

Cultural methods for improving direct harvest efficiency in dry edible bean

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Direct Harvest of Dry Bean

- How do we minimize harvest loss?
 1. Equipment
 2. Field prep
 3. Variety selection

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- tillage followed by roller

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- plant into previous crop stubble (barley/wheat)
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QUESTION:

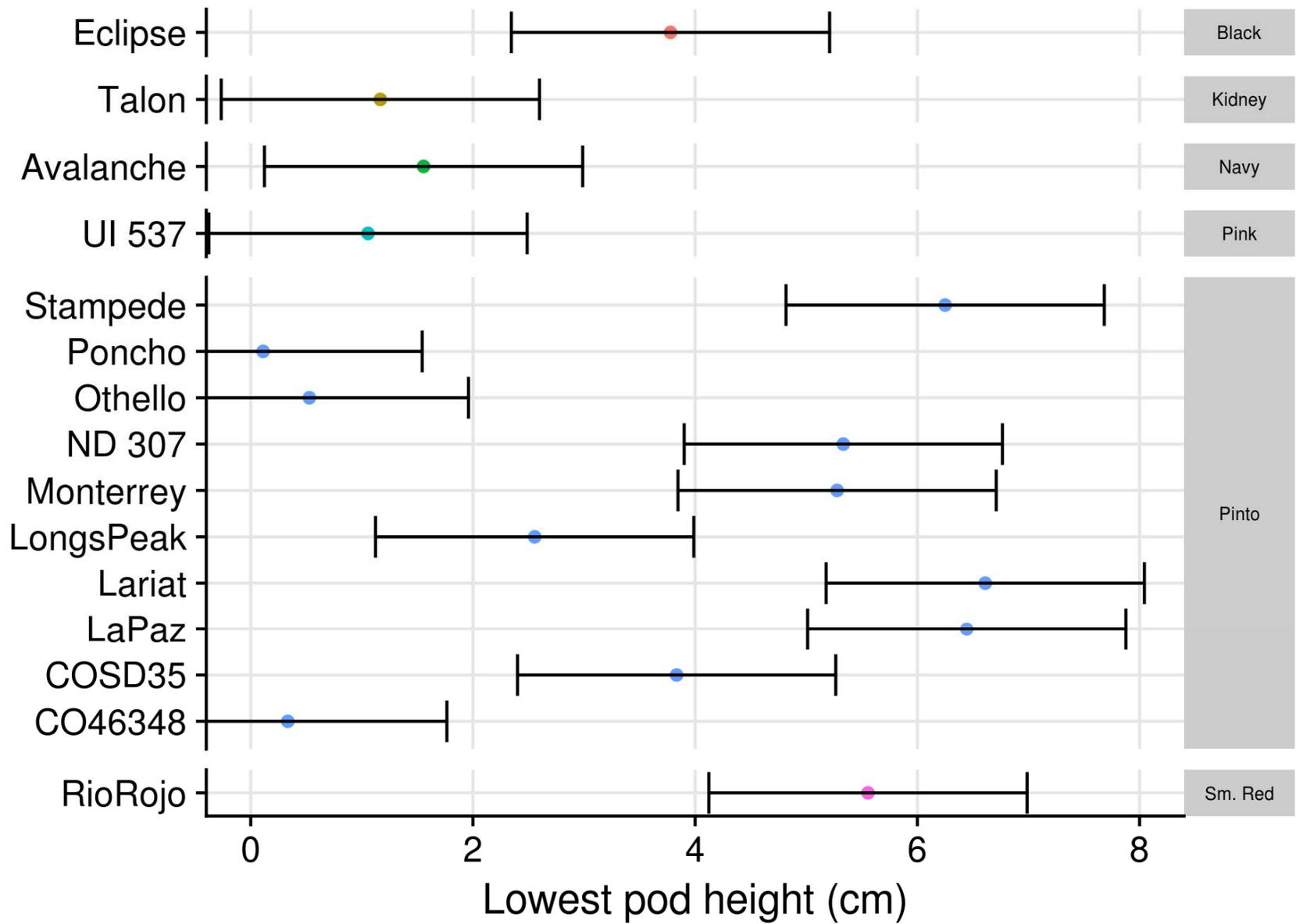
How does bean variety interact with other components of the direct harvest/conservation tillage system?

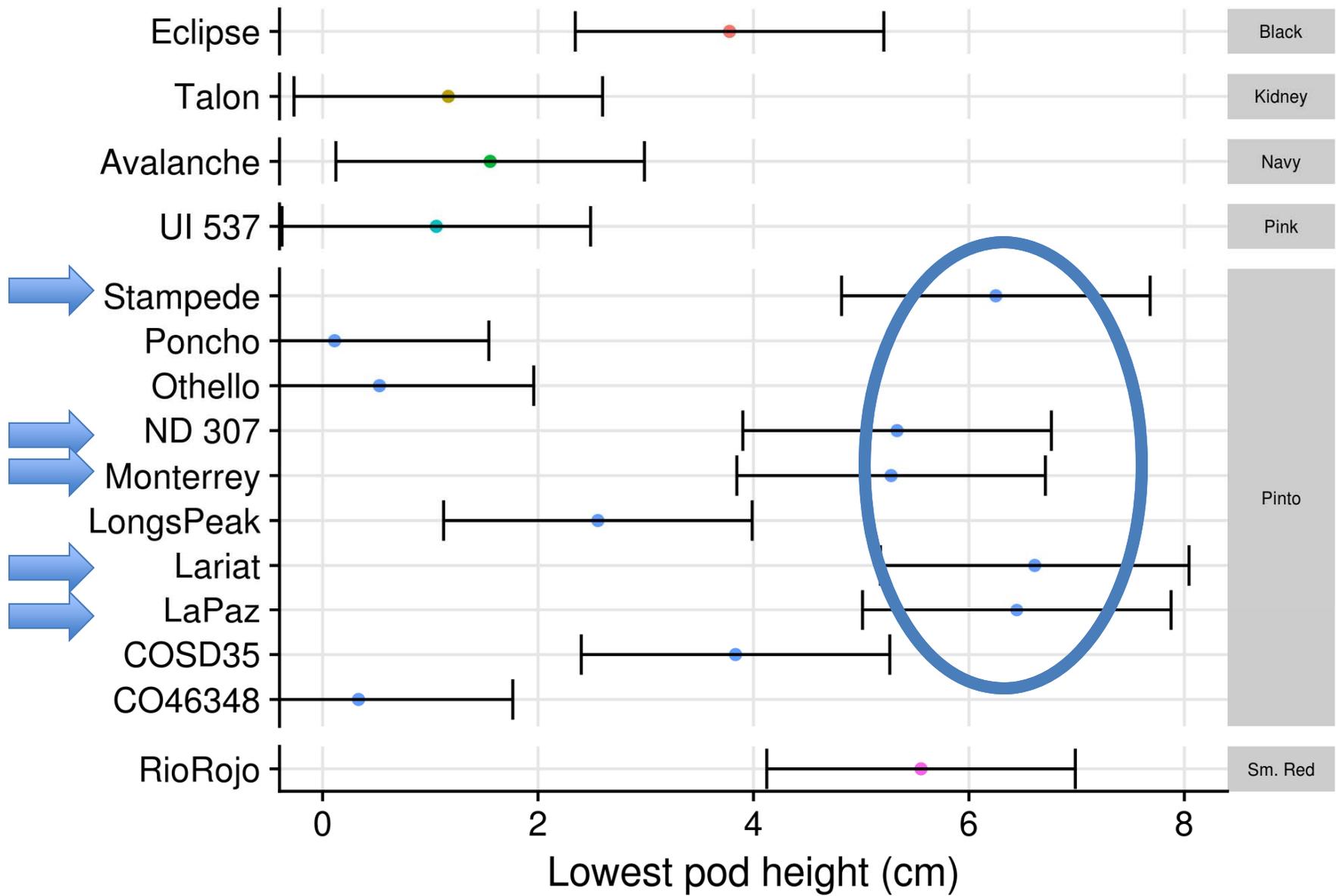
Are varieties that perform well under clean-till conditions also best in a stubble/cover crop system?

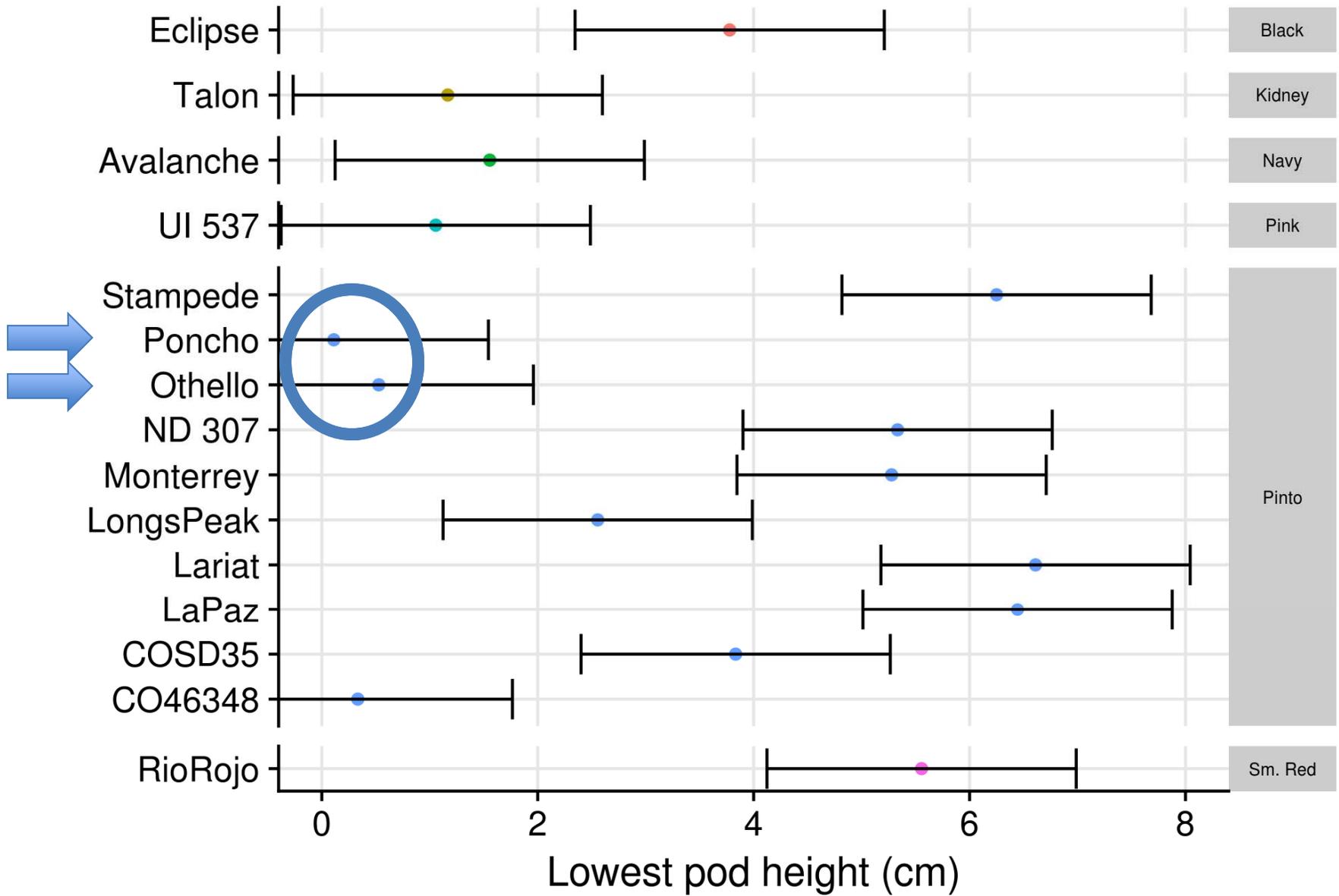
2019 Research Objectives:

- Evaluate early-season node elongation for dry bean varieties in response to presence or absence of a winter wheat cover crop.
- Measure pod height at maturity and evaluate whether early-season node heights predict bean pod height at maturity.
- Determine the yield trade-offs (if any) from early season node extension and cover crop termination timing.

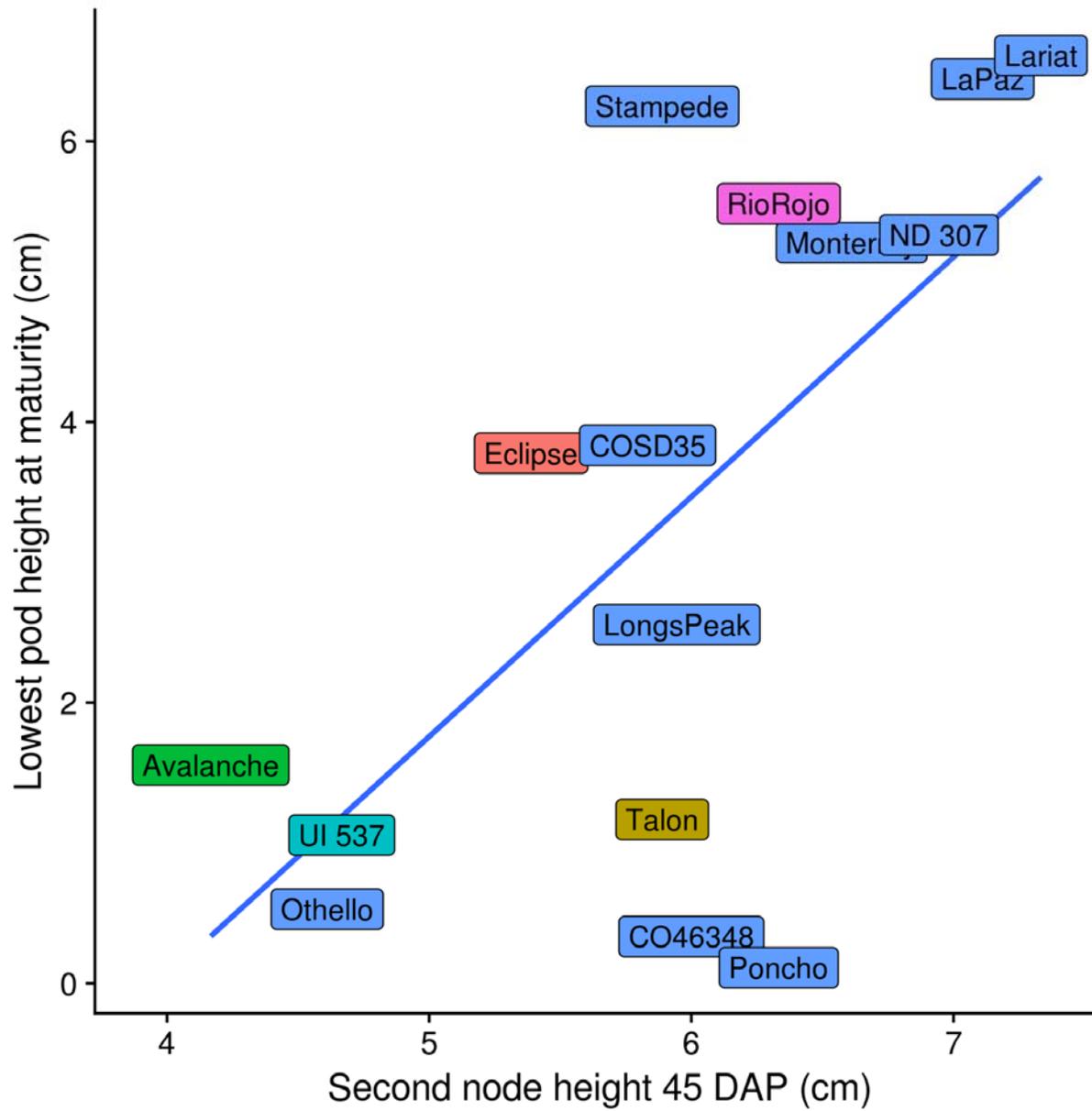


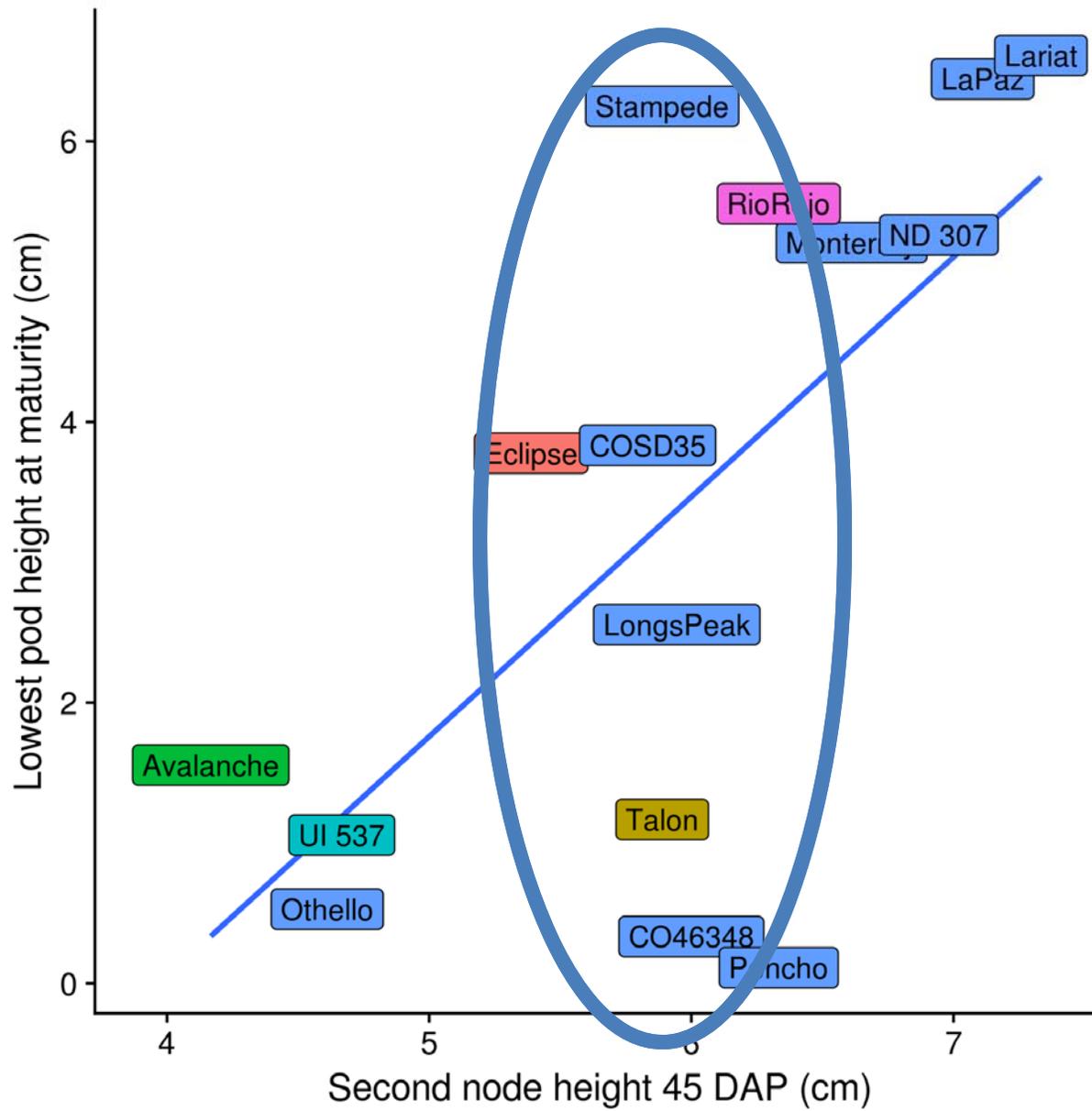


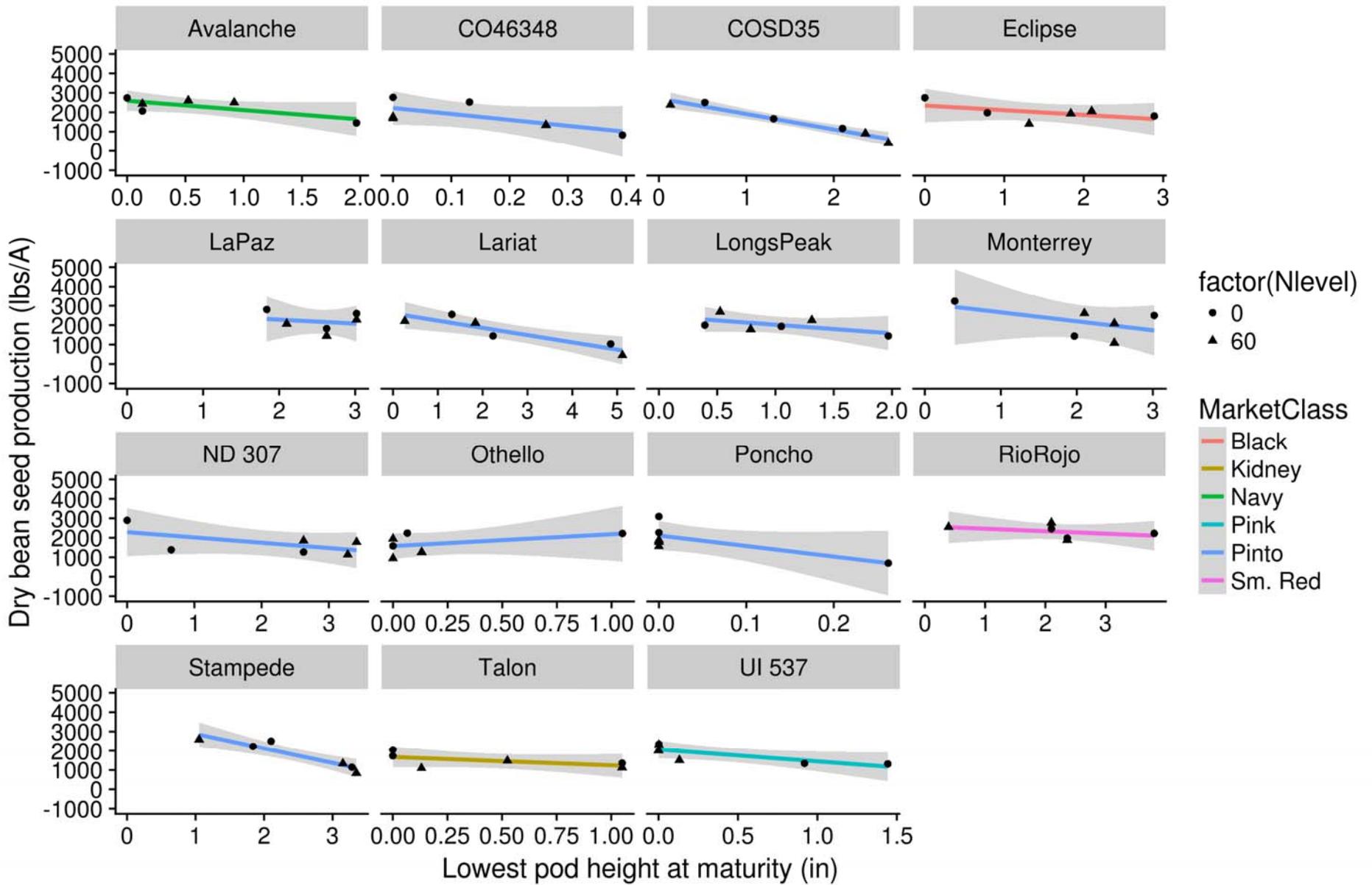












Yield / Pod Height Trade-off:

- Pinto varieties:
 - For each 1” of increased pod height, ~3 cwt of decreased bean yield
 - For each 1” of increased pod height, ~2.5 cwt of increased harvest loss (Smith, UNL)
- Harvestable yield was not negatively impacted by increased pod height

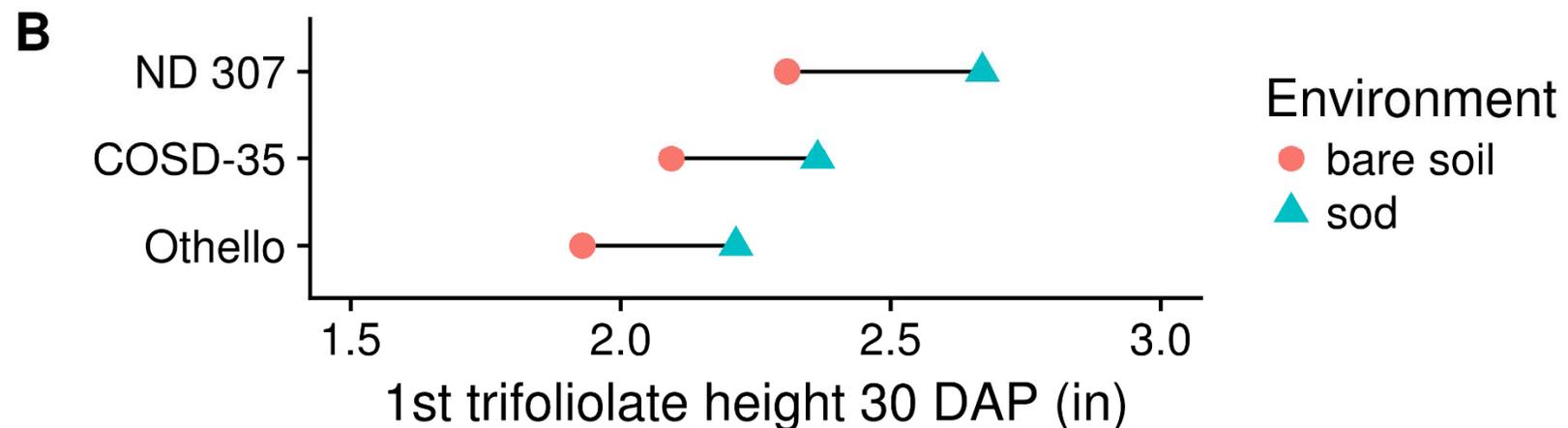
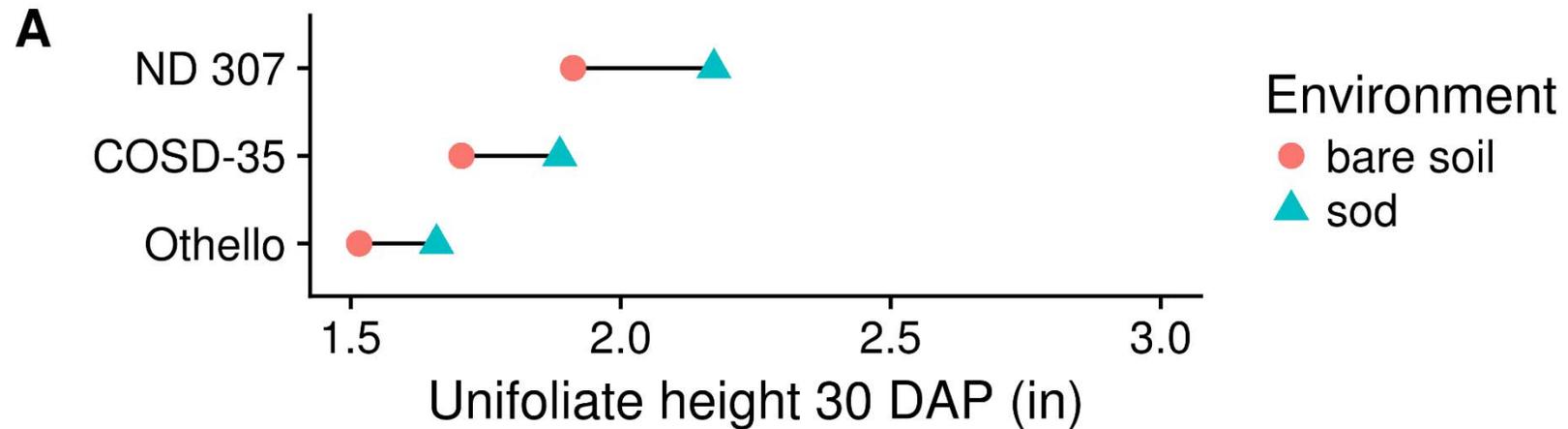
Box Study:



Box Study:



Node height in response to sod



2019 Proposal:

Three bean varieties:

- 'Othello' (short)
- 'Staybright' (medium)
- 'ND 307' (tall)

Cover termination timing:

- Bare soil (control)
- 7 days before planting
- Day of planting
- 7 days after planting
- 14 days after planting
- 21 days after planting

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Thank You!

Funding for this research:

Wyoming Dry Bean Commission (2016-2017)

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Stateline Bean Cooperative (2013)

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