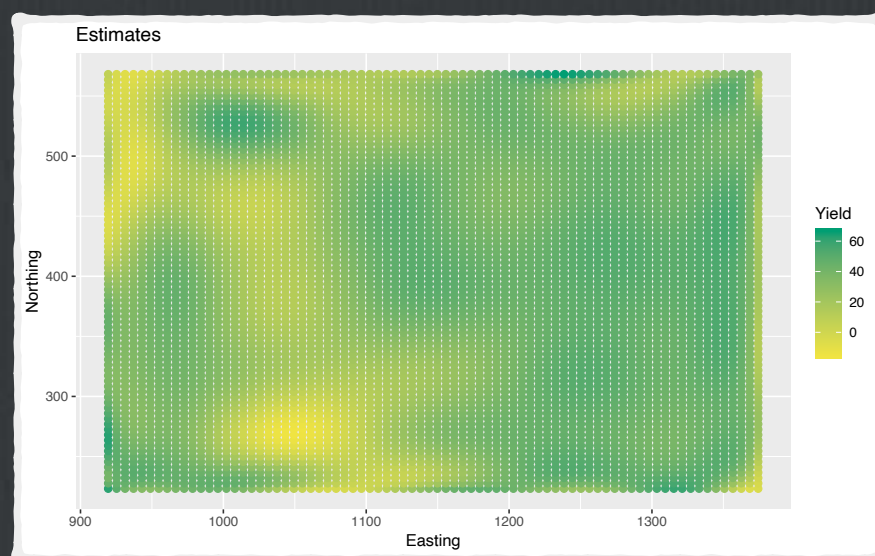
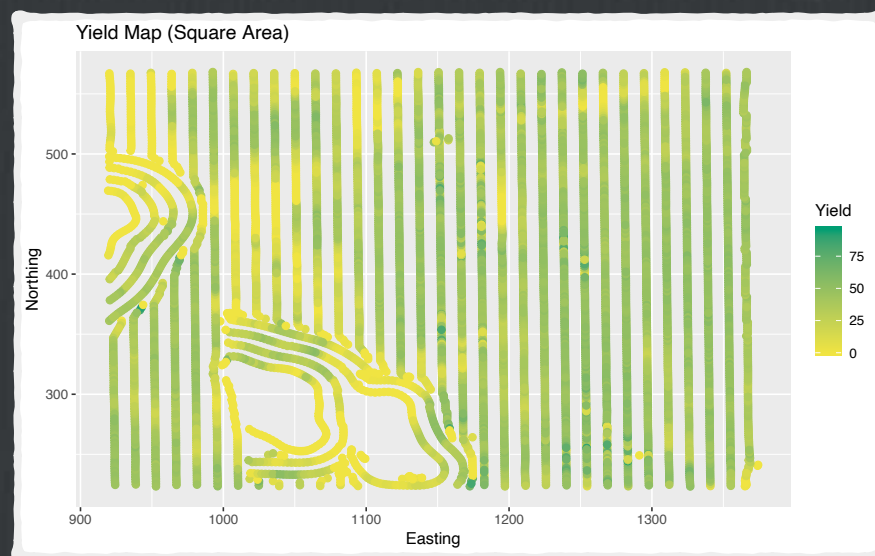


# Expanded Square



□ Likelihood test to compare 2D models with and without treatment effect

□ Likelihood ratio test

Model 1:  $\text{Yield} \sim \text{poly}(\text{Easting}, 17) * \text{poly}(\text{Northing}, 17)$

Model 2:  $\text{Yield} \sim \text{poly}(\text{Easting}, 17) * \text{poly}(\text{Northing}, 17) + \text{Sprayed}$

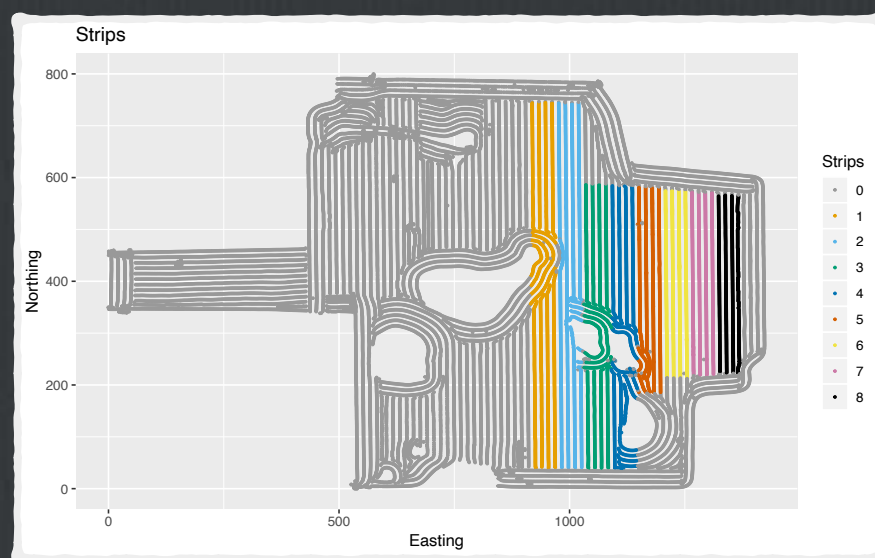
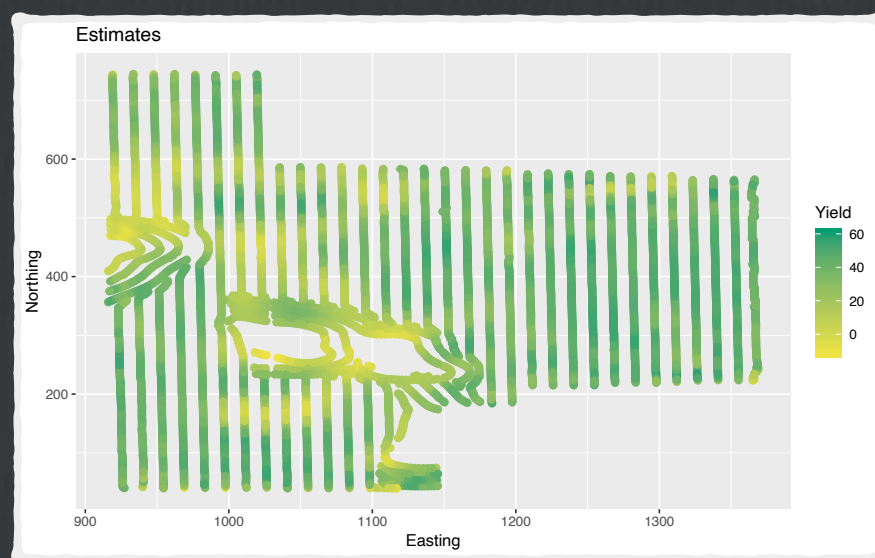
	#Df	LogLik	Df	Chisq	Pr(>Chisq)
1	325	-21602			
2	326	-21601	1	1.0578	0.3037

□ and

$H_{2D} : \tau = 0.648, p(t) = 0.317$

□ But we require some degree of interpolation to fill in missing areas.

# All Strips



□ Likelihood test to compare 2D models with and without treatment effect

□ Likelihood ratio test

Model 1:  $\text{Yield} \sim \text{poly}(\text{Easting}, 21) * \text{poly}(\text{North}, 21)$

Model 2:  $\text{Yield} \sim \text{poly}(\text{Easting}, 21) * \text{poly}(\text{North}, 21) + \text{Sprayed}$

	#Df	LogLik	Df	Chisq	Pr(>Chisq)
1	485	-29622			
2	486	-29622	1	1.8792	0.1704

□ and

$$H_{2D} : \tau = 0.833, p(t) = 0.183$$