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THE EFFECT OF THE ABSENCE OF PEDICELS ON POST-HARVEST DISEASES OF AVOCADOS

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INTRODUCTION

There are several observations on the disadvantageous effect of short pedicels on stored avocados as a result of severe stem-end rot, caused by *Diplodia natalensis* (Schiffmann-Nadel 1968; Arzee, Cohen & Schiffmann-Nadel 1970; Schiffmann-Nadel, Cohen & Arzee, 1970).

D. natalensis was not isolated from stem-end rot in the Tzaneen area, but a *Nectria* sp. and a *Phomopsis* sp. appeared to be the primary causes of stem-end rot. In this experiment the effect of the debuttoning of avocado pedicels on post-harvest diseases was studied.

MATERIALS AND METHODS

Fuerte avocados were picked from a selected tree and after debuttoning the pedicels on 50% of the fruit and treated with TAG wax plus TBZ, the fruit was stored at 5,6°C for 28 days. Following this, the fruit was kept at room temperature until ripe. Evaluation was carried out on soft fruit.

DISCUSSION

From the table below it appears that in regard to stem-end rot, there was no significant difference between fruit with and without pedicels. It was late in the season (July) when fruit for the experiment was picked and the incidence of stem-end rot was low on fruit picked during this period.

Chilling injury and anthracnose (both externally and internally) were more severe on fruit stored without pedicels.

The occurrence of pulp spot, vascular browning and lead discolouration was too low to be conclusive.

RESULTS

Table I: *Incidence of post-harvest problems on avocados stored with and without pedicels.*

	Diseases on ripe fruit (rated from 0 to 10)							
		External		Internal				
Treatment	Chilling injury	Anthrac-nose	Stem-end rot	Anthrac-nose	Stem-end rot	Pulp spot	Vascular browning	Lead discolour
Without pedicel	0,80	0,41	0,04	0,35	0,13	0,00	0,04	0,03
With pedicel	0,51	0,23	0,03	0,24	0,09	0,03	0,02	0,00

References

ARZEE, T., COHEN, Y. & SHIFFMANN-NADEL M., 1970. The anatomy of the avocado pedicel and the localization *of Diplodia mycelium.* Bot. Gaz. 131: 50 - 54.

SHIFFMANN-NADEL, M., COHEN Y. & ARZEE, T., 1970. Rate of advance *of Diplodia mycelium* in avocado pedicel. Israel Jnl. Bot. 19: 624 - 626.

SHIFFMANN-NADEL, M., 1968. Influence de la longueur de pedoncule á la cueilette sur le pourcentage de pourriture pedonculaire du l'avocat. Fruits 23 (6): 312 - 314.