

Irrigation Scheduling

iv. Irrigation Scheduling with Minipans

(M04-1001)

Evaporation minipans (BSES blue drums) have been used to effectively schedule furrow irrigations for a number of years. Once calibrated to a particular soil type, they are one of the most effective and cheapest methods of irrigation management.



How do Evaporation Minipans work?

The minipans are filled with water immediately after irrigation. When a certain level of evaporation from the pan has occurred (depending on soil type), irrigation recommences. This can become more accurate once combined with cane growth rates.

Yield increases between 10 and 25% have been demonstrated in areas where growers have gone from no scheduling to scheduling with minipans.

How are Evaporation Minipans calibrated?

- Mark out 25 stalks from adjacent drills about 10 metres into a block of cane.
- Using marking tape, individually mark each stalk.
- Record the height of each stalk to the top visible dewlap or collar.

- Do these three steps just prior to irrigation.
- Once irrigation ceases, fill up the minipan.
- Record stalk growth and read the minipan at roughly the same time each day.
- Once growth rates fall to 50% (Burdekin) or 30% (Central) of the maximum recorded in that irrigation, the draw down on the minipan is recorded. This becomes the deficit figure.



Useful Hints on Evaporation Minipans:

- An Evaporation Minipan will lose approximately 10% more water than a Class 'A' Pan.
- Cane to be measured should have at least 1 metre of stalk growth (closed canopy).
- Growth readings should be taken at least 3 times per week and at roughly the same time each day.
- Position minipans in open locations, upwind of pumps and cylinders
- Place the Minipans on cement blocks to allow circulation under the pan and to stop animals drinking the water.

For more information, please ring your local Rural Water Use Efficiency Officer.

The Rural Water Use Efficiency Initiative is a joint venture between BSES, CANEGROWERS and the Queensland Government through the Department of Natural Resources and Mines.