

Irrigation Management: An Agronomist's Perspective

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Photo courtesy of Texas Agrilife Extension Service

General Thoughts on Irrigation

- Irrigation is one of the best tools that we have yet it is the least well understood
- Water for irrigation is becoming an increasingly precious resource
 - San Joaquin Valley
- We must become better stewards of this resource

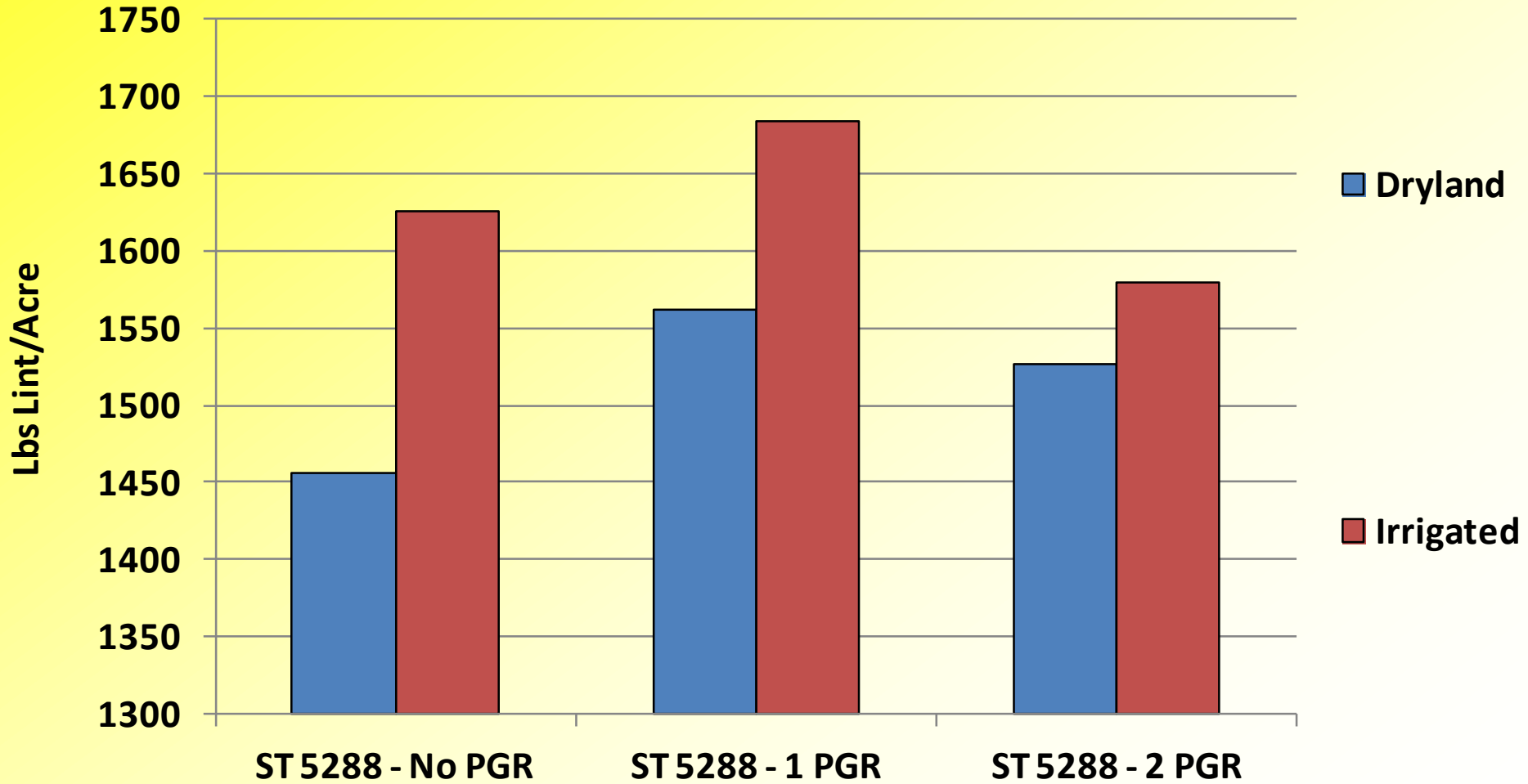
Typical Irrigation Questions

- **When can I stop irrigating?**
 - Growth stage
 - Depends on your irrigation system
 - Soil texture
- **When should I start irrigating?**
 - Depends
 - When irrigation usually starts
- **How long should I wait between irrigations?**

Transitioning to Irrigation

- **Variety selection**
- **Management of vegetative growth**
- **Insect management**
 - **Plant bugs**
 - **Stink bugs**

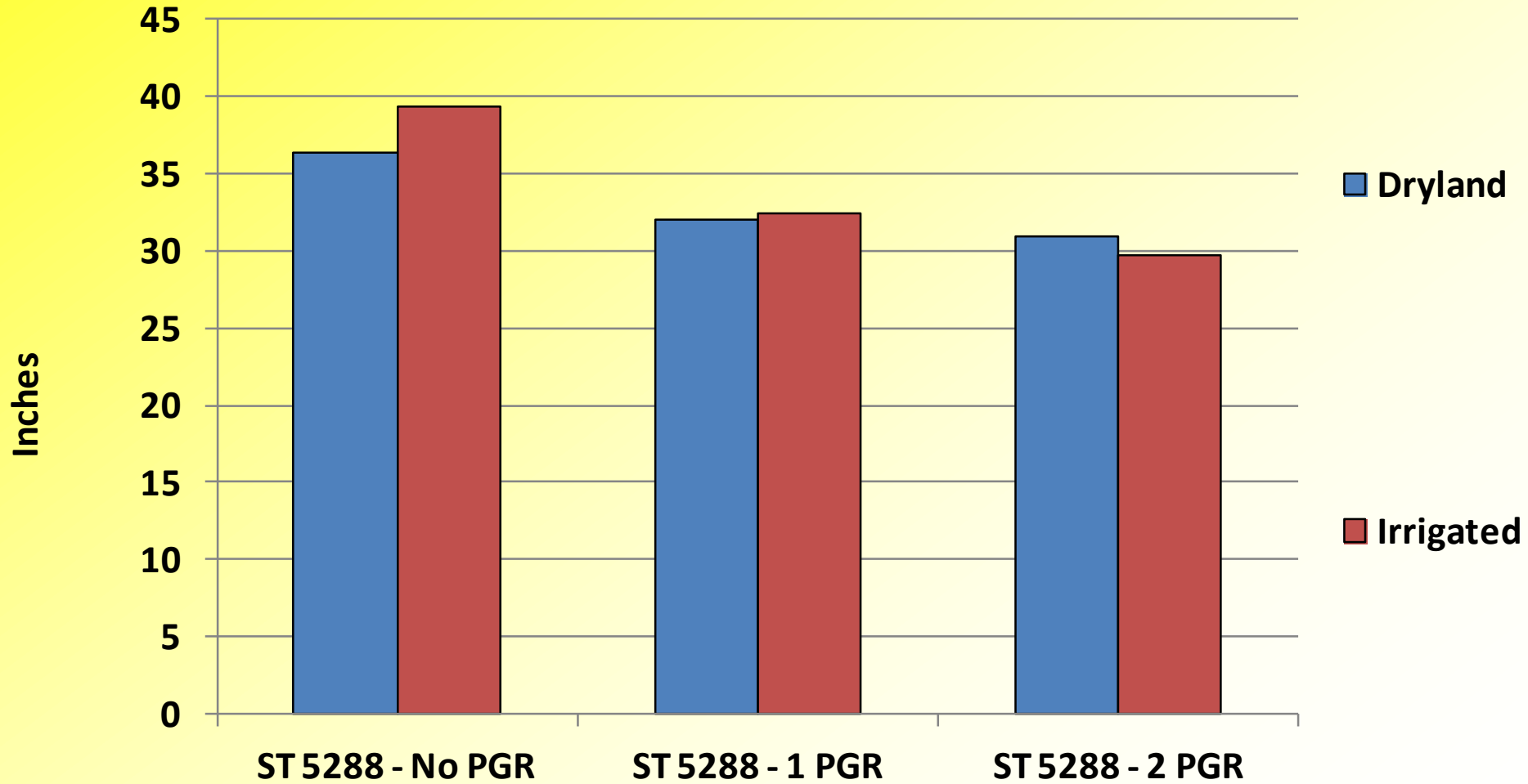
Yield



Transitioning to Irrigation

- **Variety selection**
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Plant Height



Transitioning to Irrigation

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Irrigation Advantages

- **Potential for increased crop production**
- **Increased land value**
- **Herbicide activation**
- **Fertigation**

On-Farm Experiments

- **Interest in improving irrigation management**
- **Decagon and Watermark soil moisture sensors installed at Bush Farms near Money, MS**
 - **Equipped with wireless communication**
- **Evaluate the effectiveness of soil moisture sensors for scheduling irrigation**
 - **Ease of use**
 - **Yield**
 - **Water savings**

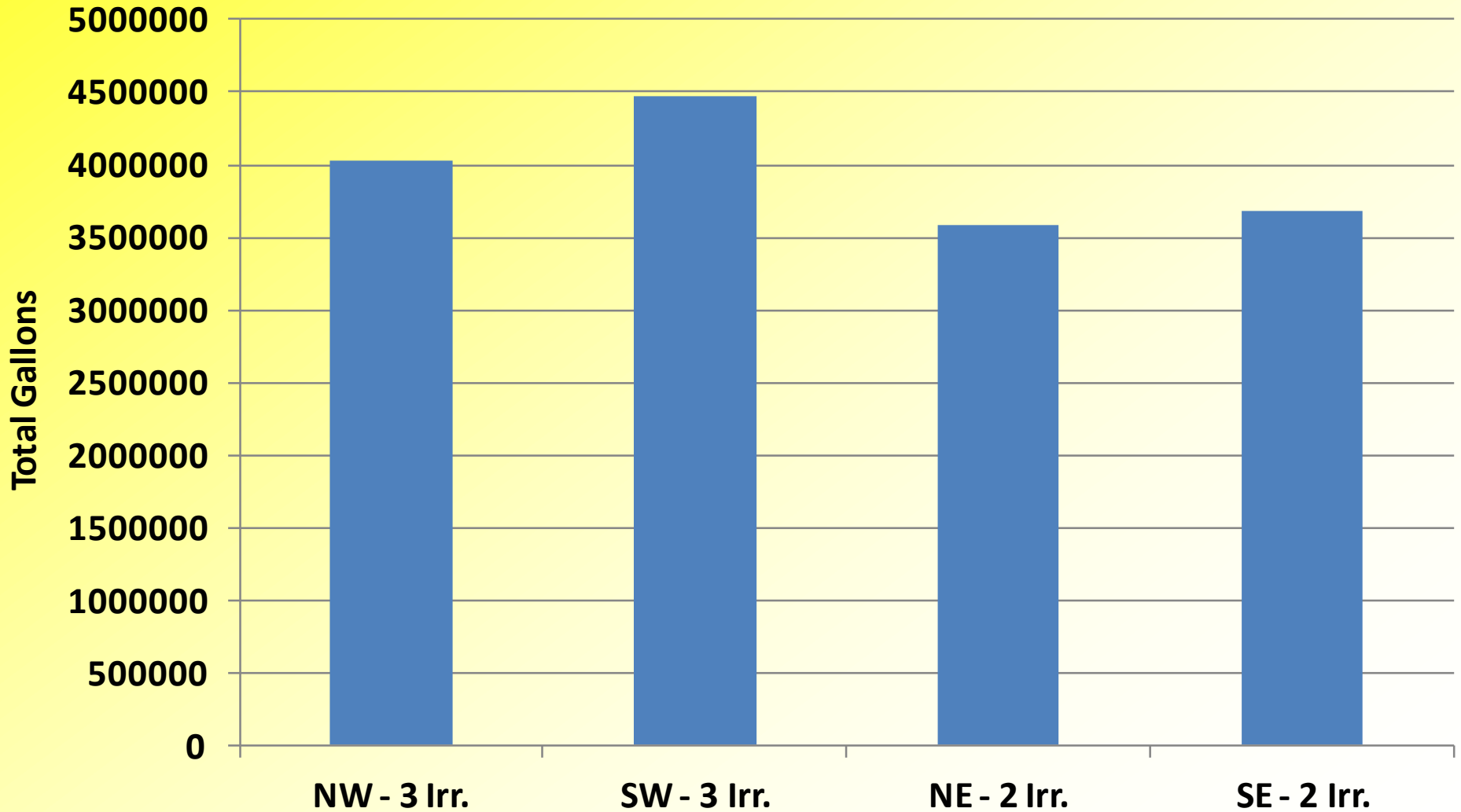
Bush Farms – Money, MS



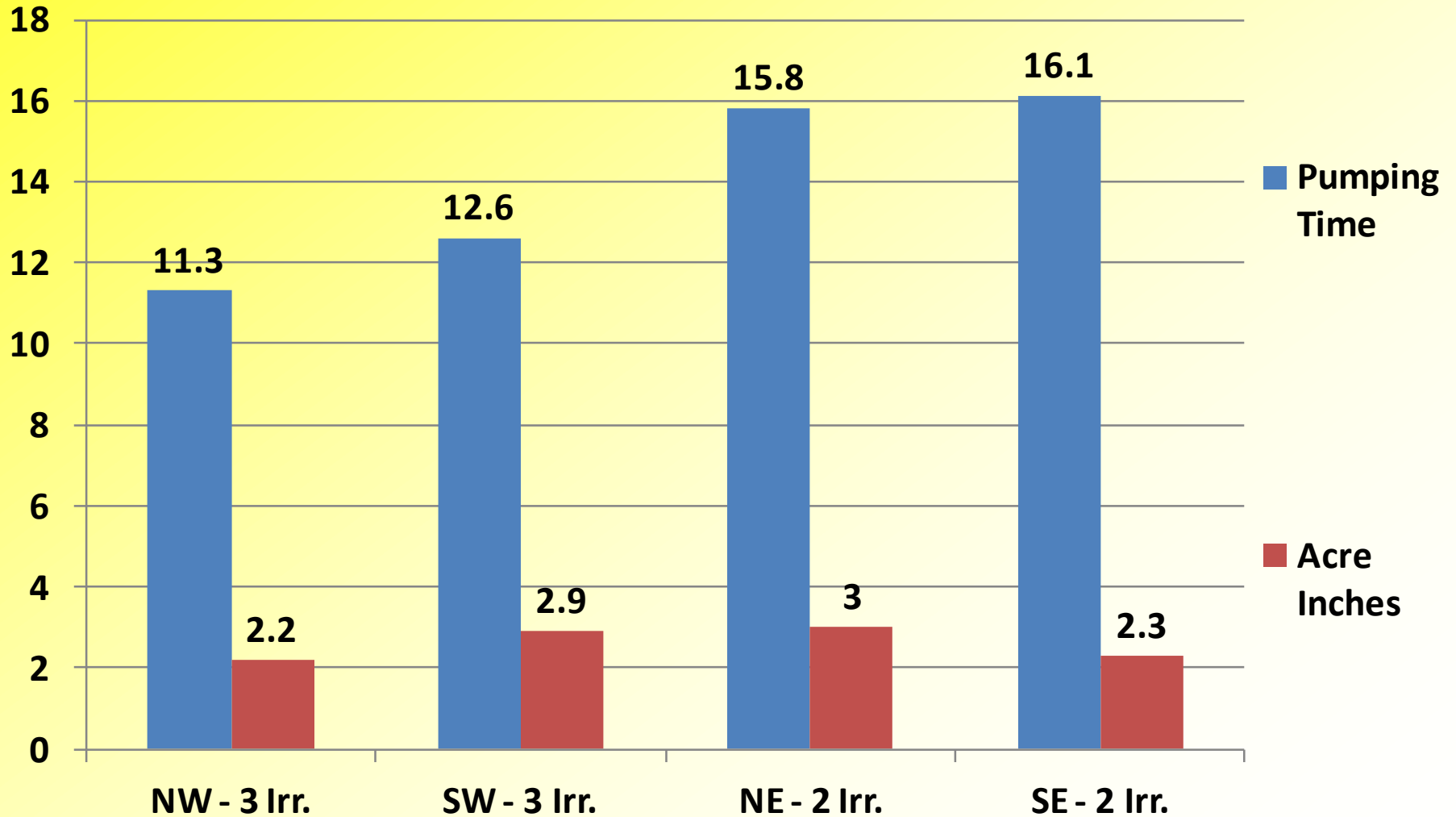
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Google earth

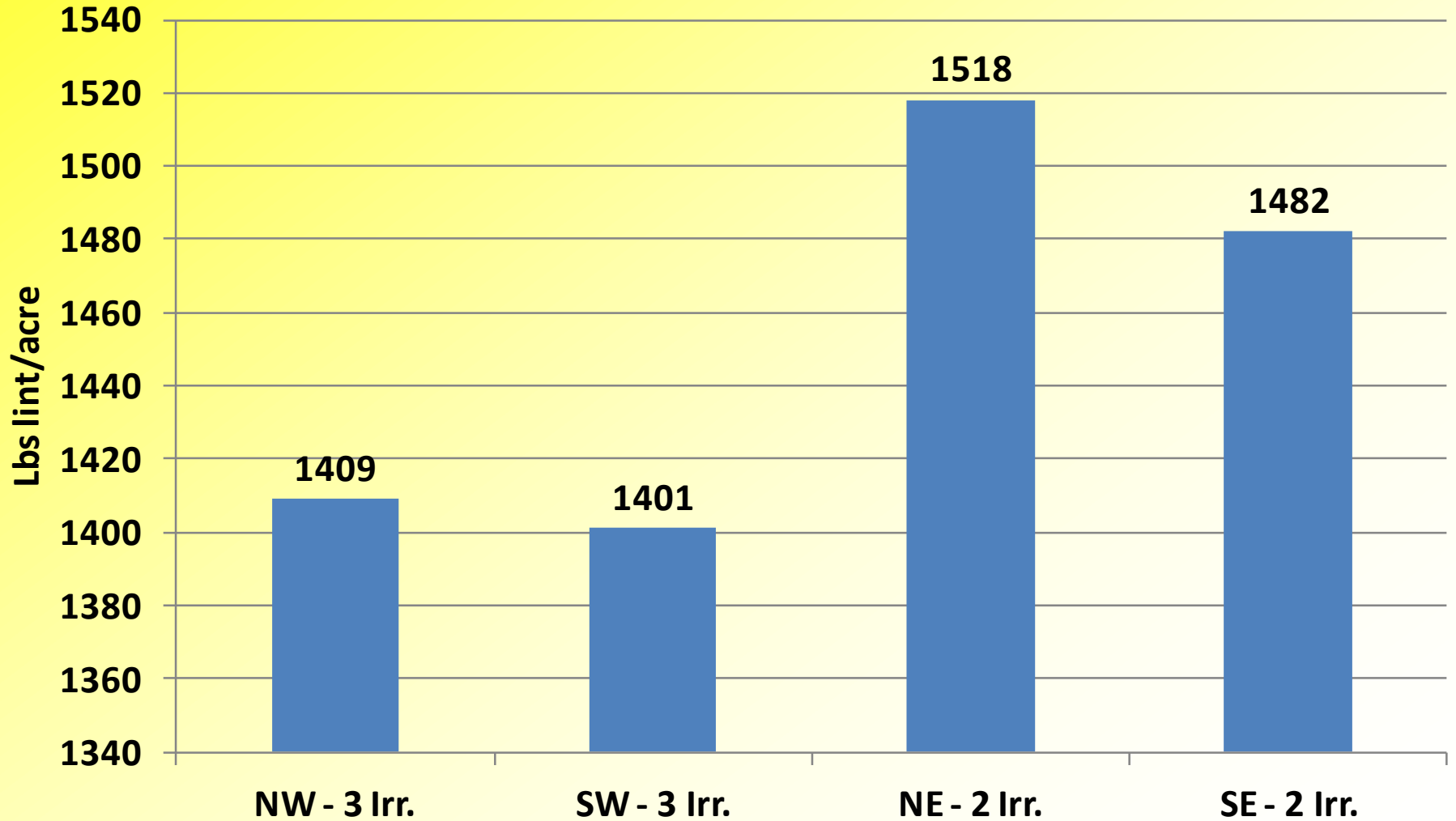
Total Water Used



Water Utilization



Yield



Lessons Learned

- **We must continue to fine tune our production systems**
 - Intervals between watering?
- **We can produce high yields with less water**
 - Where is the edge?
- **Using sensors without wireless communications – PITA**

Using Moisture Sensors

- **Sensor installation requires time and technique**
 - How many sensors are required for accurate scheduling?
 - Must be done each year
- **The ability to view data from office improves efficiency**
- **Education is needed regarding values provided by sensors**

Thank You

- Chris Bush and family
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- Jerry Singleton

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