

Table 1 Variation among Fe, Zn & Protein content in diverse common bean genotypes

Genotype	Mean $\pm$ SE*			Fe/ Zn		Fe/Protein		Zn/Protein	
	Fe	Zn	Protein	t-value/df	p-value	t-value	p-value	t-value	p-value
P1	1.055 $\pm$ 029 <sup>abcdefg</sup>	0.950 $\pm$ 203 <sup>r</sup>	22.80 $\pm$ 1.15470 <sup>fghi</sup>	6.059/2	.026	-18.879/ 2	.003	-19.260/2	.003
P2	1.297 $\pm$ 566 <sup>defghijk</sup>	0.480 $\pm$ 173 <sup>abcd</sup>	14.80 $\pm$ 57735 <sup>b</sup>	20.833/2	.002	-25.929/ 2	.001	-25.572/2	.002
P3	0.8423 $\pm$ 245 <sup>abcde</sup>	0.650 $\pm$ 147 <sup>ghijkl</sup>	18.00 $\pm$ 1.73205 <sup>bde</sup>	19.55/ 2	.003	-10.048/2	.010	-10.103/2	.010
P4	1.192 $\pm$ 577 <sup>abcdefg</sup>	0.589 $\pm$ 202 <sup>efghij</sup>	22.80 $\pm$ 2.19393 <sup>fghi</sup>	16.132/2	.004	-10.115/2	.010	-10.219/2	.009
P5	1.822 $\pm$ 289 <sup>mno</sup>	0.467 $\pm$ 011 <sup>abc</sup>	20.80 $\pm$ 46188 <sup>defg</sup>	48.889/ 2	.000	-43.828/2	.001	-44.132/2	.001
P6	1.013 $\pm$ 075 <sup>abcdefg</sup>	0.615 $\pm$ 028 <sup>fghijkl</sup>	18.00 $\pm$ 1.15470 <sup>bde</sup>	86.170/2	.000	-14.807/2	.005	-15.094/2	.004
P7	1.755 $\pm$ 029 <sup>klmno</sup>	1.056 $\pm$ 288 <sup>s</sup>	22.80 $\pm$ 1.15470 <sup>fghi</sup>	26.905/ 2	.001	-18.271/2	.003	-19.314/2	.003
P8	1.076 $\pm$ 092 <sup>abcdefg</sup>	0.483 $\pm$ 145 <sup>abcd</sup>	19.60 $\pm$ 80829 <sup>cdef</sup>	107.469/ 2	.000	-23.182/2	.002	-24.080/2	.002
P9	1.273 $\pm$ 577 <sup>cdefghij</sup>	0.688 $\pm$ 577 <sup>klmn</sup>	18.80 $\pm$ 1.15470 <sup>bdef</sup>	-28.773/ 2	.000	-15.978/2	.004	-16.511/2	.004
P10	1.344 $\pm$ 017 <sup>fghijkl</sup>	0.669 $\pm$ 173 <sup>ijklm</sup>	16.00 $\pm$ 2.30940 <sup>bc</sup>	43.278/ 2	.001	-6.351/2	.024	-6.689/2	.022
P11	1.419 $\pm$ 109 <sup>hijklm</sup>	0.703 $\pm$ 017 <sup>lmn</sup>	24.80 $\pm$ 46188 <sup>ghij</sup>	77.500/ 2	.000	-51.853/2	.000	-52.368/2	.000
P12	2.557 $\pm$ 069 <sup>p</sup>	0.601 $\pm$ 057 <sup>fghijk</sup>	19.60 $\pm$ 69282 <sup>cdef</sup>	1.691/ 2	.000	-24.848/2	.002	-27.653/2	.001
P13	1.089 $\pm$ 577 <sup>abcdefg</sup>	1.127 $\pm$ 057 <sup>st</sup>	27.60 $\pm$ 34641 <sup>jk</sup>	-.727/2	<b>.543</b>	-91.836/2	.000	-77.716/2	.000
P14	0.902 $\pm$ 011 <sup>abcdefg</sup>	0.528 $\pm$ 089 <sup>bdef</sup>	26.60 $\pm$ 92376 <sup>ijk</sup>	48.319/2	.000	-18.421/2	.003	-28.491/2	.001
P15	1.213 $\pm$ 075 <sup>bcdefghi</sup>	0.598 $\pm$ 289 <sup>fghijk</sup>	26.60 $\pm$ 1.38564 <sup>ijk</sup>	28.775/2	.001	-27.854	.001	-19.164/2	.003
P16	0.853 $\pm$ 349 <sup>abcdef</sup>	0.464 $\pm$ 002 <sup>abc</sup>	24.80 $\pm$ 92376 <sup>ghij</sup>	11.114/2	.008	-26.943/2	.001	26.344/2	.001
P17	1.321 $\pm$ 052 <sup>efghijkl</sup>	1.091 $\pm$ 173 <sup>st</sup>	24.80 $\pm$ 1.32791 <sup>ghij</sup>	18.970/2	.003	-17.751/2	.003	-18.090/2	.003
P18	6.746 $\pm$ 577 <sup>t</sup>	0.656 $\pm$ 289 <sup>ijklm</sup>	20.80 $\pm$ 1.50111 <sup>defg</sup>	210.962/2	.000	-9.737/2	.010	-13.682/2	.005
P19	1.148 $\pm$ 271 <sup>abcdefg</sup>	0.762 $\pm$ 004 <sup>no</sup>	20.80 $\pm$ 1.50111 <sup>defg</sup>	14.382/2	.005	-17.429/2	.003	-17.358/2	.003
R1	3.673 $\pm$ 900 <sup>q</sup>	1.482 $\pm$ 577 <sup>v</sup>	22.80 $\pm$ 57735 <sup>fghi</sup>	69.087/2	.000	-32.038/2	.001	-41.027/2	.001
R2	<b>7.22<math>\pm</math>404<sup>u</sup></b>	0.449 $\pm$ 173 <sup>ab</sup>	18.00 $\pm$ 1.03923 <sup>bde</sup>	293.155/2	.000	-10.793/2	.008	-17.174/2	.003
R3	1.30 $\pm$ 288 <sup>efghijk</sup>	0.542 $\pm$ 230 <sup>bdef</sup>	16.80 $\pm$ 92376 <sup>bcd</sup>	131.252/2	.000	-17.321/2	.003	-18.051/2	.003
R4	0.771 $\pm$ 288 <sup>ab</sup>	0.587 $\pm$ 012 <sup>efghij</sup>	22.00 $\pm$ 57735 <sup>efgh</sup>	6.641/2	.022	-38.705/2	.001	-37.163/2	.001
R5	1.247 $\pm$ 173 <sup>bcdefghij</sup>	0.616 $\pm$ 035 <sup>fghijkl</sup>	14.40 $\pm$ 1.21244 <sup>b</sup>	43.772/2	.001	-11.006/2	.008	-11.397/2	.008
R6	1.416 $\pm$ 034 <sup>hijklm</sup>	0.55 $\pm$ 002 <sup>cdef</sup>	18.800 $\pm$ 1.32791 <sup>bdef</sup>	249.993/2	.000	-13.126/2	.006	-13.743/2	.005
R7	0.889 $\pm$ 115 <sup>abcdefg</sup>	0.563 $\pm$ 230 <sup>cdefghi</sup>	18.00 $\pm$ 1.44338 <sup>bde</sup>	28.206/2	.001	-11.950/2	.007	-12.277/2	.007
R8	1.013 $\pm$ 075 <sup>abcdefg</sup>	0.475 $\pm$ 115 <sup>abc</sup>	20.80 $\pm$ 17321 <sup>defg</sup>	132.681/2	.000	-119.415/2	.000	-125.726/2	.000
R9	4.739 $\pm$ 052 <sup>r</sup>	0.812 $\pm$ 057 <sup>opq</sup>	24.80 $\pm$ 1.32791 <sup>ghij</sup>	6.802/2	.000	-15.167/2	.004	-18.143/2	.003
R10	1.129 $\pm$ 029 <sup>abcdefg</sup>	0.803 $\pm$ 017 <sup>op</sup>	16.00 $\pm$ 1.09697 <sup>bc</sup>	282.178/2	.000	-13.592/2	.005	-13.387/2	.005
KS1	1.225 $\pm$ 029 <sup>bcdefghij</sup>	0.576 $\pm$ 429 <sup>defghij</sup>	20.80 $\pm$ 1.96299 <sup>defg</sup>	16.217/2	.004	-9.987/2	.010	-10.533/2	.009
KS2	1.375 $\pm$ 115 <sup>ghijklm</sup>	0.749 $\pm$ 173 <sup>mno</sup>	22.00 $\pm$ 1.73205 <sup>efgh</sup>	108.513/2	.000	-11.988/2	.007	-12.393/2	.006

Continued Table 1

Genotype	Mean $\pm$ SE*			Fe/ Zn		Fe/Protein		Zn/Protein	
	Fe	Zn	Protein	t-value/df	p-value	t-value	p-value	t-value	p-value
KS3	0.99 $\pm$ 231 <sup>abcde</sup> gh	0.919 $\pm$ 577 <sup>f</sup>	25.60 $\pm$ 1.90526 <sup>hijk</sup>	2.584/2	<b>.123</b>	-13.586/2	.005	-13.359/2	.006
KS4	1.791 $\pm$ 225 <sup>lmno</sup>	1.582 $\pm$ 917 <sup>x</sup>	16.80 $\pm$ 98150 <sup>bcd</sup>	3.017/2	<b>.095</b>	-15.651/2	.004	-17.105/2	.003
KS5	1.423 $\pm$ 058 <sup>hijklm</sup>	0.575 $\pm$ 296 <sup>defghij</sup>	18.80 $\pm$ 1.38564 <sup>bcd</sup>	35.572/2	.001	-12.593/2	.006	-13.440/2	.005
KS6	1.05 $\pm$ 289 <sup>abcde</sup> gh	<b>0.427<math>\pm</math>176<sup>a</sup></b>	<b>31.60<math>\pm</math>2.25167<sup>l</sup></b>	55.319/2	.000	-13.744/2	.005	-13.953/2	.005
KS7	0.914 $\pm$ 049 <sup>abcde</sup> fg	0.815 $\pm$ 057 <sup>opq</sup>	14.40 $\pm$ 69282 <sup>b</sup>	114.200/2	.000	-19.605/2	.003	-19.774/2	.003
KS8	6.34 $\pm$ 577 <sup>s</sup>	0.484 $\pm$ 173 <sup>abcd</sup>	16.00 $\pm$ 1.15470 <sup>bc</sup>	144.896/2	.000	-8.806/2	.013	-13.642/2	.005
KS9	0.972 $\pm$ 289 <sup>abcde</sup> fgh	1.167 $\pm$ 704 <sup>t</sup>	16.80 $\pm$ 00000 <sup>bcd</sup>	-4.689/2	.043	-548.291/2	.000	-221.944/2	.000
KS10	1.368 $\pm$ 289 <sup>ghijklm</sup>	0.662 $\pm$ 289 <sup>ijklm</sup>	18.00 $\pm$ 1.73205 <sup>bcd</sup>	142.896/2	.000	-9.765/2	.010	-10.180/2	.010
KS11	2.098 $\pm$ 577 <sup>o</sup>	0.489 $\pm$ 288 <sup>abcde</sup>	14.40 $\pm$ 23094 <sup>b</sup>	55.505/2	.000	-71.026/2	.000	-68.801/2	.000
K12	<b>0.711<math>\pm</math>0577<sup>a</sup></b>	0.553 $\pm$ 289 <sup>cdefg</sup>	<b>7.20<math>\pm</math>69282<sup>a</sup></b>	6.820/2	.021	-9.445/2	.011	-10.012/2	.010
K13	0.862 $\pm$ 289 <sup>abcde</sup> f	0.556 $\pm$ 289 <sup>cdefgh</sup>	18.00 $\pm$ 1.15470 <sup>bcd</sup>	1.311/2	.000	-15.222/2	.004	-15.494/2	.004
K14	0.797 $\pm$ 115 <sup>abc</sup>	0.466 $\pm$ 289 <sup>abc</sup>	29.60 $\pm$ 2.94449 <sup>kl</sup>	19.110/2	.003	-9.820/2	.010	-9.992/2	.010
K15	0.853 $\pm$ 289 <sup>abcde</sup> f	<b>1.931<math>\pm</math>346<sup>y</sup></b>	16.80 $\pm$ 23094 <sup>bcd</sup>	-186.670/2	.000	-78.917/2	.000	-75.747/2	.000
K16	1.701 $\pm$ 006 <sup>ijklmno</sup>	0.895 $\pm$ 461 <sup>qr</sup>	24.00 $\pm$ 00000 <sup>ghij</sup>	17.676/2	.003	-3.862/2	.000	-500.242/2	.000
K17	1.19 $\pm$ 404 <sup>abcde</sup> fghi	1.363 $\pm$ 115 <sup>u</sup>	16.80 $\pm$ 92376 <sup>bed</sup>	-5.993/2	.027	-17.671/2	.003	-16.923/2	.003
K18	0.800 $\pm$ 003 <sup>abcd</sup>	0.534 $\pm$ 062 <sup>bcd</sup> ef	26.80 $\pm$ 34641 <sup>ijk</sup>	42.284/2	.001	-75.056/2	.000	-77.227/2	.000
K19	1.928 $\pm$ 049 <sup>no</sup>	0.943 $\pm$ 168 <sup>f</sup>	20.80 $\pm$ 98150 <sup>defg</sup>	80.881/2	.001	-19.319	.003	-20.584/2	.002
K20	1.627 $\pm$ 115 <sup>ijklmn</sup>	0.912 $\pm$ 074 <sup>f</sup>	24.00 $\pm$ 1.90526 <sup>ghij</sup>	174.205/2	.000	-11.814/2	.007	-12.165/2	.007
B1	1.004 $\pm$ 023 <sup>abcde</sup> fgh	0.654 $\pm$ 439 <sup>hijklm</sup>	18.00 $\pm$ 1.50111 <sup>bcd</sup>	8.400/2	.014	-11.340/2	.008	-11.903	.007
B2	1.073 $\pm$ 230 <sup>abcde</sup> fgh	0.886 $\pm$ 2304 <sup>pqr</sup>	15.20 $\pm$ 80829 <sup>bc</sup>	173.105/2	.000	-17.992/2	.003	-18.203	.003
Avg	1.81 $\pm$ 1.21	0.78 $\pm$ 0.31	20.31 $\pm$ 0.40						

Note: \*Mean  $\pm$ SE values with different superscripts between the genotypes within the same column are significantly different from each other (ANOVA; DUNCAN post-hoc;  $P < 0.05$ )