Efficiency in using additional N on the Yield of extracted protein : The response to additional N could be seen markedly in the 4th, 7th, and 8th cuttings and the extracted protein yield increased almost linearly with a corresponding increase in the application of N.

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Studies on the Protein Yield in Wheat Genotypes

Protein is an important constituent of food and feed crops from the stand point of nutritive value. The present study was initiated to evaluate the different wheat genotypes for protein, so that the promising genotype having higher protein could be selected for further breeding programmes.

A field study was made at the Agronomy field unit, Main Research Station, University of Agricultural Sciences, Bangalore on red sandy loam soils of average fertility during 1971 winter. Wheat genotypes included were Choti lerma, Sonalika, Safed Lerma, UP 301, Bijaga Yellow, Narmada 4, Hira and

a promising Australian variety Gamut. The experiment was laid out in a randomised block design with four replications. The gross and net plot sizes were 4.5 m^2 and 3.0 m^2 respectively. The crop was sown under irrigation, adopting a row spacing of 18 cm and a seed rate of 150 kg/ha. The crop was fertilized at a dose of 150 N, 100 P_2O_5 and 75 K_2O kg/ha. Nitrogen was applied in two splits at sowing and three weeks from sowing in the form of ammonium sulphate, while all the P_2O_5 and K_2O were applied as basal dressing. The sample of grain from all the replications was collected and ground uniformly. The percent nitrogen in grain was estimated by the Kjeldahl method and the per cent protein was determined by multiplying the per cent nitrogen with 5.7 (A. O. A. C., 1960).

The data on per cent nitrogen, grain yield and protein yield are furnished in Table 1. Among the genotypes, Bijaga Yellow recorded the highest per cent protein of 15.39 followed by Choti Lerma (14.93), Hira (14.59), UP 301 (14.42), Sonalika (14.19), Narmada 4 (14.8), Safed Lerma (13.97) and Gamut (13.34). Eventhough the genotypes showed no significant differences in per cent protein, the total protein yield varied largely since there was highly significant difference in grain yield among the genctypes. Choti Lerma (5200 kg/ha) significantly out-yielded other genotypes.

TABLE 1. Protein yield of wheat genetypes

Wheat genotypes	Protein (%)	Grain yield (kg/ha)	Protein yield (kg/ha)
Bijaga Yellow	15.39	3010	463.24
Choti Lerma	14.93	5200	776.36
Hira	14.59	2600	379.34
UP-301	14.42	4620	666.20
Sonalika	14.19	4980	709.66
Narmada 4	14.08	2800	394.24
Safed Lerma	13.97	4820	673.35
Gamut	13.34	4750	633.65
Mean	14.36	4097.50	586.63
'F' test	N.S.	**	—
C. D. at 5%	—	750	—

With regard to protein yield Choti Lerma (776.36 kg/ha) was the best, followed by Sonalika (706 66 kg/ha), Safed Lerma (673.35 kg/ha) and UP 301 (666.20 kg/ha).

The study indicated that the grain yield is the contributory factor of protein yield difference in wheat genotypes than per cent protein.

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