

Feed type and intake affect glycemic response in Thoroughbred horses.

Pagan JD¹, PA Harris², MAP Kennedy¹,
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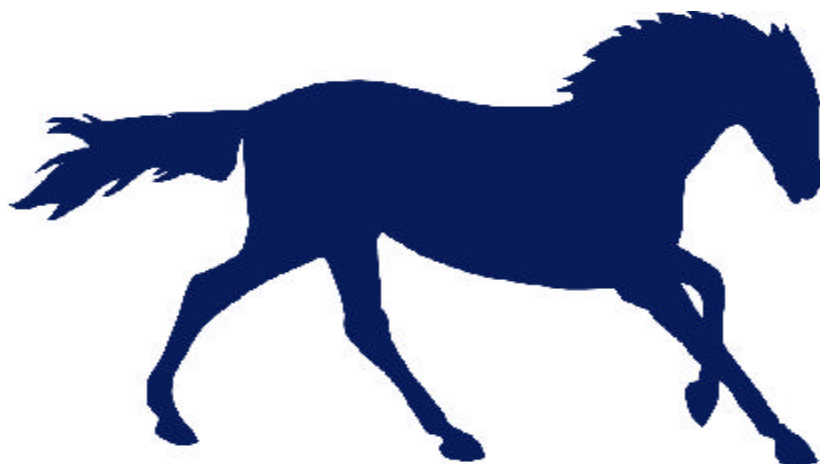
Purpose

The purpose of this experiment was to determine glycemic response in horses fed six different feeds at three different levels of intake.

SWEET FEED
WHOLE OATS
CRACKED CORN
HIGH FIBER MIX
SWEET FEED + OIL
ALFALFA FORAGE

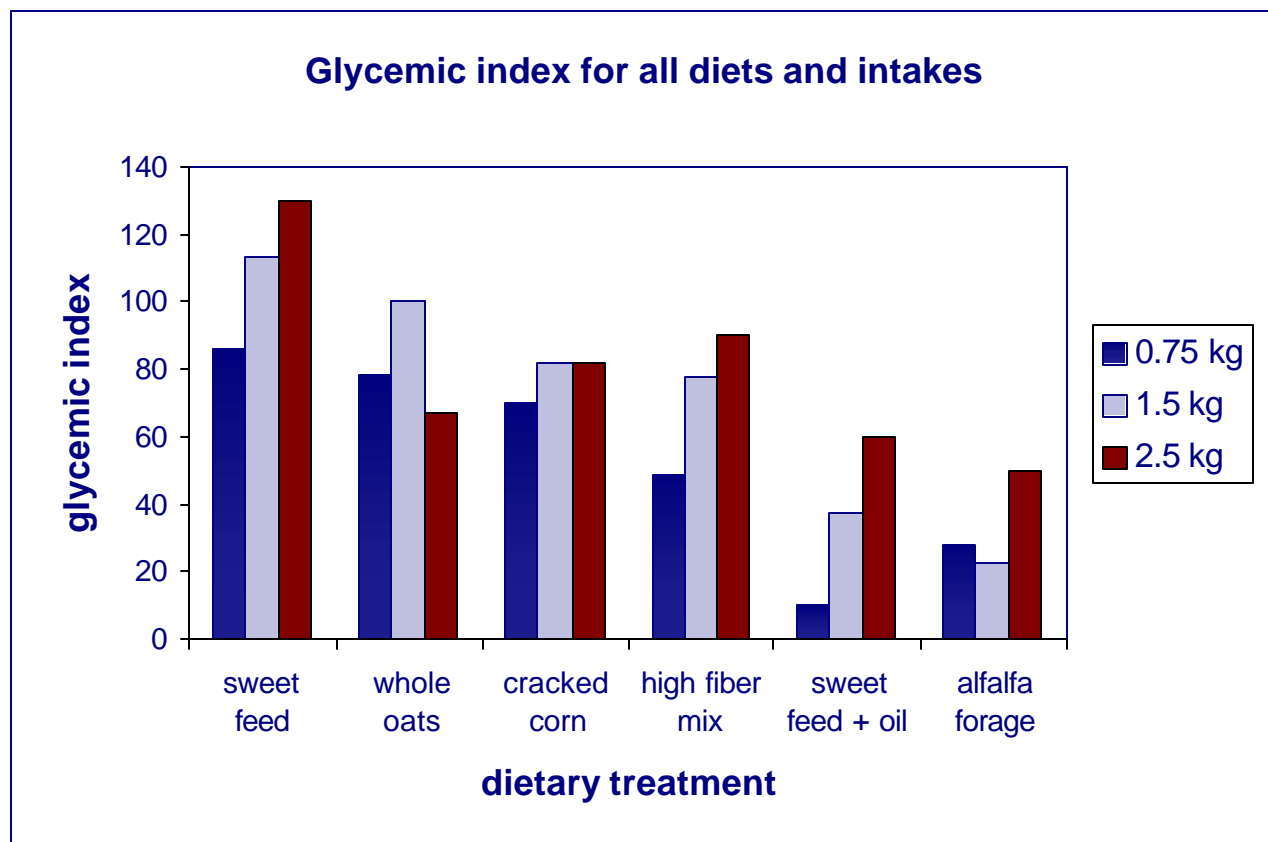
Three levels of intake per feeding (kg or lb).

0.75 kg	1.5 kg	2.5 kg
1.65 lb	3.31 lb	5.51 lb



Results

Area under the curve indicated differences in glycemic response between low (.75 kg) and high (2.5 kg) intake levels of all diets combined. Sweet feed and whole oats demonstrated the greatest glycemic response, while alfalfa and sweet feed + corn oil provided the lowest response. Plotting the glycemic index by feed and level of intake revealed an appreciable drop in the index for whole oats fed at 2.5 kg compared to that at 1.5 kg and relative to glycemic indexes generated for other feeds. Mean glucose was highest for sweet feed, whole oats and the low starch, high fiber mix and lowest for the alfalfa diet. Peak glucose was similar for all diets except alfalfa forage. Time to peak glucose (min) was greatly increased in the sweet feed + corn oil diet, while the remaining diets demonstrated similar responses. Increasing level of intake from 0.75 kg to 1.5 kg per feeding increased time to peak glucose by 45 ± 14.1 min.



Implications

Results of this study indicate that different grain diets demonstrate different glyce-
mic responses and adding fat reduces both the
area under the curve and peak glucose values,
as measured within this experimental design.
More research is required to determine the
relevance of glycemic response in predicting
the effects of
different feed
ingredients
on a horse's
performance
or behavior.

