

**1102 Wool comfort factor variation in Australian crossbred sheep.** A. E. O. Malau-Aduli\* and D. J. Deng Akuoch, *School of Agricultural Science/TIAR, University of Tasmania, Hobart, Tasmania 7001, Australia.*

Comfort factor (CF) is defined as the percentage of wool fibers with diameter less than 30 microns. Our objective was to investigate the effects of sire genetics, nutrition, level of supplementation and gender and their interactions on CF in crossbred sheep either grazing or supplemented with dietary protein. Correlations between CF and other wool traits were also investigated. Texel, Coopworth, White Suffolk, East-Friesian and Dorset sires were mated with 500 Merino ewes at a ratio of 1:100 in individual paddocks. Five hundred of the crossbreds were raised on pasture until weaning at 12 weeks of age. Forty of the weaners with initial BW range of 23-31 kg (average of  $27 \pm 3.2$  kg) were fed with lupins or canola at 1 or 2% BW for 6 weeks in a  $5 \times 2 \times 2 \times 2$  factorial experimental design. CF and other wool quality traits were commercially measured at the Australian Wool Testing Authority. Data were analyzed in SAS using MIXED models procedures with sire fitted as a random effect, whereas sire breed, nutrition, supplement, level of supplementation and gender and their interactions were fitted as fixed effects. We found that neither supplement ( $P > 0.14$ ) nor level of supplementation ( $P > 0.16$ ) influenced CF which did not differ between pasture-fed and supplemented sheep. However, highly significant effects of sire breed ( $P < 0.01$ ), gender ( $P < 0.01$ ) and interactions between sire breed  $\times$  level of supplementation ( $P < 0.01$ ), sire breed  $\times$  gender ( $P < 0.03$ ) and supplement  $\times$  level of supplementation ( $P < 0.01$ ) on CF were detected. White Suffolk crosses had the highest CF ( $90.1 \pm 8.7\%$ ) and East-Friesian crosses the least ( $81.5 \pm 10.1\%$ ). Males fed canola at 1%BW had the highest CF ( $90.8 \pm 7.0\%$ ), while females fed lupins at 1%BW had the least ( $81.1 \pm 10.8$ ). White Suffolk sired males ranked the highest ( $91.1 \pm 10.5\%$ ) and East Friesian females the least ( $74.7 \pm 7.9\%$ ). CF was significantly correlated with fiber diameter ( $-0.89$ ), spinning fineness ( $-0.95$ ) and wool curvature (0.33). Our findings provide useful information to sheep farmers in crossbreeding dual purpose sheep that will also deliver desirable wool comfort outcomes to the fabric industry.

**Key Words:** wool comfort factor, pasture-fed sheep, protein supplements

**1103 Supplementation of Starbio probiotic and yeast on milk production and nutrient digestibility of lactating Holstein cows fed a ration containing cassava meal.** E. Sulistyowati\*, I. Badarina, and E. Soetrisno, *Animal Science Dept., College of Agriculture, University of Bengkulu (UNIB), Bengkulu, Indonesia.*

The aim of this research was to evaluate the effects of Starbio probiotic and yeast on milk production and nutrient digestibility of lactating Holstein fed a ration containing cassava meal in a rural area farm in Bengkulu, Indonesia. There were eight lactating Holstein Cows which were assigned in a replicated Latin Square ( $2 \times 4 \times 4$ ) to receive four treatments: basal diet of 65% field grass and 35% concentrate containing cassava meal, as control (SR0); basal diet + Starbio 1% of concentrate (SR1); basal diet + 20 g yeast (SR2); and basal diet + Starbio 1% of concentrate + 20 g yeast (SR3). The application was run for four 3-wk periods. Yeast supplementation (SR2) increased milk production ( $P < 0.05$ ) for as much as 2.13 kg/d, equivalent to 24.85%. The highest milk fat content (4.10%) was found with the combination of these probiotics (SR3). Nutrient (dry matter, organic matter, crude protein, fiber, and ether extract) consumptions and nutrient digestibility were not different ( $P > 0.05$ ) among treatments. However, digestibilities were relatively high, ranging from 80.93 to 85.55%. The most efficient ratio between dry matter intake and milk production was found in SR2 (1.64). In conclusion, yeast supplementation for as much as 20 g/d into a basal diet with 35% concentrate containing cassava meal resulted in the highest increase in milk production (2.13 kg/d) with slightly lower milk fat (4.05%), combined with the most efficient ratio of milk production and dry matter intake (1.64) in lactating Holstein cows.

**Key Words:** Starbio, yeast, milk production, nutrient digestibility, Holstein cows