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Short Communication

Lactation curves in West African Dwarf and Red Sokoto goats

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Abstract

Four mathematicalfunctions (incomplete gamma, non linear regression, mixed log„ and polynomial regression) were fitted to 202 weekly lactations of 8 *West African Dwarf and* 9 *Red Sokoto goats to ascertain the accuracy of prediction of individual:S, milk production. . The accuracy was assessed by the magnitude of R2 and the proportion of individual lactations well predicted All the functions tested generally gave good jit to the observed data with slight tendency to consistently under-estimate daily milk yield The pooled R2 estimates for all models exceeded 70%. Both breeds showed similar peak yields (P>U05) averaging 420.65 1771 during first week of lactation. . The oroportion of individual laclations accurately predicted most of the models (incomplete gamma, mixed log and polynomial regression) were moderate* (66.67%) *for Red Sokoto breed to high* (87.5%) *for West African Dwarf breed* R^2 *values generated from the fit of non-linear regression model however showed significant (P<O.05) breed difference with indication that more West African Dwarf goats* (87.5%) *had better fit* (R^2 = 0.863) *than Red Sokoto goats* (44.44%) *with* R^2 *estimated at 0.693. The apparently reasonable trends in goodness ojftt shown by the models, despite the limitation in number of records, points to the fact that predictive equations could be developed with increase in data size to predict fillure yields from incomplete lactation* records.

Keywords: Lactation curves, goat

Sudarwati *et al.* (1995) and Olori *et al.* (1999),