

Meloidogyne incognita and Production of Leaf Epicuticular Wax in Cotton¹

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Leaf surfaces may have sufficient waxiness to interfere with wetting action and adherence of pesticide sprays (1). Juniper (2) showed correlation of restricted root growth and increased epicuticular wax in cabbage and suggested this might decrease the plant's susceptibility to mechanical and herbicide injury.

This study was designed to determine whether infection by *Meloidogyne incognita* (Kofoid and White) Chitwood affects epicuticular leaf wax deposition in cotton, *Gossypium hirsutum* L. variety 'Acala SJ-1.'

Ten-day-old cotton seedlings, one per 8-in clay pot in Hesperia fine sandy loam, were inoculated with 0, 1,000, 2,000, 5,000, or 10,000 *M. incognita* (mist chamber—extracted from tomato and cotton) per pot, replicated ten times and greenhouse-grown at 28 ± 5 C. Two months later, plant height was noted, and 1 dm² of leaf tissue was collected at random from each plant with a

leaf punch. Leaf tissue from two plants was combined to provide sufficient sample for extraction. Wax content was determined by the petroleum ether extraction method of Schieferstein and Loomis (3).

Plant height was inversely proportional to inoculum size, but wax content was not affected (Table 1).

TABLE 1. Plant height and epicuticular leaf wax of 'Acala SJ-1' cotton two months after inoculation with root-knot nematode larvae.

Inoculum size	Plant height (cm)	Leaf wax (mg/dm ²)
0	33.3 a†	1.9 a
1,000	26.7 b	1.6 a
2,000	23.3 c	1.9 a
5,000	16.7 d	1.8 a
10,000	10.0 e	1.9 a

† Means within columns containing the same letter are not significantly different at the 5% level.

LITERATURE CITED

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