



MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

Recommendation Sheet

December 2010, No 177

The practice of deficit irrigation

Deficit irrigation enables the implementation of a water-saving strategy in sugar cane production. Research results have confirmed that by deliberately reducing the irrigation dose to some extent, the following can be achieved:

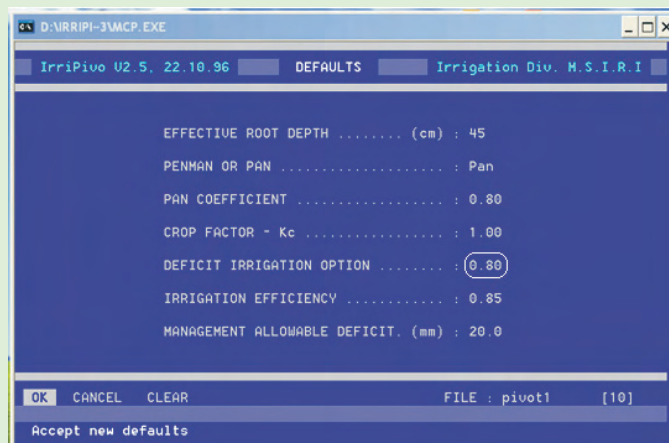
- ✓ irrigation water can be saved without greatly affecting cane yield
- ✓ the water saved can be used to irrigate additional areas
- ✓ a better use of effective rainfall and
- ✓ best practices in terms of water use efficiency.

➤ Recommendation

Irrigation of sugar cane can be reduced to 80% of the full crop requirement in all irrigated sectors with little risk of yield loss

How to implement the practice of deficit irrigation?

1. For owners of centre pivot using the software IRRIPIVO.



- Enter the deficit irrigation fraction of 0.80 in the default menu as shown. Go to OK to save and then move to data entry menu.
- Proceed with normal data entry of rain, pan evaporation and previous irrigation applied.
- Whenever another irrigation round is due, the software will prompt users to apply 80% of the water requirement.

2. If software is not used, apply the guidelines in table below.

Application regime/Systems	Irrigation requirement	New recommendation
Daily application (drip & centre pivot)	5 mm/day	Apply 4 mm/day
Weekly application (centre pivot & big guns)	35 mm/week	Apply 30 mm/week
Dragline system	10-day rotation	Increase to 12-day rotation

Your attention is drawn that guideline and/or advice is restricted for the purpose for which it is recommended only. MSIRI board shall not be responsible for any act that may arise out outside the purview of these guidelines.

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