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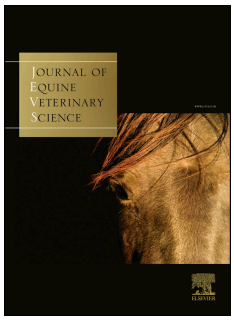

Exercised ponies fed hay and three concentrate feeds: apparent digestibility, nutritive value, observed versus calculated digestible energy and behaviour.

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PII: S0737-0806(17)30627-5

DOI: 10.1016/j.jevs.2017.10.013

Reference: YJEVS 2403

To appear in: *Journal of Equine Veterinary Science*

Received Date: 13 September 2017

Revised Date: 17 October 2017

Accepted Date: 17 October 2017

Please cite this article as: Longland AC, Barfoot C, Harris PA, Exercised ponies fed hay and three concentrate feeds: apparent digestibility, nutritive value, observed versus calculated digestible energy and behaviour., *Journal of Equine Veterinary Science* (2017), doi: 10.1016/j.jevs.2017.10.013.

Exercised ponies fed hay and three concentrate feeds: apparent digestibility, nutritive value, observed versus calculated digestible energy and behaviour.

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Abstract

Four ponies were fed at 2% bodyweight (BW) as dry matter (DM) per day, hay, or a 50:50 mix of hay plus one of three complementary feeds (Spillers HDF Power Cubes: SPC, Winergy Equilibrium High Energy: WHE, and Buckeye Nutrition EQ8: EGH), in a 4 x 4 Latin square design. The complementary feeds contained (g/kg DM) 168-209 g starch, 57-98 g oil, 131-134 g CP and 300-345g NDF. Corresponding hay values were trace, 16, 58, and 620. A 5day nutrient balance period followed 18 days adaptation. Ponies were exercised for an average of 45 minutes per day according to a strict protocol. Digestibilities of DM, gross energy (GE), N and NDF were similar for the complementary feeds, averaging (± SD) 0.74±0.006, 0.74±0.015, 0.76±0.026 and 0.52±0.079 respectively. Apart from NDF, complementary feed digestibilities were significantly higher than those of the hay which were DM, 0.43; GE 0.40; CP, 0.45 and NDF, 0.41. Feed digestible energy (DE) contents were also calculated from their chemical composition. After adjustment for oil content, DE values of the complementary feeds were within 5.5 percent of observed values, indicating this was a useful method for predicting the DE of such feeds for exercised ponies. Intakes of the mixed hay:complementary feeds all exceeded the ponies requirements for DE, digestible crude protein and crude protein, but the hay provided only 0.76, 0.6 and 0.74 of these requirements. There were no apparent effects of feeding any of the complementary feeds on pony behaviour when either stabled or exercised.

Keywords: Ponies; exercise; digestibility; calculated DE; behaviour