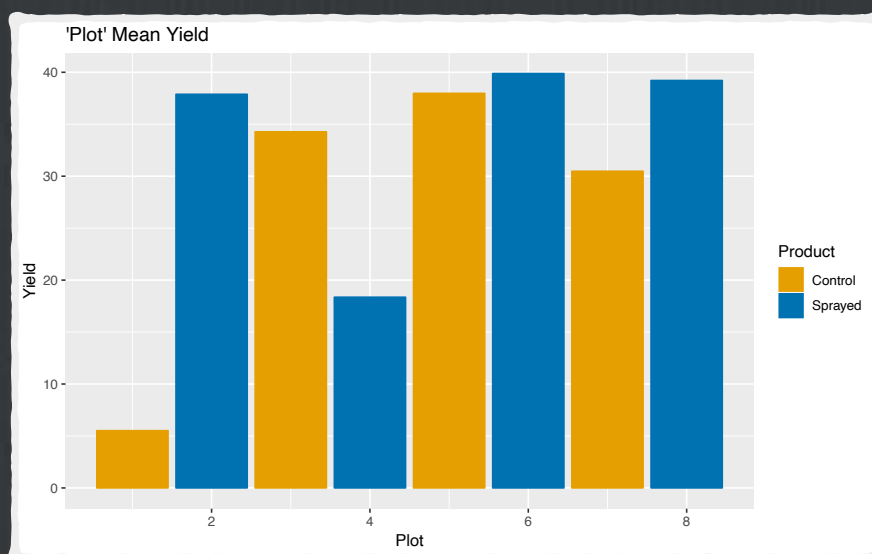
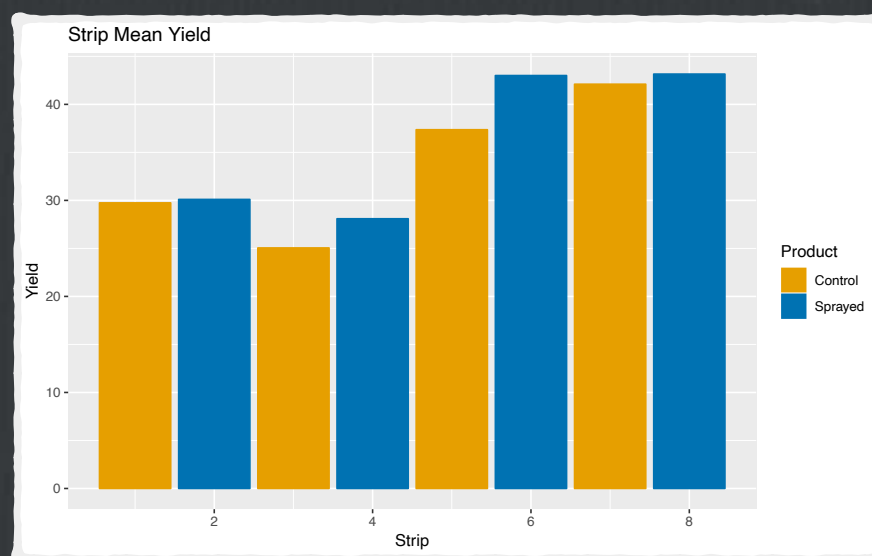


Theoretical Randomizations



- ☐ Under the null hypothesis
 - ☐ The most extreme result (treated yield higher on 4 of 4 pairs, or untreated yield higher on 4 of 4 pairs) could have happened in 2 out of 16 = 0.125 arrangements.
 - ☐ The next most extreme result (treated yield higher on 3 of 4 pairs, or untreated yield higher on 3 of 4 pairs) could have happened in 8 out of 16 arrangements; only 6 of 16 would have been less extreme ($p = 1 - 6/16 = 0.625$)

Results



- ☐ `> wilcox.test(Yield ~ Product, paired=TRUE,...)`
Wilcoxon signed rank test
 data: Yield by Product
 $V = 0$, $p\text{-value} = 0.125$
- ☐ `> t.test(Yield ~ Product, paired=TRUE, ...)`
Paired t-test
 data: Yield by Product
 $t = -2.1319$, $df = 3$, $p\text{-value} = 0.1228$
- ☐ `> friedman.test(Yield ~ Block | Product, ...)`
Friedman rank sum test
 data: Yield and Block and Product
 Friedman chi-squared = 6, $df = 3$, $p\text{-value} = 0.1116$
- ☐ `> anova(Yield ~ Block + Product, ...)`
Analysis of Variance Table
 Response: Yield

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Block	3	363.52	121.173	43.230	0.005732 **
Product	1	12.74	12.739	4.545	0.122791
Residuals	3	8.41	2.803		
- ☐ `> wilcox.test(Yield ~ Product, paired=TRUE,...)`
Wilcoxon signed rank test
 data: Yield by Product
 $V = 3$, $p\text{-value} = 0.625$
- ☐ `> t.test(Yield ~ Product, paired=TRUE, ...)`
Paired t-test
 data: Yield by Product
 $t = -0.67812$, $df = 3$, $p\text{-value} = 0.5463$
- ☐ `> friedman.test(Yield ~ Block | Product, ...)`
Friedman rank sum test
 data: Yield and Block and Product
 Friedman chi-squared = 4.2, $df = 3$, $p\text{-value} = 0.2407$
- ☐ `> anova(Yield ~ Block + Product, ...)`
Analysis of Variance Table
 Response: Yield

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Block	3	369.77	123.258	0.6174	0.6492
Product	1	91.80	91.802	0.4599	0.5463
Residuals	3	598.90	199.633		