

Water Deficit Management in Pecan

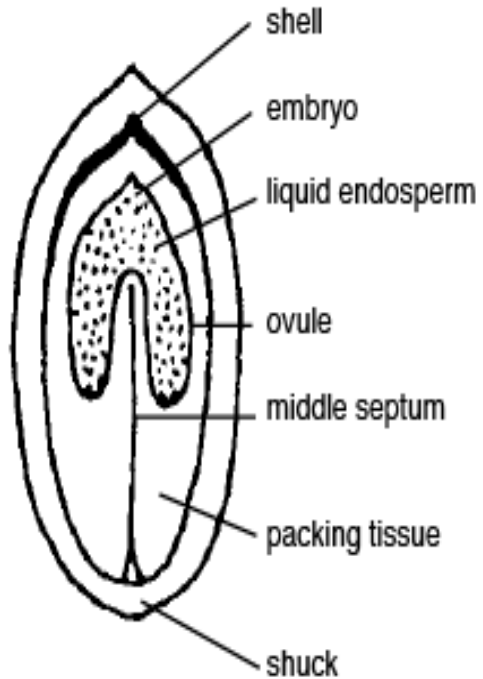
Department of Horticulture and Landscape Architecture

Srijana Panta

Dr. Lu Zhang







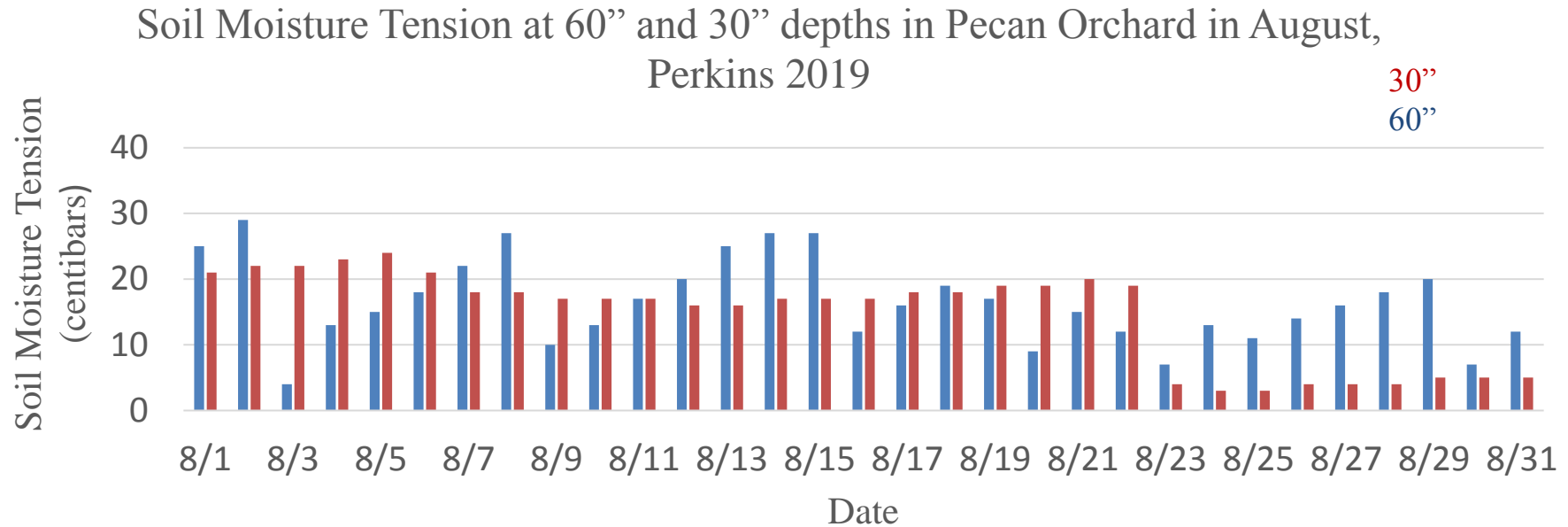
Internal structure of Pecan Nut



Water Stage of Pecan Nut

Background

Inadequate or excessive irrigation?



- Soil Moisture Tension: a measurement of how tightly water clings to the soil
- The drier the soil, the greater the soil moisture tension
- A value <40 is recommended

OBJECTIVE

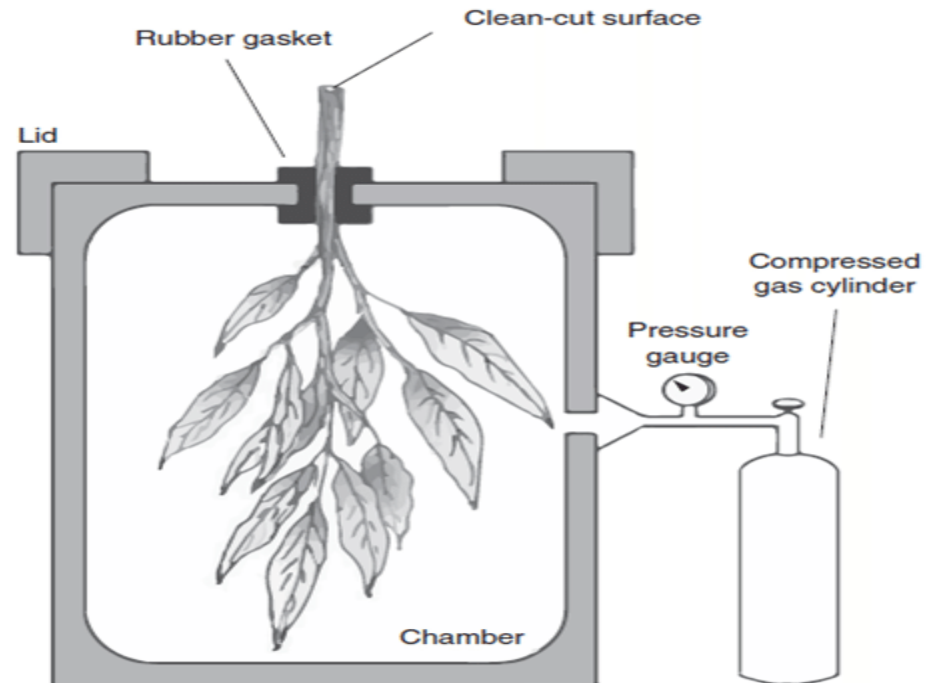
- To cut off the price of irrigation by developing precise irrigation schedule.

Method

- **Water Potential:** Straight forward indicator of plant water stress
- Assist in irrigation management decision



PMS Instrument



Measuring water potential

RESULT

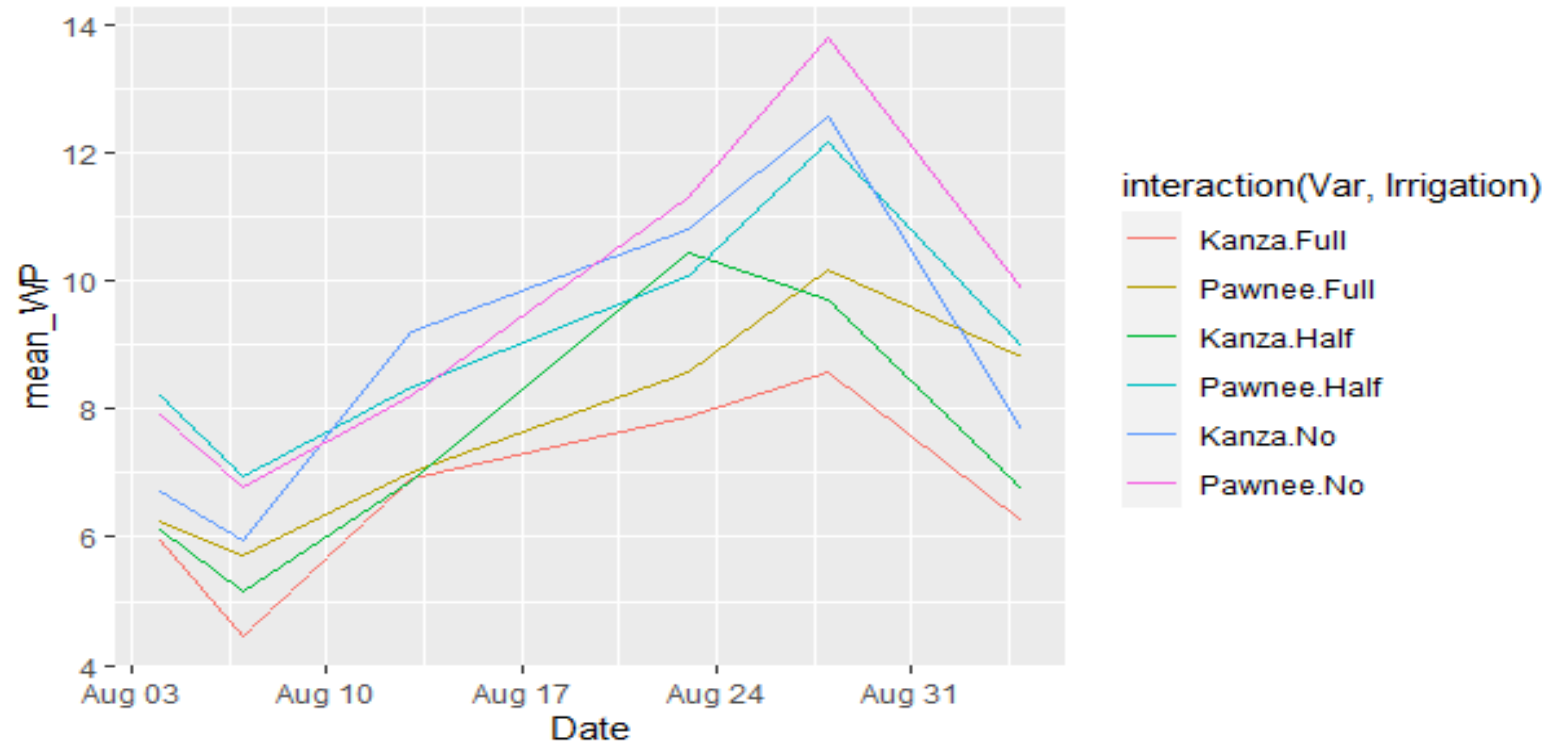


Fig 1: Water potential of two different variety under different irrigation condition

Cultivar	Type	Full	Half	No
Pawnee	Wt of Shell	316 ^a	322 ^a	314 ^a
Pawnee	Wt of kernel	184 ^a	187 ^a	186 ^a
Kanza	Wt of Shell	240 ^a	237 ^a	234 ^a
Kanza	Wt of kernel	127 ^a	131 ^a	127 ^a

Table1: Weight of nut and weight of kernel only under different irrigation condition of different cultivar.