SEASONAL SECONDARY FOLLICLE ACTIVITY IN CASHMERE-TYPE GOATS

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Casual observations suggest that animals vary considerably in both the extent of the growing season and in growth, rate of cashmere fibre (Restall 1985), possibly due to location. Although seasonal changes in fleece parameters may imply changes in secondary follicle activity (McDonald *et al.* 1987), changes in the activity of the follicles themselves have not previously been examined.

Over a period of 17 months seasonal variation in follicle activity was studied in the skin of 8 adult (5 female, 3 male), South Australian feral-based, cashmere-type goats, pastured in a Mediterranean climate (Lat. 35 S, Long. 138.5 E). The number of mitotic cells per 4 um follicle bulb section was recorded in alternate sections, for 200 such bulb sections *per* specimen.

Secondary follicle activity (Fig. 1), and thus the actual cashmere growing season, occurred over a 10–11 month period, follicles being inactive in mid-winter. Mitotic activity was low in spring, peaked in early summer, and decreased again in autumn just before the dormant period. A subsidiary drop in follicle activity, similar to that observed in some sheep (Ryder 1969,1974), was seen in late summer. The pattern of mitotic activity was not significantly different between sexes (Fig. 2), but males tended to retain the old coat after the new one had started growing. It is suggested that an increase in daylength following the shortest day *on* 22 June stimulates *renewed* activity. It is important that producers know the timing, extent and peak period of the growing season, for manipulation of nutrition and/or breeding at critical times is likely to have a marked effect upon production.

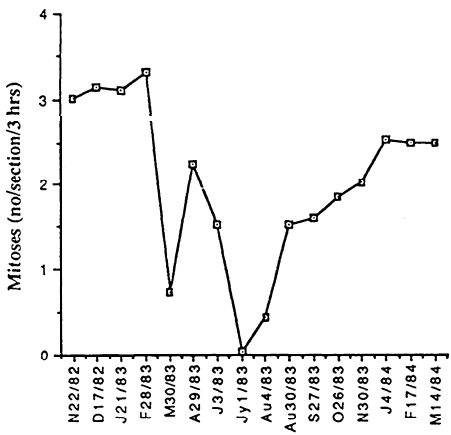

Fig. 1 Seasonal change in mitotic activity

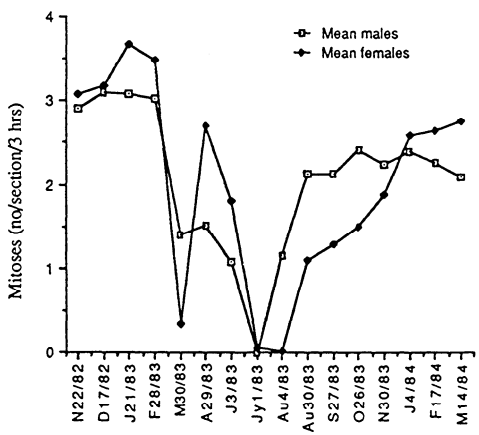

Fig. 2 Males v females

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