2006 SMFD
Management for Improving Crop Water Use

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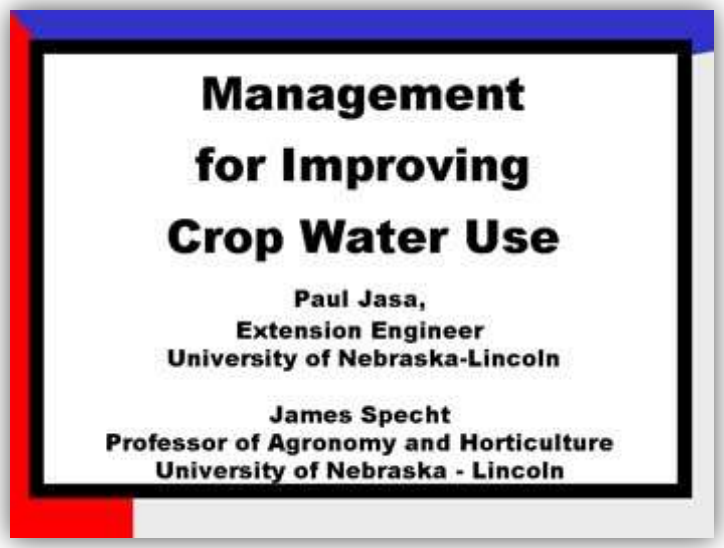

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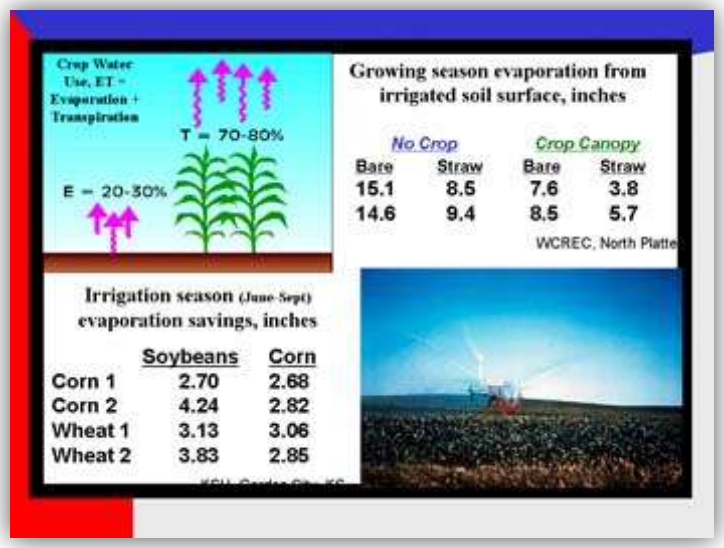

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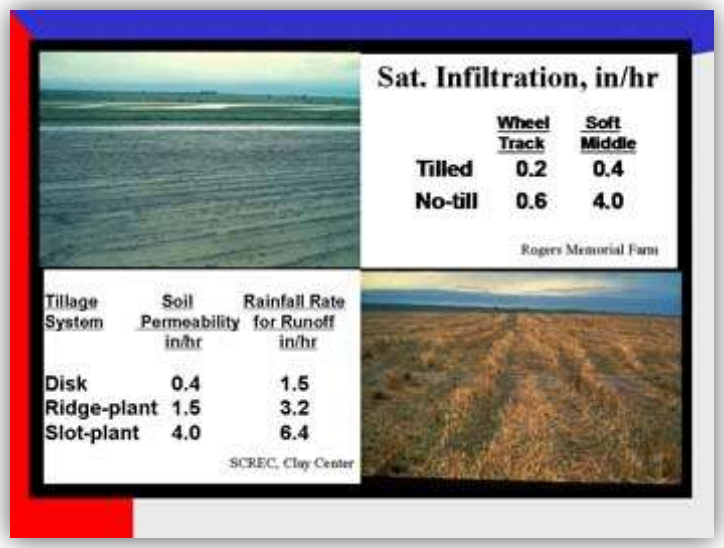

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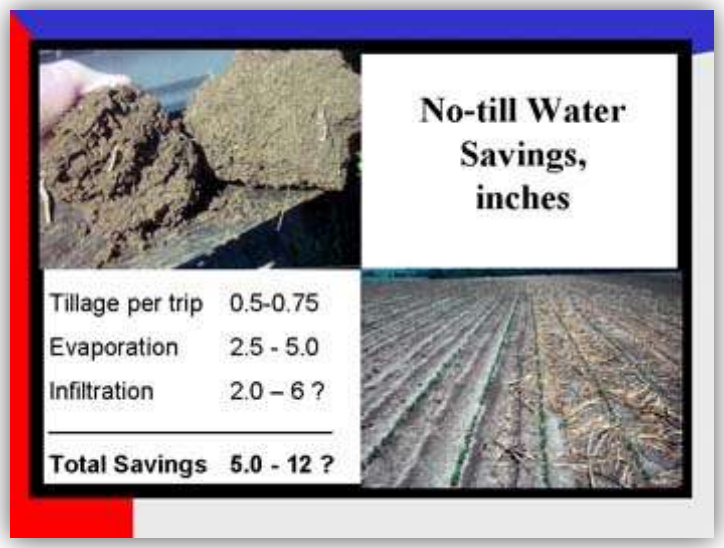

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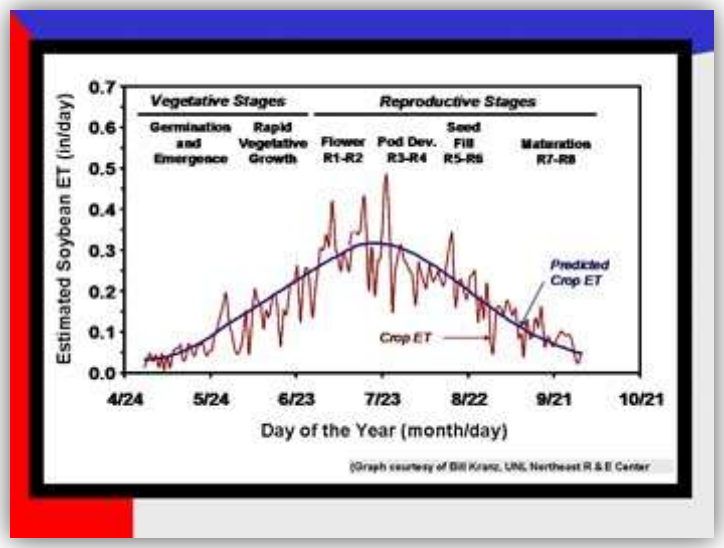

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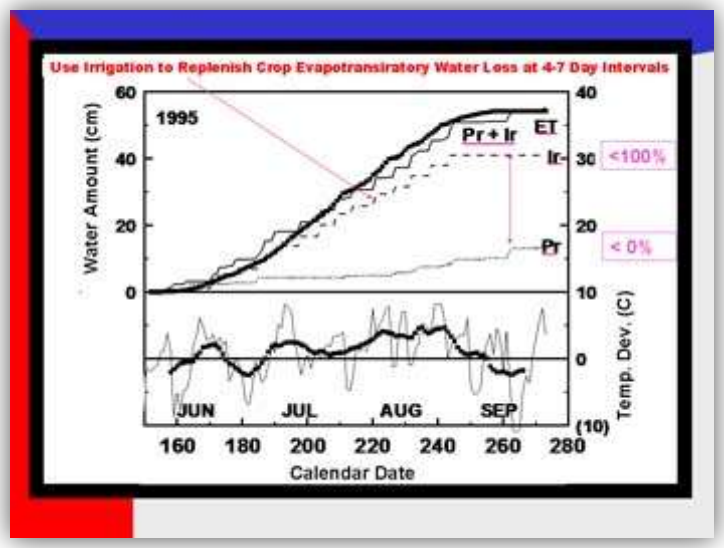

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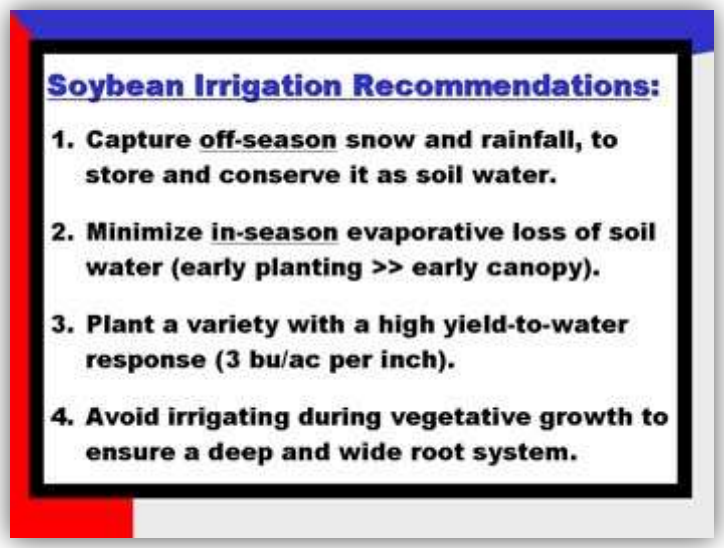

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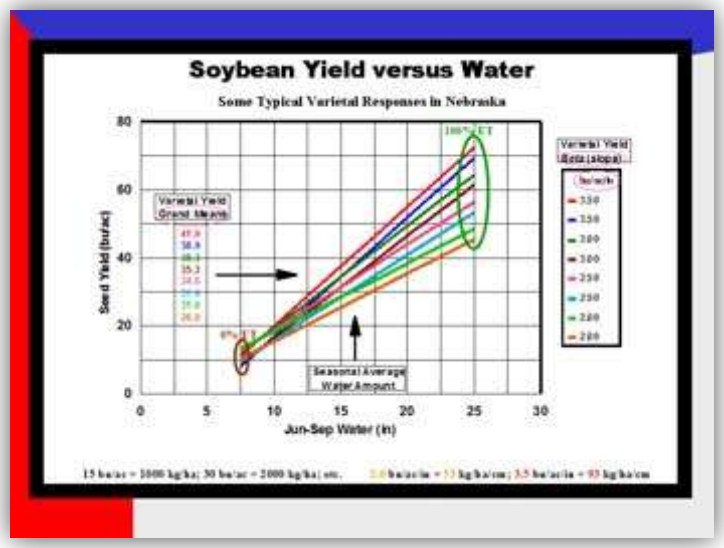

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Soybean Irrigation Recommendations:

5. Skip irrigation during flowering (R1-R2) to minimize disease risks of rust & white mold, and to lessen lodging potential.
6. Always irrigate at pod elongation (R3-R4), the most yield-sensitive R-stage. Delivers max "yield bang" for the "irrigation buck".
7. Continue irrigation during seed-filling (R5-R6) as August water is more critical for soybean than corn. Don't stop too soon!

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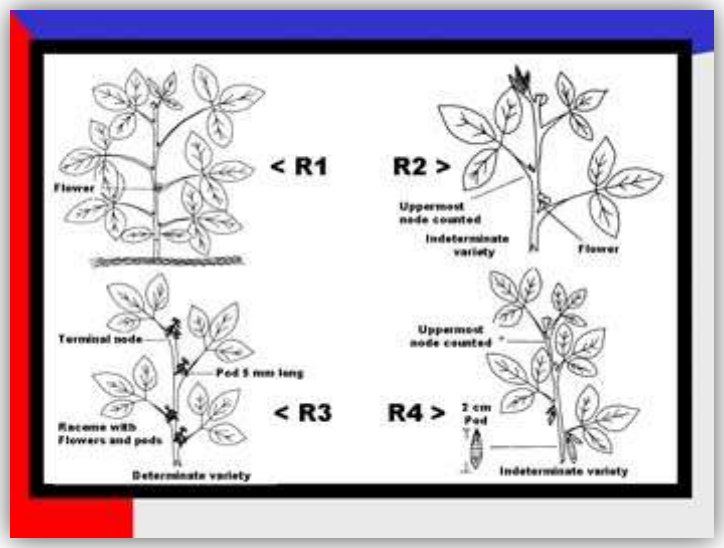

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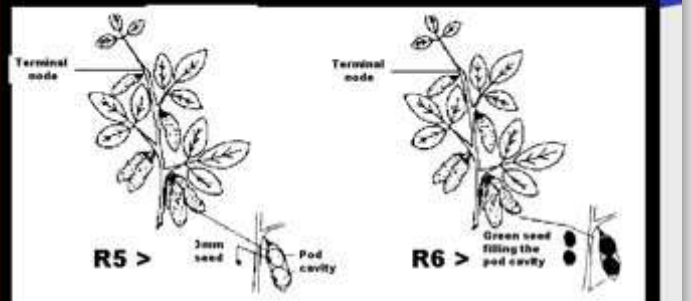

R7 is reached when there is one mature brown pod on the plant

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Three Factors Influence Your Ability to Optimize Your Soybean Yields:

*Soil Type/Conditions

*Seasonal Water Supply

*Your Management

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Soybean Irrigation Pointers:

1. If your crop rotation is corn/soybean and you are not achieving a long-term Corn/Soy yield ratio of 3.25 (examples: 175/53.8, 200/61.5, 225/69.2, 250/76.9, then you are likely mismanaging one of the two crops.
2. Soybean yield response to water is linear and a high-yield variety delivers 3.5 bu/ac per inch of irrigation. With 8 inches of water, you could apply all 8 inches to a 100-acre field or apply 1 inch over a 800-acre field. How many here would take the first option?

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Soybean Irrigation Pointers:

3. Some irrigation scheduling models treat the top 3-ft of soil zone as fully loaded with roots. Actually only the root hairs absorb water, and they mine soil water from a given layer before moving to the next soil layer.
4. Some irrigated producers think that they can plant late and use irrigation during vegetative growth to bring the crop back to a plant height similar to an earlier planted non-irrigated field. How many of you do this?

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Soils Differ for Available Water

Soil Texture	Available Water (in/ft)	
	Range	Typical
Fine sand	0.7 - 1.1	1.0
Sandy loam	0.9 - 1.5	1.4
Loam	1.2 - 2.3	1.8
Silt loam	1.4 - 2.6	2.0
Silty clay loam	1.5 - 2.5	2.2
Clay	1.6 - 2.2	1.8

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Take Home Messages

- Don't destroy soil structure with tillage and lose soil moisture
- Use residue cover to reduce erosion, crusting, and evaporation
- Select the proper maturity and plant early
- Irrigate primarily during pod fill, sparingly before that
- Don't shut off too early, fill those pods

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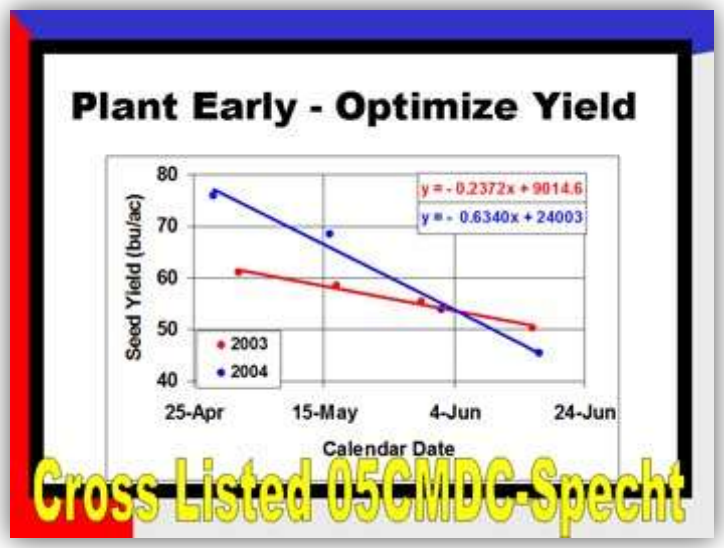

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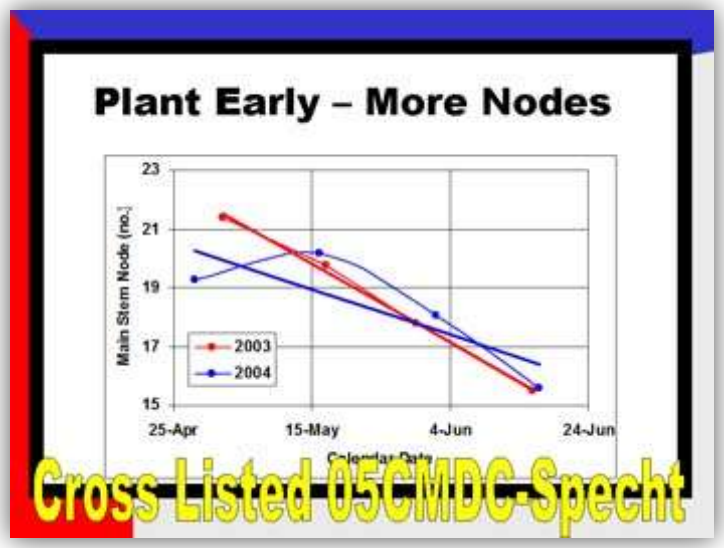

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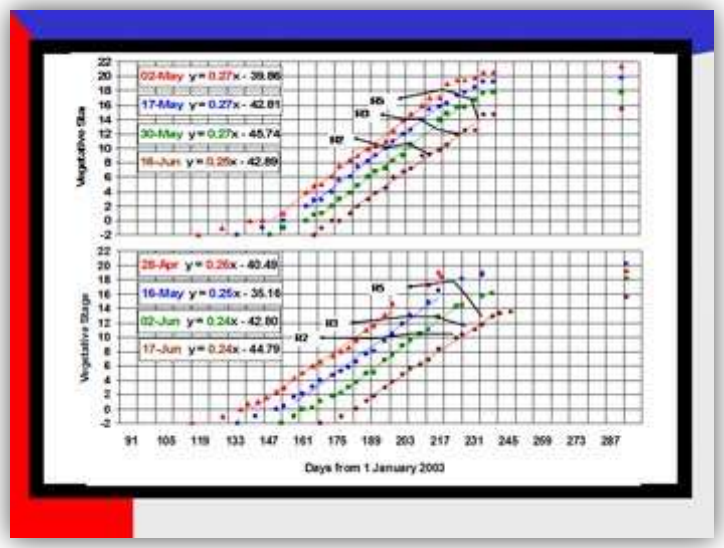

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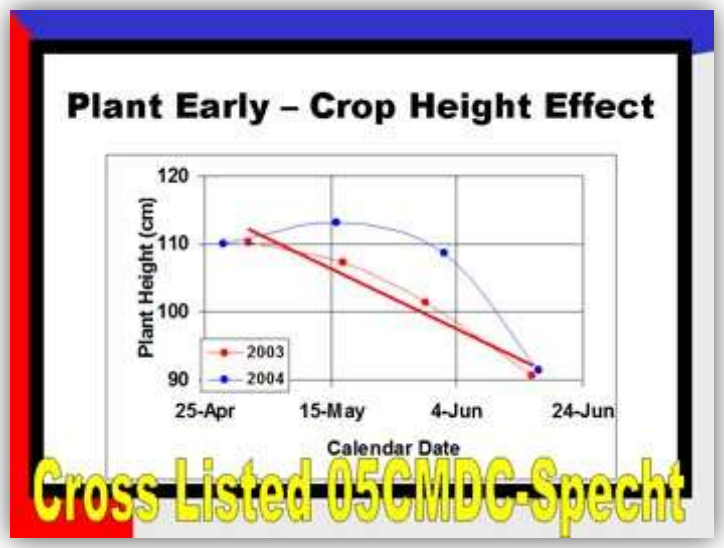

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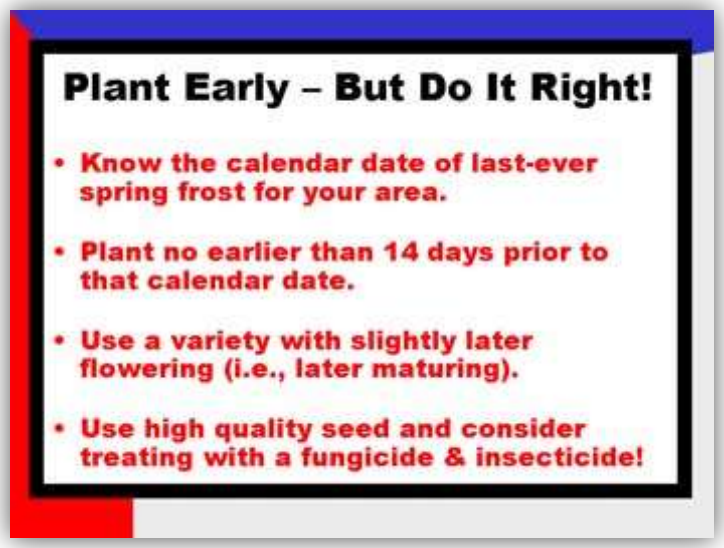

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