

TABLE 1 Influence of tillage and microbial inoculants mediated integrated P management on quality parameters (amino acids and protein content) of wheat under conservation agriculture

Treatment	Lysine content (%)		Methionine content (%)		Proline content (%)		Glycine content (%)		Alanine content (%)		Cystine content (%)		Phenylalanine content (%)		Protein content (%)	
	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18	2016-17	2017-18
Tillage practices																
CT-R	2.95	2.98	1.78	1.79	7.77	7.80	5.91	6.02	6.47	6.49	3.46	3.49	4.79	4.82	9.01	9.05
ZT-R	3.01	3.03	1.82	1.83	7.98	7.99	6.00	6.11	6.64	6.65	3.51	3.53	4.86	4.87	10.5	10.7
ZT+R	3.23	3.24	1.89	1.91	8.12	8.14	6.19	6.20	7.71	7.73	3.54	3.55	4.88	4.90	10.8	10.9
SEm±	0.03	0.02	0.03	0.01	0.09	0.08	0.06	0.07	0.03	0.02	0.02	0.01	0.03	0.02	0.11	0.14
LSD (P=0.05)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Phosphorus management practices																
P1	2.88	2.94	1.71	1.74	7.57	7.63	5.81	5.85	6.50	6.54	3.41	3.43	4.75	4.78	9.30	9.35
P2	3.15	3.18	1.79	1.81	7.83	7.88	5.94	5.97	6.62	6.63	3.47	3.48	4.81	4.83	10.2	10.4
P3	3.23	3.25	1.87	1.88	8.18	8.19	6.11	6.17	7.71	7.72	3.53	3.55	4.88	4.92	10.7	10.8
P4	3.20	3.21	1.85	1.87	8.01	8.05	6.01	6.04	7.67	7.69	3.50	3.51	4.84	4.86	10.5	10.7
P5	3.28	3.30	1.91	1.92	8.23	8.25	6.26	6.27	7.76	7.78	3.58	3.60	4.91	4.95	10.8	10.9
SEm±	0.05	0.04	0.02	0.03	0.08	0.07	0.09	0.06	0.16	0.14	0.03	0.03	0.03	0.03	0.14	0.12
LSD (P=0.05)	0.12	0.11	0.07	0.09	0.24	0.22	0.27	0.25	0.45	0.42	0.10	0.09	0.08	0.09	0.45	0.35
Tillage × P management	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Where, CT – R (Conventional tillage with no residue); ZT – R (Zero tillage with no residue); ZT + R (Zero tillage with maize residue @ 2.5 Mg ha⁻¹); P₁: Control (NK as per recommendation, but no P); P₂: 17.2 kg P ha⁻¹; P₃: 17.2 kg P ha⁻¹ + biofertilizer (PSB); P₄: 17.2 kg P ha⁻¹ + compost inoculants and P₅: 34.4 kg P ha⁻¹

Table 2 Results of principal component analysis (PCA) of tillage, residues, P management practices and quality parameters of wheat

Principal components		PC1	PC2
Initial eigen values	Total	6.47	1.34
	% of Variance	80.93	16.78
	Cumulative %	80.93	97.71
Rotation sums of squared loadings	Total	3.98	3.84
	% of Variance	49.72	47.99
	Cumulative %	49.72	97.71
Factor loadings^a			
Eigen vectors^b		PC1	PC2
Lysine yield		0.319	0.937
Methionine yield		0.370	0.877
Proline yield		0.936	0.348
Glycine yield		0.935	0.351
Alanine yield		0.935	0.351
Cystine yield		0.319	0.937
Phenylalanine yield		0.370	0.908
Protein yield		0.936	0.348
Lysine yield		0.319	0.937
Methionine yield		0.370	0.877

Extraction Method: Principal Component Analysis; **Rotation Method:** Varimax with Kaiser Normalization

^aBold faced factor loadings are considered highly weighted; ^bRotation converged in 5 iterations.