

# FORAGE VARIETY SELECTION WITH TTNDFD

## Separating the best from the better genetics

As forage genetics continue to evolve, so too should the selection methods. Distinguishing between hybrids, varieties, and lines requires both art and science to narrow down the genetic potential into a manageable number to market. Using the vast number of the tools available, seed industry professionals work to not just cull the good from the bad, but to select the best from the better.

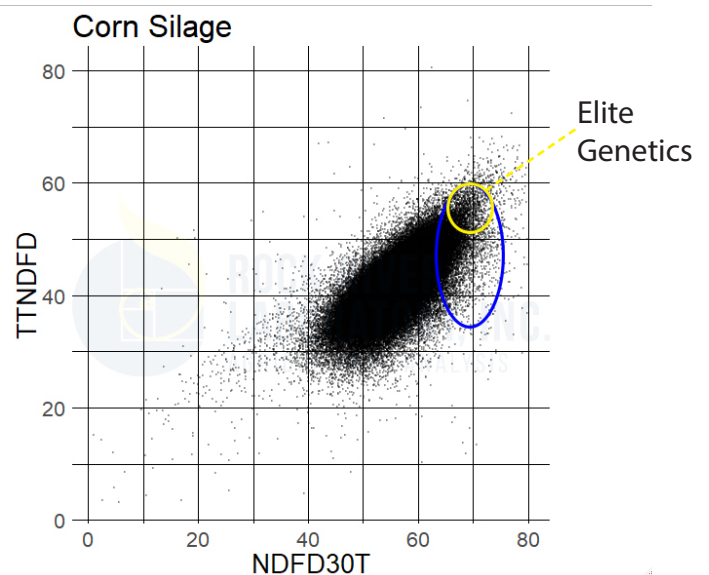
For years, fiber quality has been measured through digestibility at various time points. The gold standard is the amount of fiber digested by 30 hours [the average time forage may reside in a cow's rumen], aptly named Neutral Detergent Fiber Digestibility 30 (NDFD30), as a % of Neutral Detergent Fiber (NDF). Unfortunately, this assessment mechanism is limited by only showcasing relative fiber digestibility at a single incubation time point - negating higher quality forages that may reside in a cow's rumen for as little as 20-24 hours. Today, a fiber quality measurement exists that expands upon the capabilities of NDFD30 to completely differentiate the genetic potential of forage varieties: Total Tract NDF Digestibility (TTNDFD).

TTNDFD, an equation developed by Professor David Combs at the University of Wisconsin-Madison and backed by research, captures a more complete picture of a forage's digestion over time. Incorporating 24, 30, 48 and 240h NDFD time points, TTNDFD showcases the differences between forages with identical NDFD30 values - adding a second dimension to the genetic selection process to separate the best from the better.

The blue oval in Figure 1 captures what would be considered better than average genetics within the corn silage samples analyzed by Rock River Laboratory, based

on NDFD30. The NDFD30 has a range of about 10 points, while those same samples have a TTNDFD range of about 25. A corn silage may showcase an excellent NDFD30 but a marginal TTNDFD of below 40. This variation in TTNDFD at same or similar NDFD 30 levels equates to several pounds of milk production [herd performance], based on nutrition model projections.

**Figure 1**



Advancing and streamlining a forage genetics selection program is as easy as adding TTNDFD, available from Rock River Laboratory. The simple addition of this tool to the selection process can greatly reduce the time necessary to identify those elite genetics that can pay off in both on-farm performance and marketability. Whittle down the better from the best, and take the selection process to the next level with TTNDFD.