Phoenix Application Note

Feed – Fed Hen

Introduction

This application note describes the general results when measuring animal feed using the Phoenix NIR Analyzers.

Method

All samples were run on a Phoenix Series NIR Analyzer and calibrations were developed using Alligator Calibration software.

All samples were ground and mixed well before being analyzed.

The large rotating cup was used for analysis. Sample cup was ½ filled with lid.

Results

Samples were collected from many locations around the world and include many different types of Fed Hen brands and formulas.

All results are on as-is basis.

Definitions

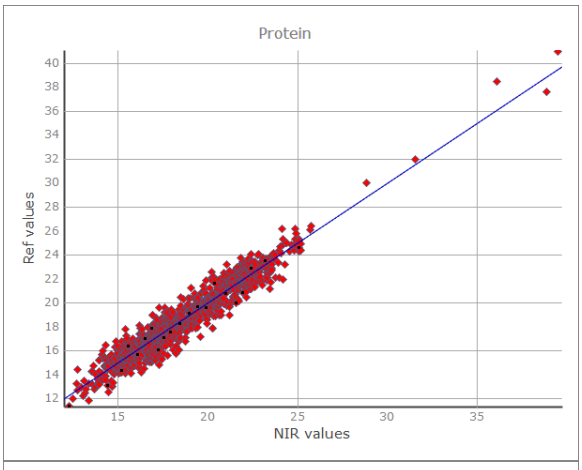
# of Samples: Total number of samples for each constituent.

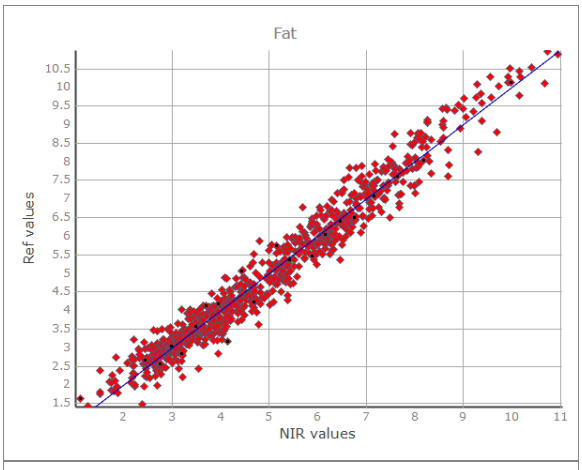
Range: Constituent range in the calibration

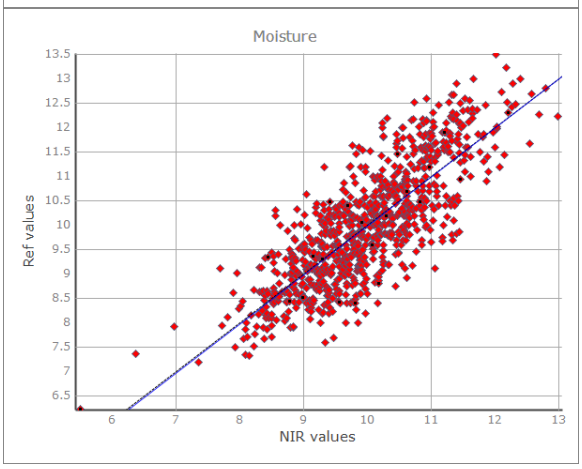
R^2: Correlation coefficient is the agreement between the wet chemistry and NIR results. Correlation is dependent on lab accuracy and constituent range.

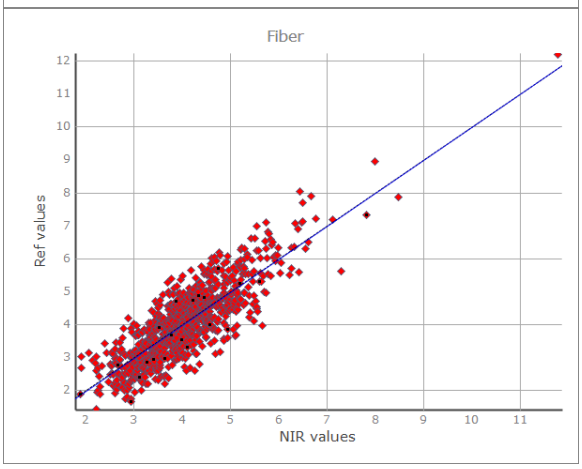
SECV: Cross Validation Error of the calibration. This value is approximately what can be expected when using the calibration for routine analysis.

Constituent	# of Samples	Range	R^2	SECV
Protein	1017	11.5 – 30	.908	.98
Moisture	874	7 – 13.5	.609	.79
Fat	833	1.5 – 11	.954	.46
Fiber	868	1.5 – 8	.648	.76
Ash	728	3.25 – 19	.781	1.55


Protein
Ref values
NIR values
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
15
20
25
30
35


Fat
Ref values
NIR values
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
2
3
4
5
6
7
8
9
10
11


Moisture
Ref values
NIR values
13.5
13
12.5
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
7
8
9
10
11
12
13


Fiber
Ref values
NIR values
12
11
10
9
8
7
6
5
4
3
2
2
3
4
5
6
7
8
9
10
11