ASK THE EXPERTS!

Members are encouraged to write or email our Forage Focus editors! *We regularly feature questions provided by our readers (not all questions will be published; however, your questions will be answered by one of our professionals).*

Why the new RFQ index? *DG, Wisconsin*

Dear DG,

Relative Feed Value (RFV) has been of great value in ranking forages for sale and inventorying and assigning forage to animal groups according to their quality needs. With the recent introduction of digestible fiber for determining animal requirements in the National Research Council's *(NRC) Nutrient Requirements for Dairy Cattle (2001),* there is an opportunity to improve upon the RFV index using newer analyses and equations.

Energy in the RFV equation (and in ration balancing software) is estimated from acid detergent fiber (ADF) even though ADF was never designed for this purpose. Using any fiber determination to estimate digestibility assumes there is a close relationship between fiber concentration and digestibility , which is definitely not true.

Relative Feed Quality (RFQ) is based on estimates of energy intake relative to a standard, as is RFV. The differences are for RFQ, intake is adjusted for digestible fiber, and energy is calculated as TDN using digestible fiber. Thus, the RFQ equation is much more robust and better able to compare grasses to alfalfa and clovers. RFQ equation:

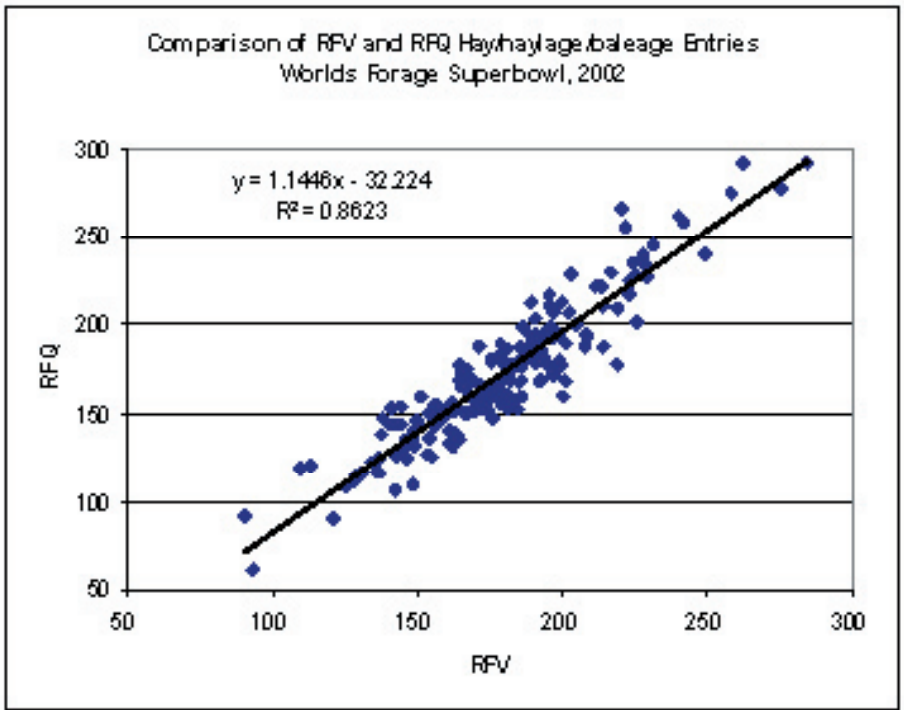
How does RFQ compare to RFV? *AV, North Dakota*

Dear AV,

We analyzed apx. 200 alfalfa hay and haylage samples from 20 states and two provinces entered in the 2002 Worlds Forage Superbowl at the World Dairy Expo. When we designed RFQ, we wanted apx. the same avg. and range as RFV, so RFQ could be substituted for RFV without making economic and other management changes. Superbowl samples had an avg. RFV of 179 and an avg. RFQ of 172, remarkably similar. The graph shows the range was similar, as intended when RFQ was developed.

RFV/RFQ relationship appears strong due to the large range of values. However, RFQ of individual samples varied by as much as 40 pts. higher or lower than RFV, and 22% of the samples varied by 20+ pts. For a sample where RFQ was higher than RFV, RFV underestimated the true feeding value of the forage, and the seller could have sold the hay for a higher price (or the buyer got a deal!). Where RFQ was lower than RFV, RFV overestimated the forage's true feeding value, and the cows would not have milked as expected.

Sincerely, *Forage Focus* Editor - *Dan Undersander, University of Wisconsin*



RFQ = (DMI, % of BW) * (TDN, % of DM) / 1.23