Correlation of 2- to 4-yr-Old Racing Performance of 2954 Thoroughbreds to Yearling Endoscopic Examination

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Thoroughbred yearlings with grade I-IIA arytenoid function (AF) and grade 0-II epiglottic structure (ES) have no differences in racing performance. Horses with grade III AF and grade III-IV ES have decreased racing performance. Yearlings with grade IIB AF and short ES tend toward decreased performance. Authors’ addresses: Rood and Riddle Equine Hospital, PO Box 12070, Lexington, KY 40580 (Pierce, Garrett, Embertson); and Department of Statistics, University of Kentucky, 817 Patterson Office Tower, Lexington, KY 40506 (Stromberg); e-mail: spierce@roodandriddle.com (Pierce). © 2007 AAEP.

1. Introduction
Endoscopic evaluation of the upper respiratory tract of the Thoroughbred yearling is an important component of the pre-purchase examination. Veterinarians are called on to render an opinion of the athletic potential of a yearling based on this examination.

2. Materials and Methods
The arytenoid function (AF) and epiglottic structure (ES) of 2954 Thoroughbred yearlings offered for public sale were examined and graded using a standard scale. Measures of racing performance were obtained from Equineline.com and were compared using one-way analysis of variance (ANOVA) with unequal variances.

3. Results
No differences in racing performance were seen between AF grades I and II A. Horses with AF grade III had fewer starts and decreased earnings than AF grades I, II A, and IIB. Horses with grade 0-II ES had no differences in performance. Compared with horses with grade 0-II ES, horses with grade III-IV ES had decreased earnings at ages 2 and 4 yr. Horses with AF grade IIB or short ES tended toward decreased earnings.

4. Discussion
The racing potential of horses with grade I-IIA AF and grade 0-II ES can be considered normal. Horses with grade III AF and grade III-IV ES have decreased athletic potential, and horses with grade IIB AF or short ES tend toward decreased racing performance.