

# Water for Profit

## BENCHMARK – IRRIGATING PUMPKINS



**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

The profitability of pumpkin production can be heavily influenced by irrigation management. Irrigating too frequently early in the crop will not encourage the root structure development required during full fruit load. Under-irrigation during fruit fill can cause problems with pumpkin sizing, cracking and fruit drop.

Pumpkins can have extensive root systems depending on irrigation system and management. Pumpkins can extract water readily from the soil up to a suction of approximately 50 kPa and will extract water to a depth of 50 cm in the soil.

However, approximately 80 percent of water used by pumpkins is extracted from the upper 30 cm of soil.

### Crop benchmarks

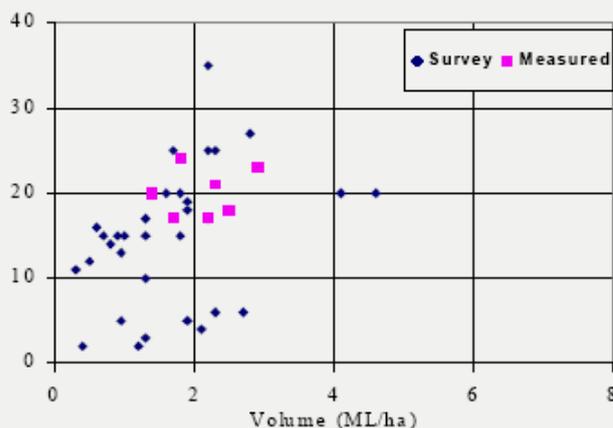
The total crop water requirement for pumpkins is 1.8 - 2.5 ML/ha per season. The irrigation requirement is normally 1.5 - 2.5 ML/ha, allowing for inefficiencies and drainage loss. Best practice marketable yield is 40-60 t/ha depending on variety and season.

### 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 the timing of irrigations and the volume of water to be applied.

- Growers using tensiometers and capacitance probes have increased yields by irrigation scheduling. Tensiometers should be installed at depths of 200 and 450 mm. Irrigations should be applied when the shallow tensiometer reads 30 - 40 kPa.
- It is important to encourage root system development in the early stages of crop growth to enable fruit to fill out properly and minimise fruit drop during periods of peak water demand.
- 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 pumpkins compared to total water applied (irrigation and effective rainfall)



For more details contact Growcom on 07 3620 3844.

*Disclaimer: This information is provided as a reference tool only. Seek professional advice for irrigation specifics.*

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