



# MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

## Recommendation Sheet

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### **Mechanical earthing-up of potato cultivated in sugar cane interrows**

Manual earthing-up of potato is a labour-intensive operation (9 woman-days ha<sup>-1</sup>) usually carried out 5 to 6 weeks after planting. To save on labour and cost, the operation can be mechanized, one tractor driver covering 3 ha in an 8 hour-day. However, owing to the narrow space between the potato canopy and that of the cane, both the potato and cane leaves can be damaged during mechanical earthing-up.

To overcome this problem an early earthing-up has been successfully tested, whereby a ridge was built shortly after germination by bringing soil over the newly emerged shoots. The operation was carried out using a pair of discs (ø 400 – 460 mm) mounted on a ridger, hitched to a narrow crawler-tractor.



Disc ridger and narrow crawler-tractor

### **How to achieve a good mechanical earthing-up?**

To ensure a good mechanical earthing-up, the following measures should be taken:

- ◆ the potato row should be planted in the centre of the cane interline
- ◆ rocks and old cane stubbles should be removed

### **Recommendations**



Plants re-emerging after earthing-up

- ➔ The operation should be carried out when germination has reached a reasonable level, normally about 15 days after planting.
- ➔ The tilt angles and the spacing between the two discs should be adjusted in relation to the soil conditions to give a ridge 10-12 cm high.
- ➔ The recommended herbicide treatment should be applied just after earthing-up as the young potato plants re-emerge about 5 days later.

- Note** ⇒ *No yield reduction has been observed with this technique, which is also valid for potato grown in full stand*
- ⇒ *The same equipment can be used to cover sugar cane setts in partially mechanized planting*

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