

## Economics of No-till Wheat

- Whether **No-till Wheat** is *profitable* Vs. **Conventional-till Wheat** depends on...
  - Expenses for No-till vs. Conventional-till
  - Wheat Yields  $\Rightarrow$  Revenue
  - Crop Share Lease Arrangement
  - Future Cropping System effects...
    - *Impact on following crops in short & long run*

## No-till in Fallow thru Wheat

- **Rotation**: Wheat - Summer Crop - Fallow
  - $\Rightarrow$  *Summer Crop – Fallow – Wheat*
- ***Focus on...***
  - No-till vs. Conventional-till
  - Fallow Periods (Pre-Wheat): “Wet” / “Dry”
  - Wheat Growing Conditions: “Good” / “Poor”

## Fallow Weed Control

### *Summer Crop – Fallow – Wheat*

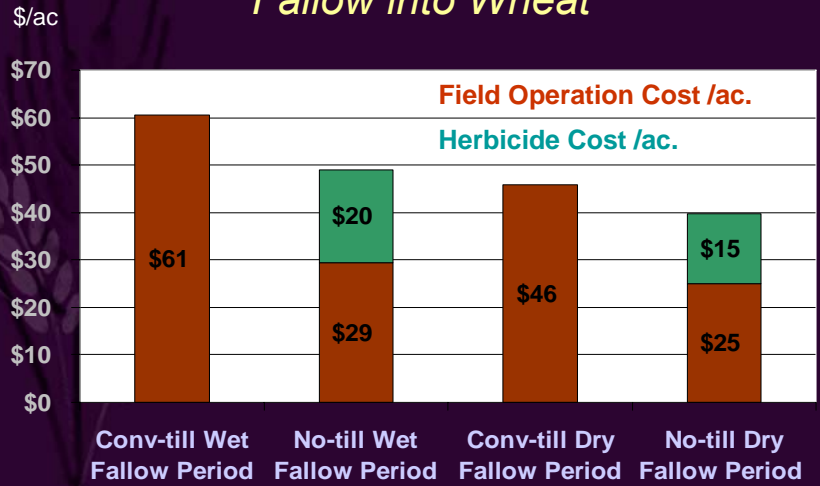
Tillage	Dry Summer	Wet Summer
No-till Spray Operations	3	4
Conventional-till (Field Cultivation with 1 Disk Operation)	5	7

## Wheat Systems

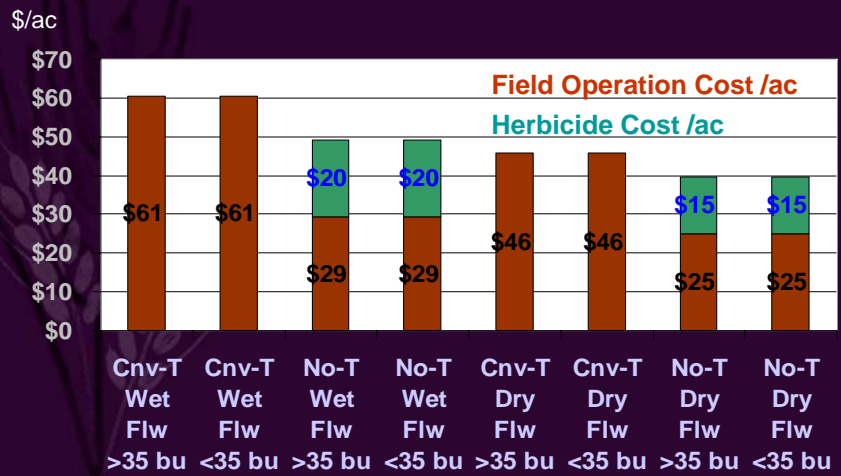
Tillage Regime	Fallow Period Moisture	Wheat Growing Season Regime
No-till	"Wet"	↑ 35 bu/a
		↓ 35 bu/a
	"Dry"	↑ 35 bu/a
		↓ 35 bu/a
Conventional-till	"Wet"	↑ 35 bu/a
		↓ 35 bu/a
	"Dry"	↑ 35 bu/a
		↓ 35 bu/a

# Tillage + Herbicide Costs

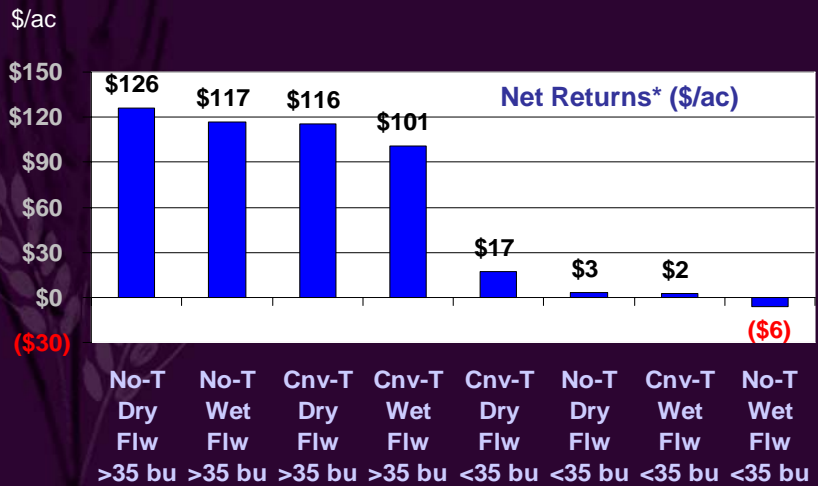
## Fallow into Wheat



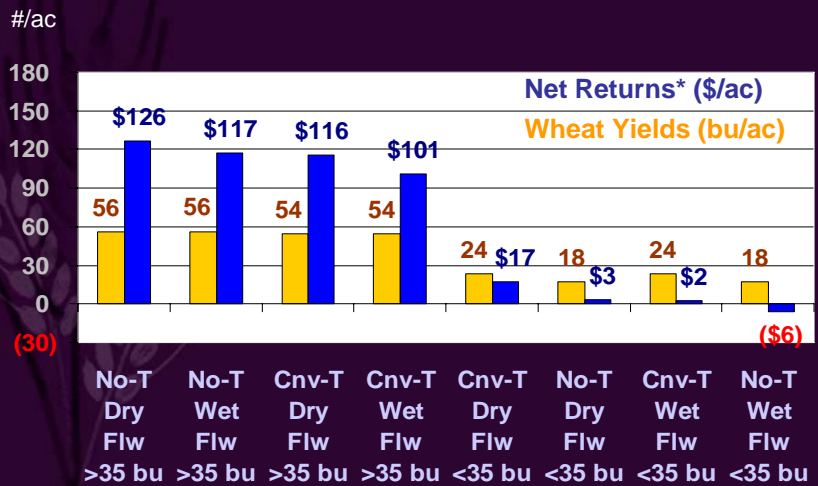
# Alternative View of Tillage + Herbicide Costs → 8 Scenarios



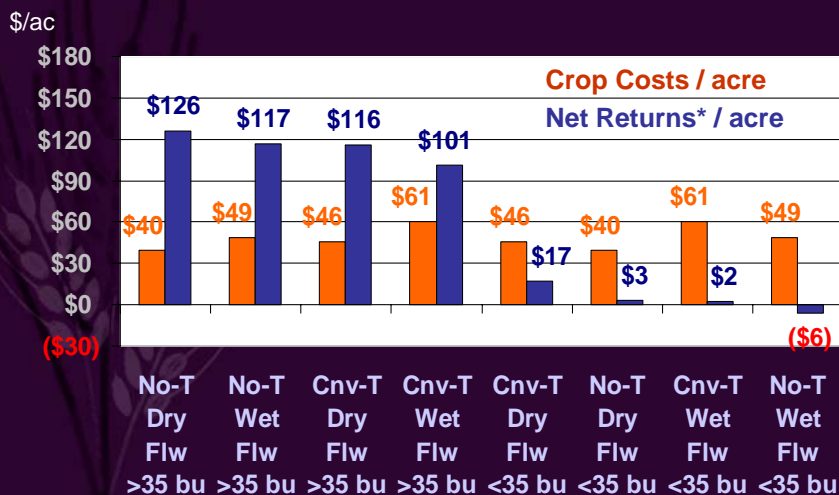
# Net Returns\*



# Wheat Yields & Net Returns\*



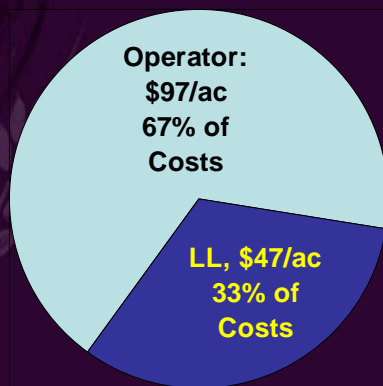
## Costs & Net Returns\*



## Crop Lease Equitable Shares

### Wheat -Summer Crop - Fallow

No-till "Wet" Fallow Period (>35 bu/a)



#### Operator Provides:

**67% Herbicide \$**

67% Fertilizer \$

100% Spray Application

100% Other Costs

#### Landowner Provides:

Farmland (100%)

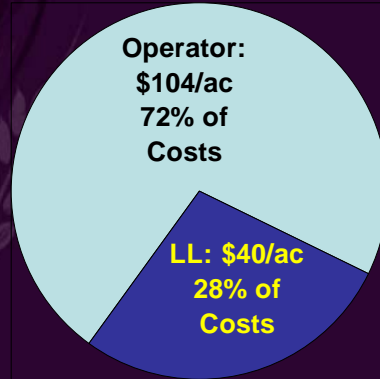
**33% Herbicide \$**

33% Fertilizer \$

## Crop Lease Equitable Shares

### Wheat -Summer Crop - Fallow

No-till "Wet" Fallow Period (>35 bu/a)



#### Operator Provides:

**100% Herbicide \$**

67% Fertilizer \$

100% Spray Application

100% Other Costs

#### Landowner Provides:

Farmland (100%)

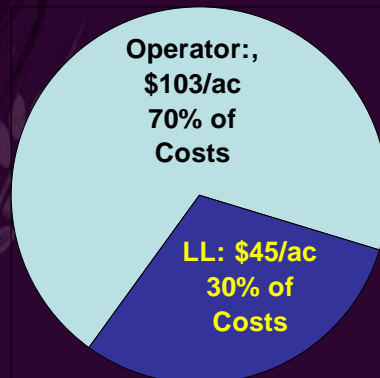
**0% Herbicide \$**

33% Fertilizer \$

## Crop Lease Equitable Shares

### Wheat -Summer Crop - Fallow

Conventional-till "Wet" Fallow Period (>35 bu/a)



#### Operator Provides:

**67% Herbicide \$**

67% Fertilizer \$

100% Spray Application

100% Other Costs

#### Landowner Provides:

Farmland (100%)

**33% Herbicide \$**

33% Fertilizer \$

## Summary Thoughts

- Wheat Yield benefits are not as much of an issue as Costs & potential moisture efficiency
  - *Immediate Wheat Yields impacts are neutral-positive*
  - *Once established, complete No-till may have more of a positive “systematic” impact upon both Wheat & Summer Crop yields / returns in future years*
- Leasing Issues
  - *(On paper) Seems to be necessary for herbicides to be shared for a 1/3 – 2/3 Lease to be equitable between Operator & Landowner*

## Comments or Questions?

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