



Estimation of Alfalfa NDF Using PEAQ with a Simplified Staging Scale

Step 1: Choose a representative 2-square-foot area in the field

Step 2: Determine the most mature stem in the 2-square-foot sampling area using the criteria shown in the table at the right.

Step 3: Measure the length of the tallest stem in the 2-square-foot area. Measure it from the soil surface (next to plant crown) to the tip of the stem (NOT to the tip of the highest leaf blade). Straighten the stem for an accurate measure of its length. The tallest stem may not be the most mature stem.

Step 4: Based on the most mature stem and length of the tallest stem, use the chart at the right to determine estimated NDF content of the standing alfalfa forage.

Step 5: Repeat steps 1 to 4 in four or five representative areas across the field. Sample more times for fields larger than 30 acres

NOTE: This procedure estimates alfalfa NDF content of the standing crop. It does not account for changes in quality due to wilting, harvesting, and storage. These factors may further raise NDF content by 3 to 6 units, assuming good wilting and harvesting conditions. This procedure is more accurate for good stands of pure alfalfa with healthy growth.

Length of Tallest Stem (from soil to stem tip)	Stage of Most Mature Stem		
	Late Vegetative (no buds visible on stem)	Bud Stage (1 or more nodes with buds visible)	Flower Stage (1 or more nodes with 1 open flower)
-- inches --	----- % NDF -----		
16	28.5	29.7	31.4
17	29.2	30.4	32.0
18	29.9	31.1	32.7
19	30.6	31.8	33.4
20	31.3	32.5	34.1
21	32.0	33.2	34.8
22	32.7	33.9	35.5
23	33.4	34.6	36.2
24	34.0	35.3	36.9
25	34.7	35.9	37.6
26	35.4	36.6	38.3
27	36.1	37.3	38.9
28	36.8	38.0	39.6
29	37.5	38.7	40.3
30	38.2	39.4	41.0
31	38.9	40.1	41.7
32	39.6	40.8	42.4
33	40.3	41.5	43.1
34	40.9	42.2	43.8
35	41.6	42.8	44.5
36	42.3	43.5	45.2
37	43.0	44.2	45.8
38	43.7	44.9	46.5
39	44.4	45.6	47.2
40	45.1	46.3	47.9

The PEAQ system for estimating alfalfa quality in the field was developed by Agronomists at the University of Wisconsin-Madison