Growing Spurs Not Trees

Should we starting thinking about growing spurs rather than growing trees?

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This year, DEPI is starting a new ABA/HAL funded research project to focus on spur-level responses to changing light environments, water and nutrient management. We're going to undertake field experiments investigating the effects of light, nutrients and water on spur productivity over time. This new experiment expands on a 10-year study of spurs in California (Tombesi *et al*., 2011).

To help describe the way spurs function over multiple seasons, we're going to measure the:

- number of spurs
- number of flowers
- fruit set
- fruit retention
- nut dry weight
- and light interception

The data will be used to better understand spur productivity under Australian conditions.

The main fruit-bearing shoots in almond trees are spurs. An understanding of the factors that influence spur fruitfulness and longevity is required to understand seasonal fluctuation in fruit behaviour, and to develop appropriate management practices that will deliver higher spur productivity and yield.

We will collaborate with scientists from around the world on this work—including CSIRO here is Australia and UC Davis, in the USA.

a) DEPI's Karl Sommer in the field at Lake Powell attaching barcodes to spurs for long-term assessment

b) Two spurs – the one bearing fruit last year has no flower buds, the other spur, vegetative last year, does

c) Flowers appearing on spurs with different fruiting histories

References

- Tombesi, S., Lampinen, B.D., Metcalf, S., DeJong, T.M. 2011. Relationships between spur- and orchard-level fruit bearing in almond (Prunus dulcis). Tree Physiology 31, 1413-1421.