

Spurs: Driving productivity

Generating yield in almonds

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Spurs are the main fruit-bearing parts of almond trees. An understanding of the factors that influence spur fruitfulness and longevity helps us predict fruiting behaviour and to develop appropriate management practices that will deliver higher productivity and yield.

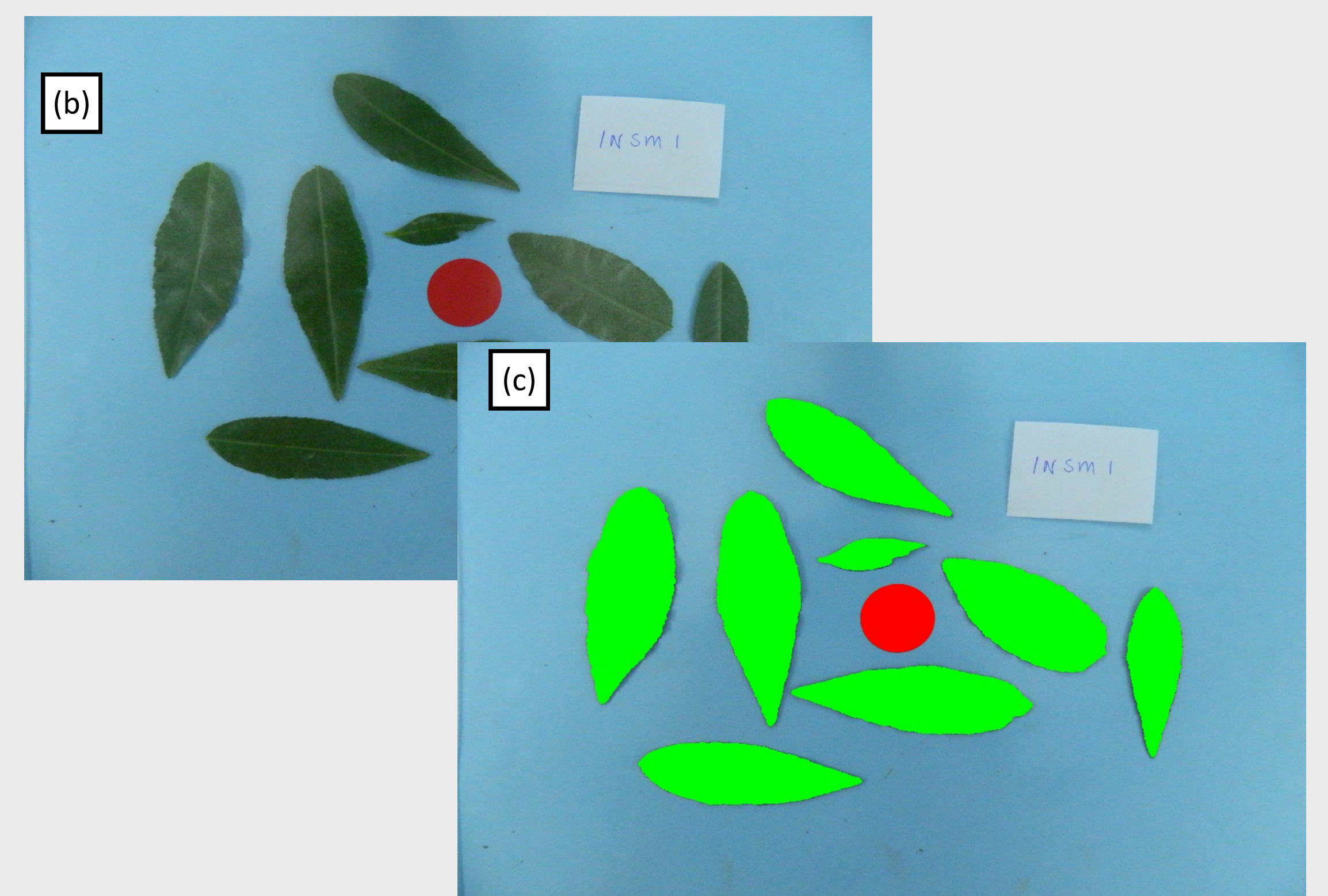
The amount of sugar (carbohydrate) almond trees have to produce kernels is directly related to the amount of light the leaves are able to capture. Photosynthesis converts the energy of the sun in to usable materials for plant growth.

By being able to measure the amount of light each spur can capture, we are able to estimate the yield in an almond block. However, the current method involves cutting the leaves off spurs to measure leaf area.

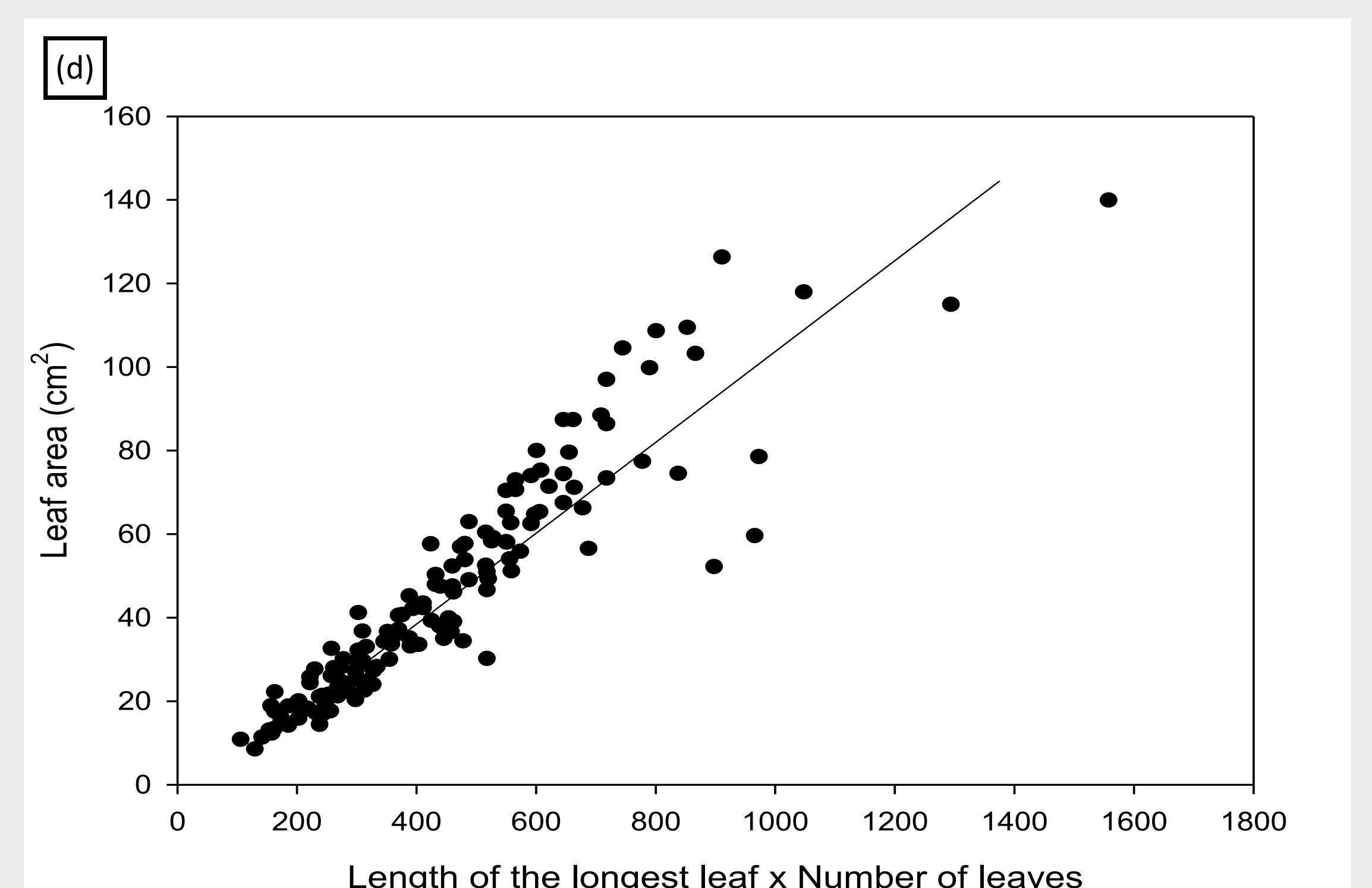
This experiment related simple, non-destructive field-based activities: counting the number of leaves and the length of the longest leaf, to leaf area for more than 700 spurs. Establishing this relationship means we can estimate individual spurs' light capture and yield in the field for the whole of a spur's life.



a) Removing leaves from a spur, ready for overhead photography.



b) Leaves prepared for leaf area analyses, and (c) as they appear to the software program.



d) The relationship between leaf area of individual 'Nonpareil' spurs and easily measured variables.