

FLEECE ROT AND THE WATER SOLUBLE COMPONENT OF THE FLEECE

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Indirect selection for resistance to fleece rot on the basis of correlated skin and fleece characters has a number of advantages over direct selection (McQuirk and Atkins 1980). Lipson (1978) found significant differences in wool suint content and the pH of suint between sheep rated "resistant" and "susceptible" to fleece rot. In the present study suint content, suint pH and conductivity were examined as possible cheap and effective methods of indirect selection for fleece rot resistance.

The sheep used were adult Merino wethers of two major strains in S.A. The sheep were scored for fleece rot following artificial wetting. The score incorporated the length and severity of fleece rot bands along the back line. The proximal portion of the midside wool sample was used for all estimations. The pH and conductivity were estimated on a "direct extract", (Lipson and Hilton 1981), from 5 g of wool in 250ml of double distilled water. Suint content was estimated by the A.W.T.A., Fremantle. The associations of fleece rot with suint, and with direct extract pH and conductivity (δ) were examined.

TABLE 1 Correlation of fleece rot score with suint, direct extract pH, conductivity and with clean fleece weight (C.F. Wt.)

	N	suint	pH	δ	C.F. Wt.
Strain A	20	.524*	.600**	.537*	-.303
Strain B	20	.532*	.739**	.663**	-.003

The sheep with low suint content, low direct extract pH and low direct extract conductivity were the most resistant to fleece rot. Fleece rot susceptibility and clean fleece weight were not significantly correlated. There was no phenotypic association of clean fleece weight with direct extract pH or conductivity.

The correlations between fleece rot susceptibility and the characters recorded in the trial are similar or larger in magnitude than those of the wool characters investigated by McQuirk and Atkins (1980) and Thornberry, Kowal and Atkins (1980) at Trangie. The results for suint and suint pH support those of Lipson (1978).

Although the numbers of sheep used were low the results obtained and the ease with which the direct extract pH and conductivity can be measured suggest these characteristics merit further consideration as aids for the indirect selection against fleece rot.

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