T160 Selenium concentrations in forages and in blood of meat goats. T. K. Hutchens*[1], A. H. Cantor[1], H. D. Gillespie[1], P. B. Scharko[1], M. Neary[2], and J. E. Tower[2], [1]*University of Kentucky, Lexington*, [2]*Purdue University, West Lafayette, IN.*

Forages grown in many areas of the USA are considered to be selenium-deficient. These regions include Indiana and Kentucky. The present study was conducted to determine Se concentrations in pasture and hay samples and in blood and plasma samples of goats consuming these forages. A composite sample of Kentucky 31 tall fescue was obtained in August 2006 from 10 locations within a 10-acre grazing paddock in Dubois, IN. In addition, four grab samples of alfalfa-orchardgrass hay from an early summer cutting were taken. Blood samples were obtained from percentage Boer-crossed meat does, approximately 3 yr of age, in August and December of 2006 and in January 2007. Selenium was determined using a fluorometric procedure following wet digestion. The pasture and hay samples contained 0.055 ± 0.009 μg Se/kg DM and 0.044 ± 0.010 μg Se/kg DM (mean ± SD), respectively. Goats sampled shortly after weaning in August 2006 (n = 10) were on pasture with access to a mineral supplement containing Se. Their respective values (μg/mL) for whole blood and plasma Se were 0.132 ± 0.022 and 0.066 ± 0.011. Does sampled in December 2006 (n = 8) had been bred, were still on pasture and were given hay with access to the mineral supplement. Their whole blood and plasma Se concentrations were 0.191 ± 0.028 and 0.071 ± 0.007 μg Se/mL, respectively. The same does sampled in January 2007 (n = 8) had continued to receive the same feeding regimen. Whole blood and plasma Se concentrations from these goats were 0.198 ± 0.031 and 0.078 ± 0.006 μg Se/mL, respectively. Average Se concentrations for whole blood, but not for plasma, of samples taken in December and January were significantly ($P < 0.001$) higher than for samples taken in August. These data show that the forages sampled were very low in Se content. In addition, a substantial change in the Se concentration in whole blood, but not in plasma, of breeding does was observed during the course of sampling.

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