

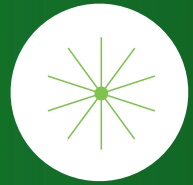


UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

UC Cooperative Extension

Managing Compost Bedded Pack Barns for Success in California

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Sonoma, Marin, &
Mendocino Counties



What is a Compost Barn?



Open resting area

Bedded with carbon-based material

Manure, urine, and bedding mixed twice daily

Holds ~2/3 collected manure

Benefits

Cow Comfort

More freedom of movement and can rise and lower more naturally

Cow Cleanliness

Provides a dry resting surface when managed properly

Low Maintenance

Twice daily tillage with bedding additions informed by moisture

Movement Ease

Improved footing for estrus expression and cows with feet and leg issues

Objectives

In barns constructed in the last 1-5 years, we aimed to quantify:

Moisture

Recommended: 40 - 60%

High Moisture

- Inhibit aerobic activity (loss of porosity/compaction)
- Increased adherence to teats

Low Moisture

- Inhibit microbial activity
- Dry lying surface??

C:N

Recommended: 25-30:1

Carbon = Energy

- Sawdust, almond hulls, shavings

Nitrogen = Protein

- Manure, urine

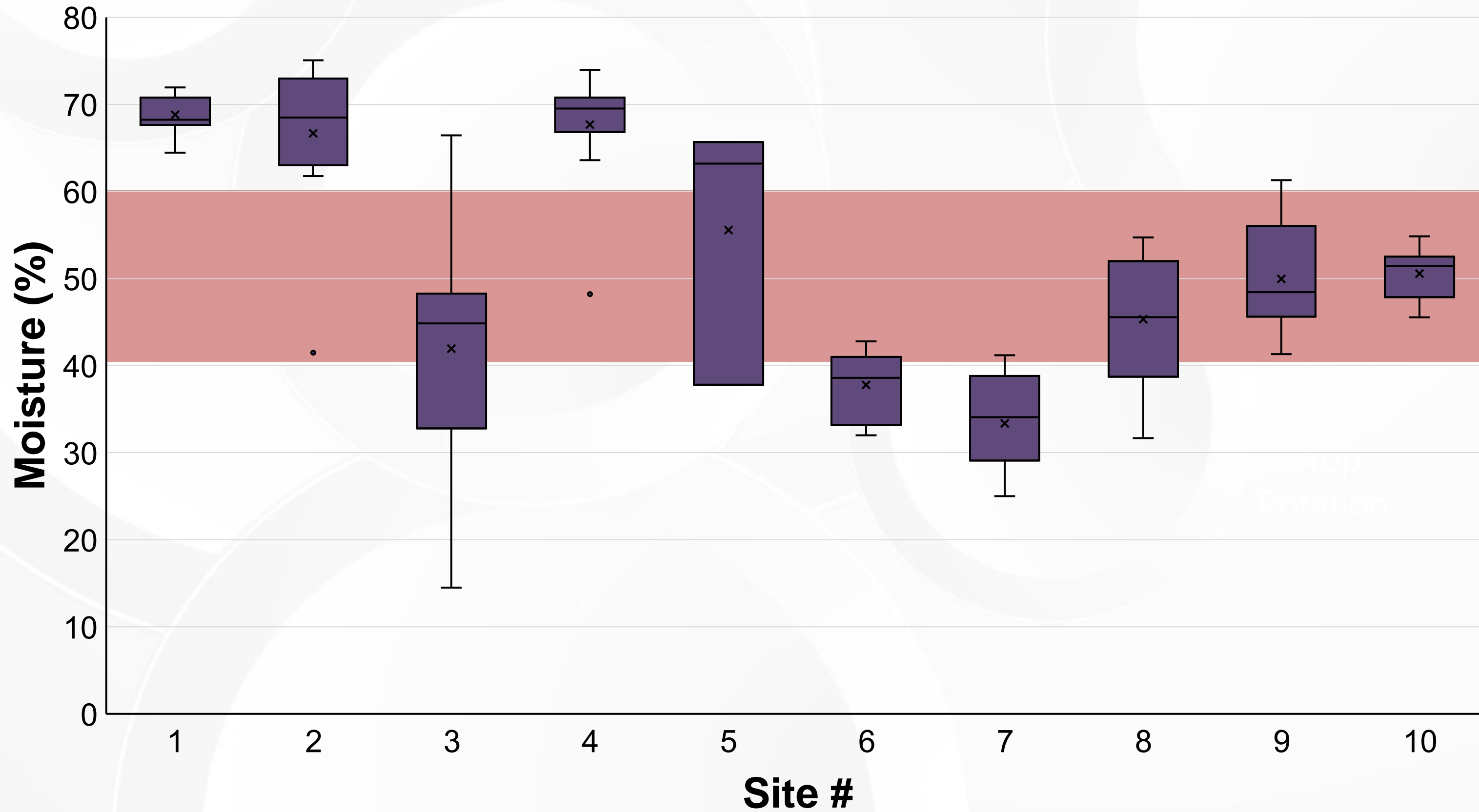
10 sites in Northern and Central California



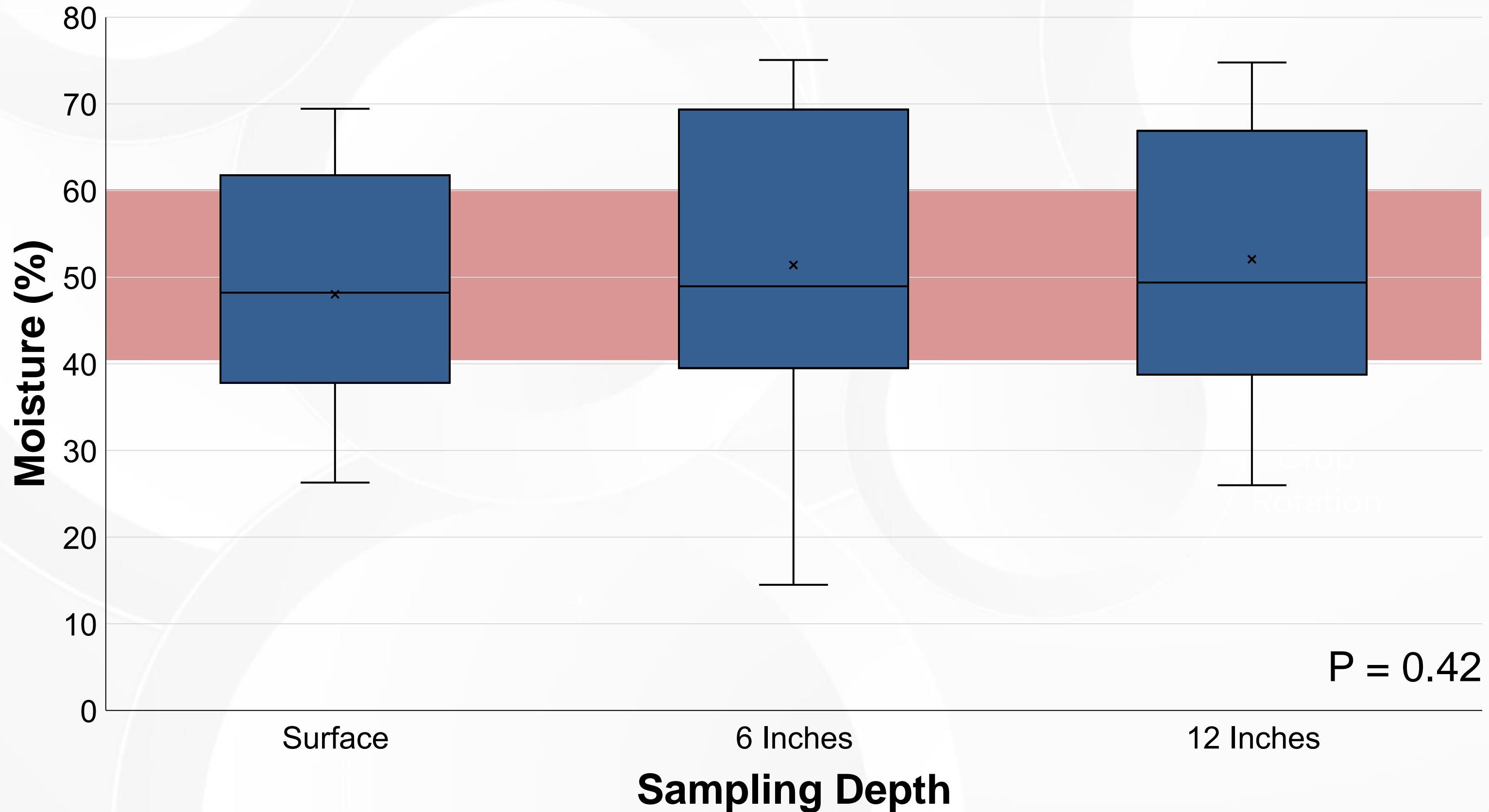
Results



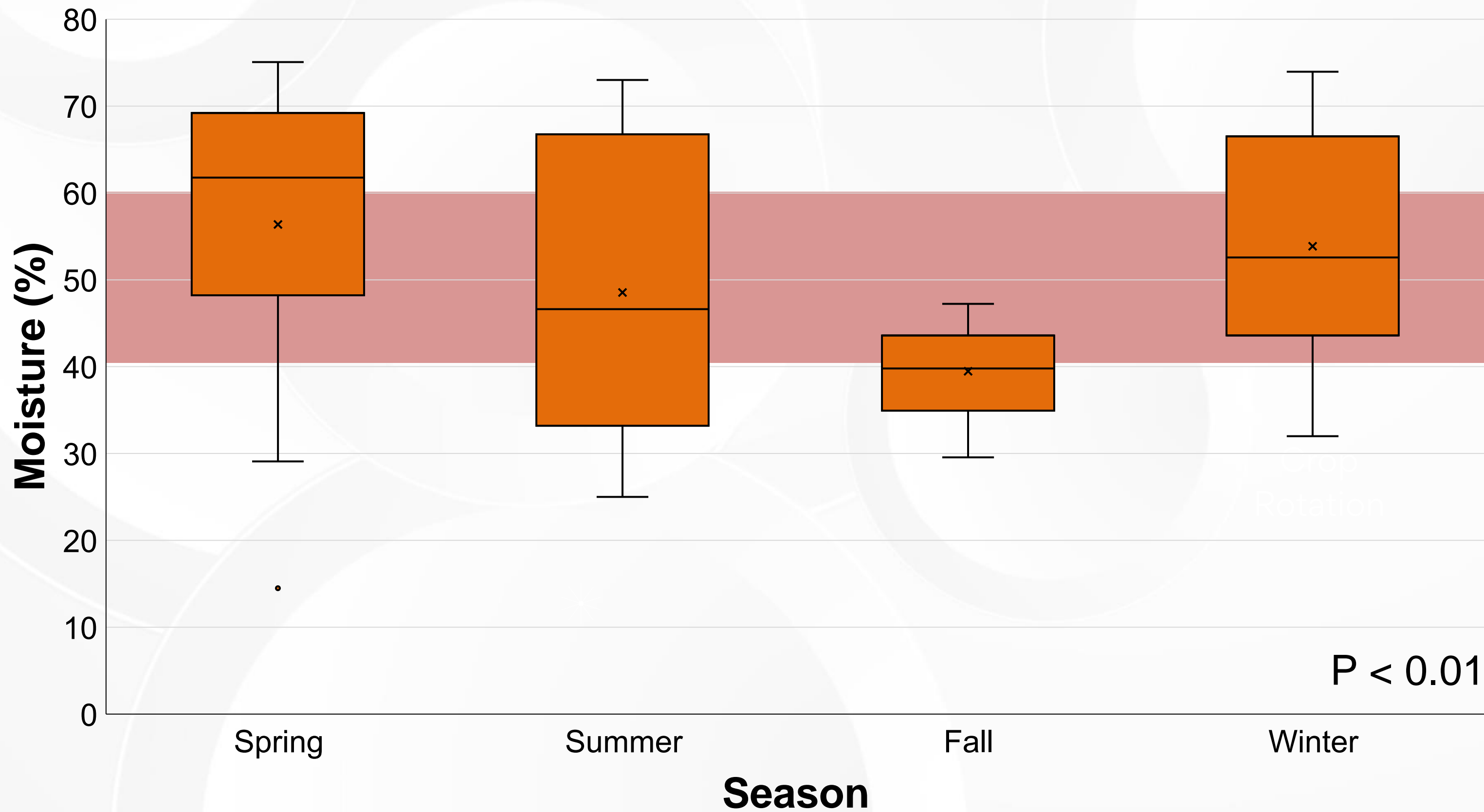
Moisture and Site



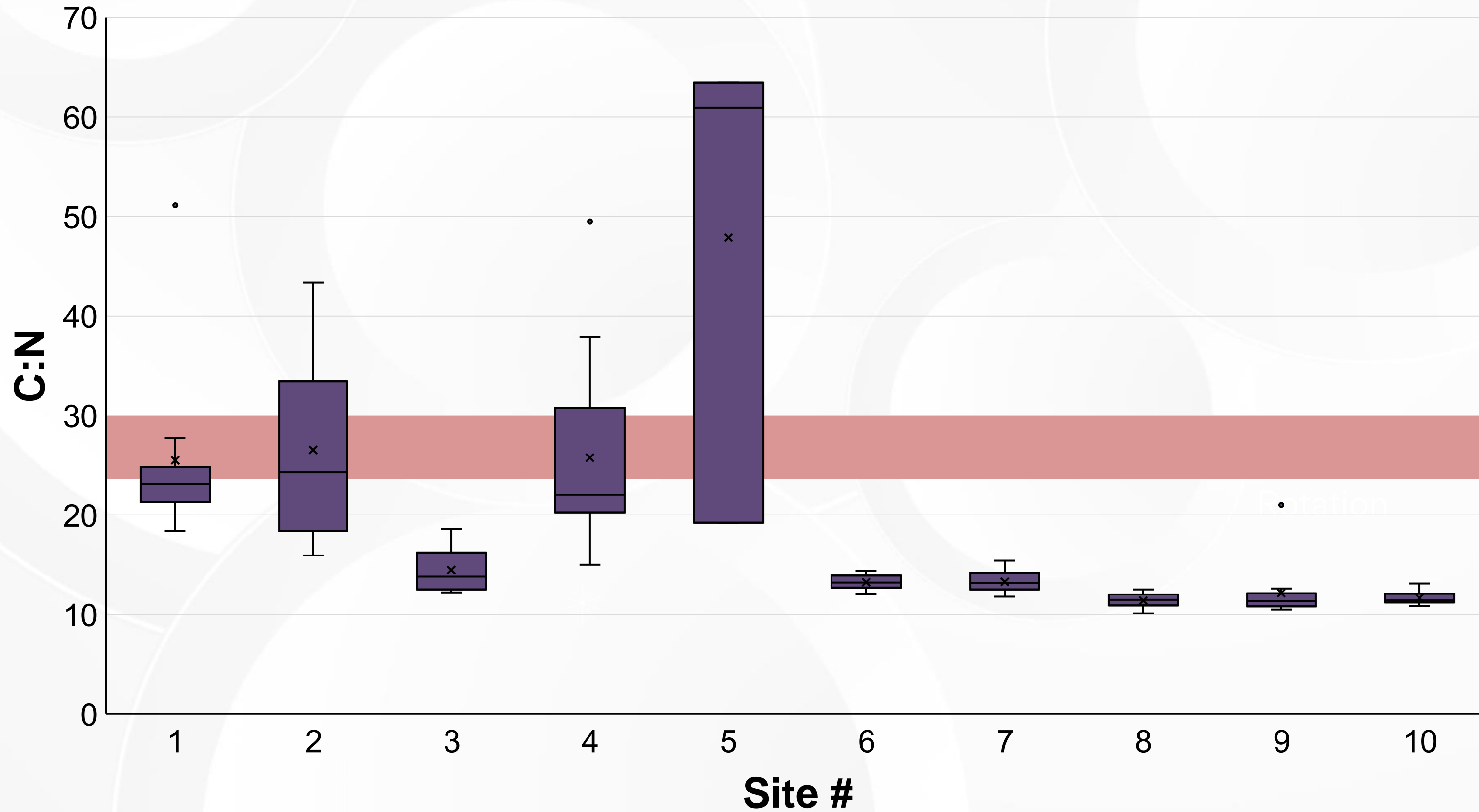
Moisture and Depth



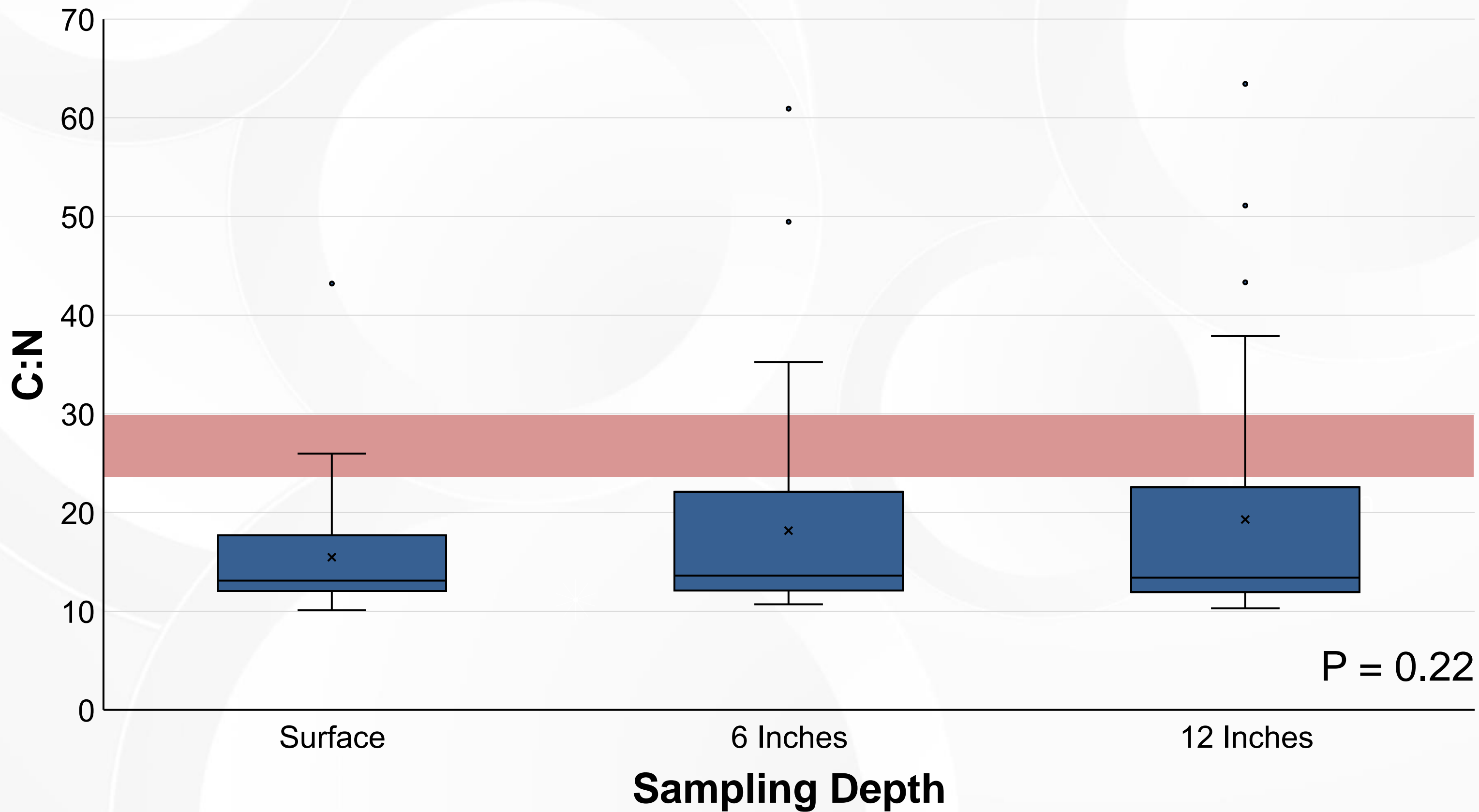
Moisture and Season



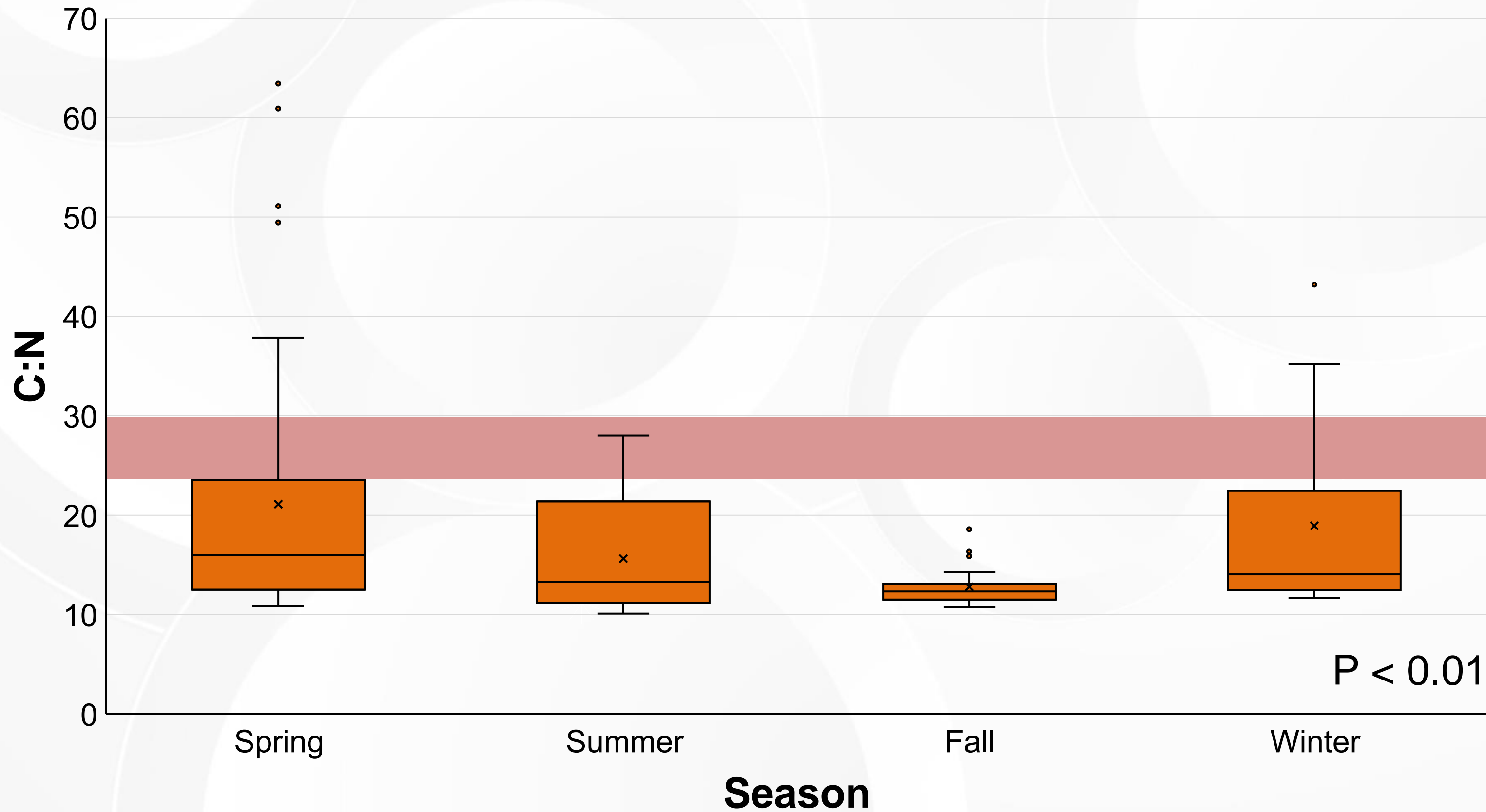
C:N and Site



C:N and Depth



C:N and Season



Take Always



High site variability

No difference in moisture or C:N with depth

Fall resulted in lower moisture and C:N

Adding bedding can increase C:N and reduce moisture





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Thank You

Questions?



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