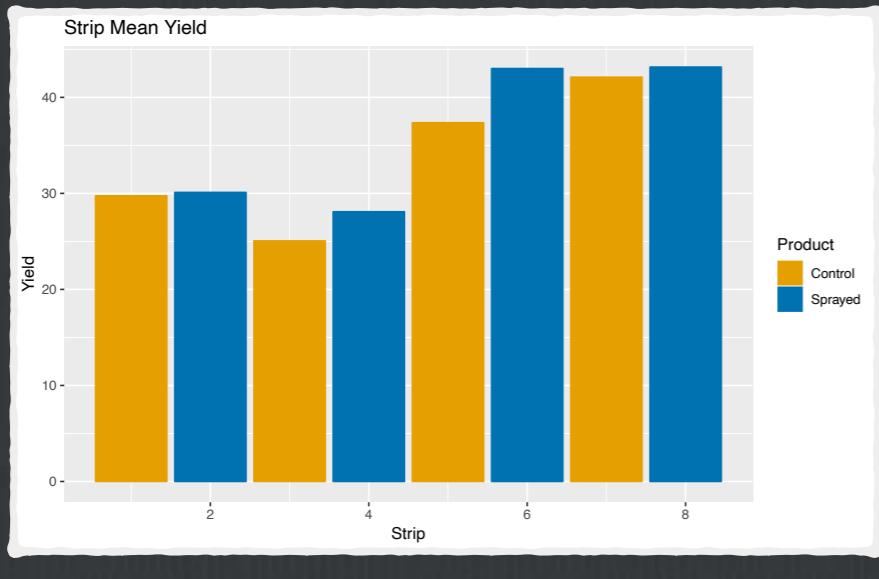


Modeling a Trend by Position



- Next, consider the trend models

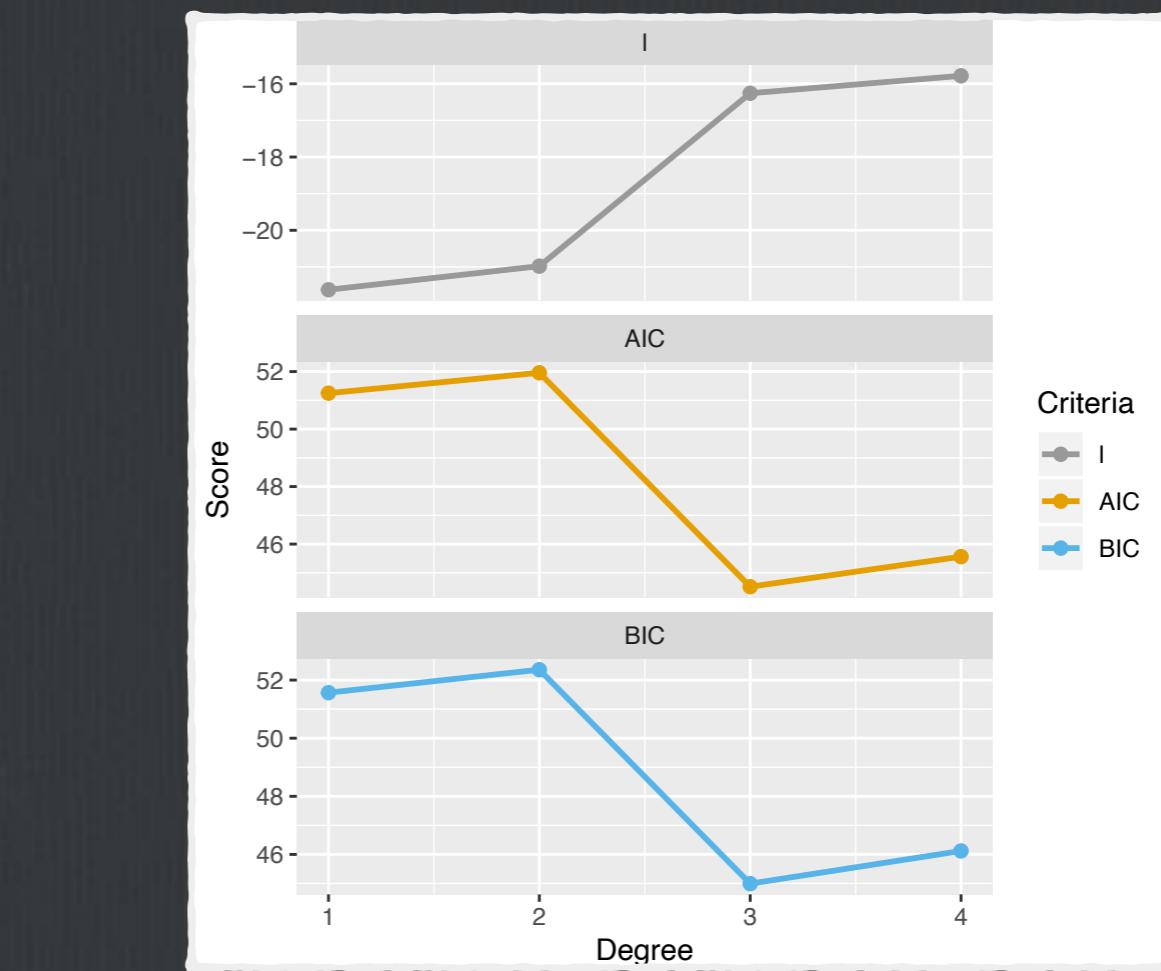
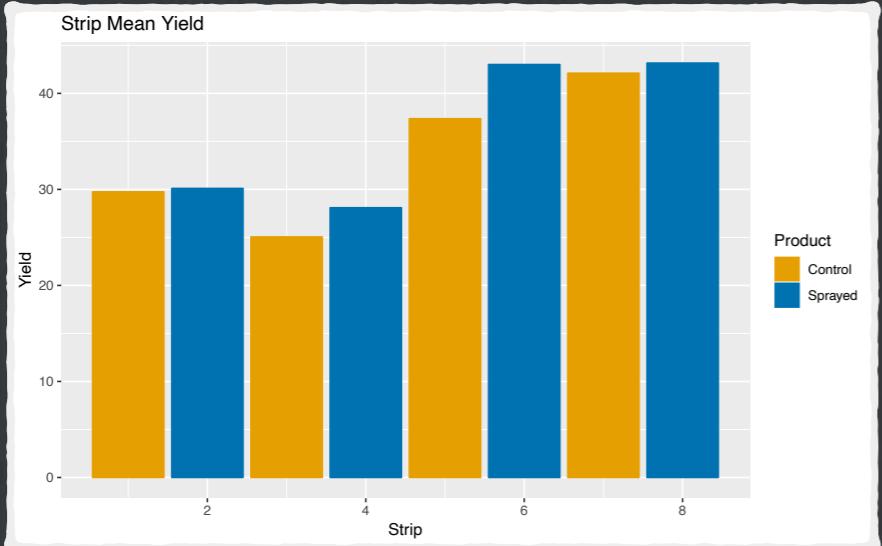
$$H_1 : y_{ij} = \beta_0 + \beta_1 E_{ij} + \tau_i + e_{ij}$$

$$H_2 : y_{ij} = \beta_0 + \beta_1 E_{ij} + \beta_2 E_{ij}^2 + \tau_i + e_{ij}$$

$$H_3 : y_{ij} = \beta_0 + \beta_1 E_{ij} + \dots + \beta_3 E_{ij}^3 + \tau_i + e_{ij}$$

$$H_4 : y_{ij} = \beta_0 + \beta_1 E_{ij} + \dots + \beta_4 E_{ij}^4 + \tau_i + e_{ij}$$

Model Selection



A cubic trend is the likely model