# Using a new in vitro method and fiber model (TTNDFD) to improve estimates of digestibility of alfalfa for dairy cattle.

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#### Carbohydrate Digestibility Affects Health & Production

Properly balancing Starch and NDF is critical for health and production in high producing dairy cows.



Variations in fiber digestibility affect production more than variations in starch digestibility

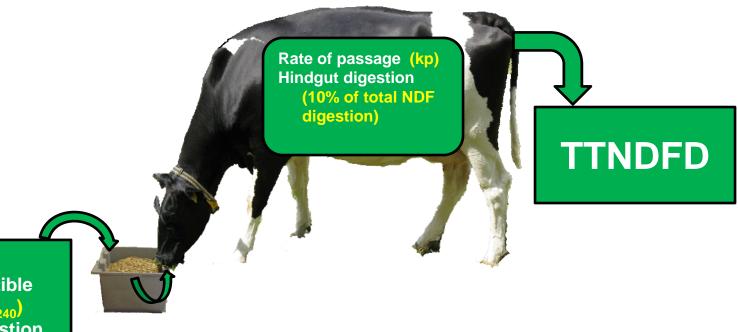
Starch digestibility => 3-5 lb/day

Fiber digestibility => 6-7 lb/day



#### TTNDFD Total Tract NDF Digestibility

Feed and cow factors are combined to measure true fiber digestion

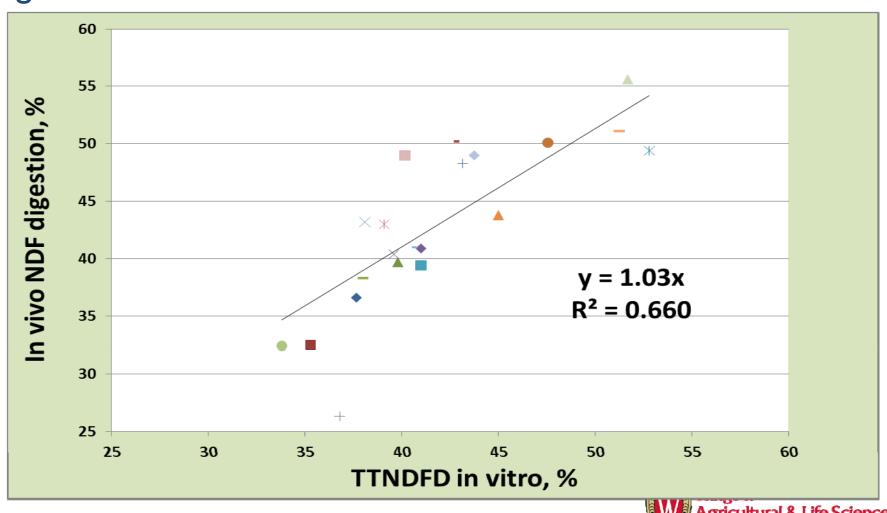


Feed fiber
Potentially digestible
NDF (NDF-uNDF<sub>240</sub>)

Rate of fiber digestion (kd of pdNDF)

A 2-3 unit change in ration TTNDFD corresponds to 1 pound change in milk yield.

## TTNDFD combines in vitro rate of NDF digestion with iNDF to improve the prediction of in vivo fiber digestion



### The Take Home Message

- 1. Fiber digestibility has a big impact on milk yield.
- 2. Fiber digestion is affected by feed characteristics (pdNDF and kd) and the animal (kp, rumen vs hindgut digestion.
- TTNDFD is a better predictor of fiber digestion than other measures such as ivDMD, uNDF or NDFD

