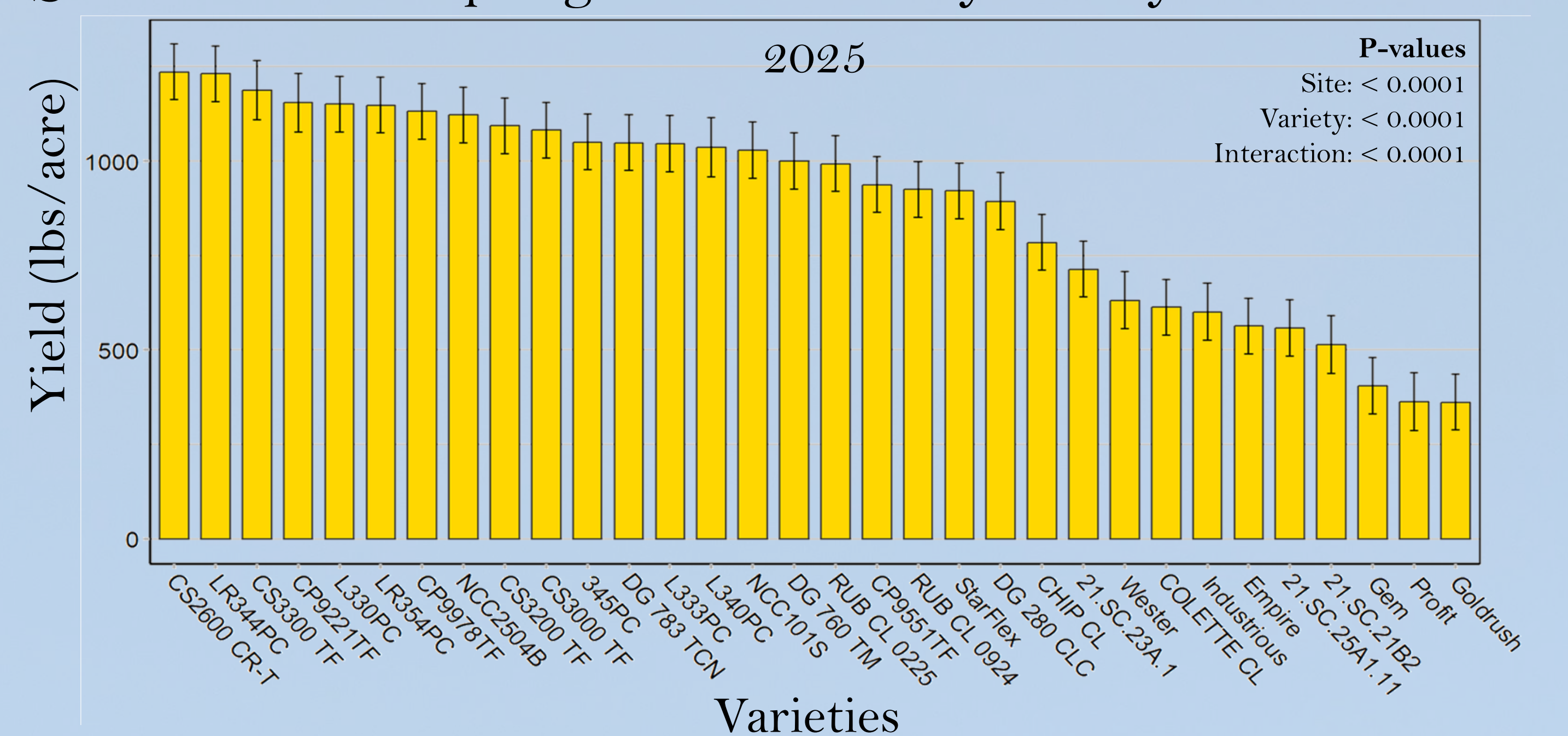
- We found that yield was impacted by variety and site, and there was a significant site-variety interaction (Fig. 2)
- Kicker, from Rubisco Seeds, had the highest overall winter canola yield at 5,394 lbs/acre and CP1077WC from CROPLAN had the second highest yield at 5315 lbs/acre (Fig. 2a)
  - CS2600 CR-T from Canterra Seeds had the highest overall spring canola yield at 1,236 lbs/acre, followed closely by InVigor LR344PC from BASF Corporation at 1,231 lbs/acre (Fig. 2b)
  - Genesee, ID had the highest winter canola yield (Fig. 2a)
  - Bonnerr Ferry, ID had the highest spring canola yield (Fig. 2b)
  - The highest yielding UI-bred winter canola line was Durola, ranking as ninth best overall (Fig. 2a)
  - The best performer among the UI-bred spring lines was 21.SC.23A.1, but it was outcompeted by industry varieties, ranking at twenty-third (Fig. 2b)



Winter Canola Yield by Variety



Spring Canola Yield by Variety



**Figure 2.** Yield by variety bar graphs for 2024 - 2025 winter a) and 2025 spring b). Error bars show a 95% confidence interval.

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