Water for Profit

BENCHMARK – IRRIGATING ZUCCHINI AND SQUASH

WATERFORPROFIT

Benchmarking can be an effective way to identify opportunities for improved management. While benchmarking can be conducted on any area of your farming operations, this sheet provides a basis for your irrigation performance.

Crop specifics

Zucchini and squash are sensitive to water stress during fruit fill. Irrigation management can be used to minimise small and misshapen fruit and improve fruit evenness and size. Zucchinis have shallow root systems but will extract water to a depth of approximately 40 cm depending on irrigation system and management. However, approximately 80 percent of water used and fertiliser uptake by these crops is extracted from the upper 25 cm of soil.

Zucchini and squash are normally grown using trickle irrigation. However, some are grown using overhead watering such as solid set or travelling irrigators.

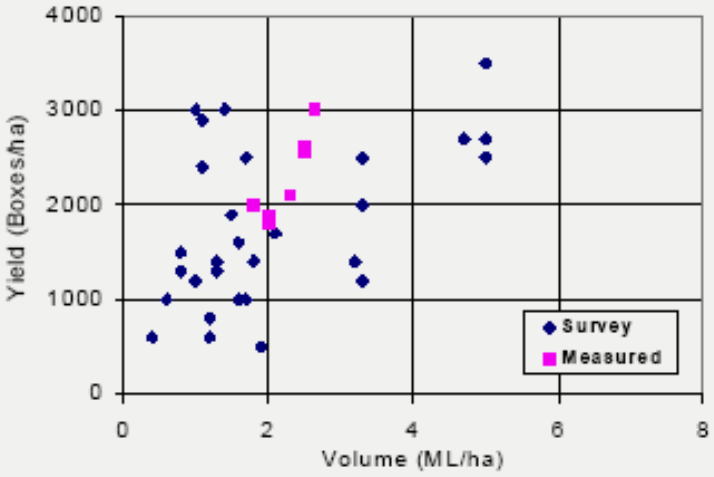
Crop benchmarks

The total crop water requirement for zucchini and squash is 1.6 - 1.8 ML/ha per season. Hence, the irrigation requirement is normally 1 - 2 ML/ha, allowing for rainfall, inefficiencies and drainage losses. Best practice marketable yield is in the order of 2000 - 2500 cartons/ha (10 kg carton) depending on plant spacings, variety, picking length time and season (autumn or spring).

Best practice guidelines

- Ensure the irrigation system has the capacity to meet the seasonal and peak water requirements. Regular maintenance and performance evaluations should be conducted.
- A soil moisture monitoring program should be used to schedule both the timing of irrigations and the volume of water to be applied. Growers using tensiometers and capacitance probes have increased yields from implementing irrigation scheduling.
- If used, tensiometers should be installed at depths of 200 and 450 mm. Irrigation should normally occur when the shallow tensiometer reaches 30 kPa. Lower values (20 - 30 kPa) should be used during fruit fill to maximise growth.
- Keeping the soil moist throughout the season has been shown to increase the yield and/or size consistency. However, this should be balanced against other considerations such as ease of harvest, nutrient uptake, disease management and quality.
- Efficient crop water use and high yield potentials can only be achieved if other agronomic factors such as nutrition, disease and pest management are also optimised.

Yields of cucurbits compared to water applied (irrigation and effective rainfall)



For more details contact Growcom on 07 3620 3844.

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