## **Analysis of Variance**

## LECTURE - 2

## **FACTORIAL EXPERIMENTS**

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Two factors: Irrigation (I) and Nitrogen (N).

Levels:

Irrigation has 2 levels:  $I_0$  and  $I_1$ 

Nitrogen has 2 levels:  $N_0$  and  $N_1$ 

Nitrogen *N*<sub>1</sub> Mean Effect Main Effect *N*<sub>0</sub> **I**<sub>0</sub> *I*<sub>0</sub>*N*<sub>0</sub> *I*<sub>0</sub>*N*<sub>1</sub> Irrigation *I*<sub>1</sub>  $I_1 N_0 \mid I_1 N_1$ General Mean Effect

Nitrogen *N*<sub>1</sub>  $N_1 - N_0$ Average Interaction Effect *N*<sub>0</sub> **I**<sub>0</sub> *I*<sub>0</sub>*N*<sub>0</sub> *I*<sub>0</sub>*N*<sub>1</sub> Irrigation *I*<sub>1</sub>  $I_1 N_0 \mid I_1 N_1$ **General Mean Effect** 

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		Nitrogen						
		N <sub>0</sub>	<b>N</b> <sub>1</sub>	$N_1 - N_0$		Average	,	
Irrigation	<b>I</b> 0	<i>l</i> <sub>0</sub> <i>N</i> <sub>0</sub>	<i>I</i> <sub>0</sub> <i>N</i> <sub>1</sub>					
Irrig:	<b>I</b> <sub>1</sub>	<i>I</i> <sub>1</sub> <i>N</i> <sub>0</sub>	<i>I</i> <sub>1</sub> <i>N</i> <sub>1</sub>					
				General Mean Effect				

				6
		Nitrog		
		N <sub>0</sub>	<b>N</b> <sub>1</sub>	
Irrigation	<b>I</b> 0	<i>I</i> <sub>0</sub> <i>N</i> <sub>0</sub>	<i>I</i> <sub>0</sub> <i>N</i> <sub>1</sub>	
Irrig	<i>I</i> <sub>1</sub>	<i>I</i> <sub>1</sub> <i>N</i> <sub>0</sub>	<i>I</i> <sub>1</sub> <i>N</i> <sub>1</sub>	
Mean Effect				General Mean Effect
Main Effec				