

## **An Overview of Camelid Congenital Genetic Conditions**

**LaRue W. Johnson DVM, PhD**

Professor Emeritus

Colorado State University

Two historical situations have to be considered if we agree that the incidence of defects in llamas and alpacas seems high. Firstly, because of the near annihilation of the South American Camelid (SAC) population by the invading Spaniards, a marked reduction of genetic diversity ensued. Subsequently, importation of small groups of SACs to North America further contributed to unknowing “inbreeding”. A further factor that in my opinion is taking place today is phenotypic inbreeding prompted by the show ring or fiber pursuit resulting in further increasing chances of undesirable gene pairing to produce abnormalities.

Reported incidence of the various congenital conditions in camelids remains understandably incomplete. Unless a veterinarian has been involved to make the diagnosis, especially the most compromising conditions will be “swept under the carpet.” In addition, unless a detailed necropsy is performed, only the most glaring defect of several will have been observed. The point being that fairly commonly more than one defect can be demonstrated. I also have found it interesting that some alpaca breeders have the opinion that alpacas have less congenital problems than do llamas. That might well be true if we are dealing with numbers of reported defects as compared to actual % of the population. I would be of the opinion that the % prevalence of congenital defects in both llamas and alpacas is comparable.

My presentation today will emphasize congenital conditions encountered in camelids by body system. For each condition, I will reflect on the relative occurrence as well as whether the condition is likely genetic.