

TABLE I
Analysis of Water-Soluble Nitrogen of the Extracts

Days	Green Gram Per 100 g. of pulse				Black Gram Per 100 g. pulse				Bengal Gram Per 100 g. pulse				Horse Gram Per 100 g. of Pulse			
	Total Solids (g.m.)	Total N (g.)	Amide N (g.)	Amide N as % of Total N	Total Solids (g.)	Total N (g.)	Amide N (g.)	Amide N as % of Total N	Total solids (g.)	Total N (g.)	Amide N (g.)	Amide N as % of Total N	Total Solids (g.)	Total N (g.)	Amide N (g.)	Amide N as % of Total N
1	—	—	—	—	11.8	0.34	0.05	13.23	10.9	0.42	0.037	9.00	16.1	0.57	0.051	9.154
2	—	—	—	—	13.8	0.34	0.06	16.96	11.7	0.40	0.037	9.41	14.0	0.61	0.102	16.04
3	19.3	1.48	0.03	3.89	12.9	0.54	0.07	13.86	10.3	0.41	0.031	10.03	13.1	0.82	0.162	19.55
4	25.0	1.67	0.15	9.27	24.7	1.01	0.14	13.11	9.9	0.41	0.052	12.53	21.0	1.23	0.24	19.83
5	19.9	1.00	0.33	16.13	25.6	1.31	0.17	13.27	10.4	0.53	0.033	18.20	22.3	1.53	0.333	21.60
6	16.3	1.67	0.61	36.03	27.4	1.74	0.23	15.90	12.5	0.60	0.131	11.0	20.3	1.53	0.370	23.36
7	15.9	2.13	0.68	31.92	22.5	1.80	0.40	21.21	12.6	0.73	0.153	11.32	20.0	1.53	0.433	27.48
8	14.3	2.1	0.75	35.24	21.8	1.96	0.42	21.77	13.7	0.70	0.132	22.02	19.3	1.71	0.487	30.33
9	14.2	2.1	0.79	37.27	20.9	2.02	0.30	25.12	13.2	0.75	0.150	25.02	21.4	1.58	0.501	25.54

lings (200 in number) have sampled out at every 24 hours and immediately blanched in water kept vigorously boiling for this purpose; the treatment served to arrest the enzymatic activity of the tissues. The material was then ground up with water and extracted twice with water (by keeping on a boiling water-bath for 15 minutes). The combined extracts were acidified to pH 5.6, kept overnight, filtered and the filtrate made up to 600 c.c. Samples were treated in this manner for nine days and all the pulses were taken up for investigation. The resulting filtrates are analysed for (1) total solids by evaporation, (2) total nitrogen (by Kjeldahl) and (3) amide N as suggested by Jodidi and Kellogg.² The results of the analyses are embodied in the above table.

DISCUSSION

The results have been calculated as percentages on the weight of the seeds and are given in Table 1. It will be observed that (1) the percentage of water-extractable total solids rises in the earlier stages of growth and later tends to diminish, (2) a steady increase in the percentage of total and amide N in the extracts. Assuming that the amide N represents the asparagine content of the seedlings, it can be seen that of the pulses examined green gram (*Phaseolus mungo*) constitutes the richest source of asparagine. It should, however, be pointed out that the results indicate that by allowing the seedlings for longer periods, a further enrichment of the extract with respect to asparagine may be obtained.

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1. Vickery, H. B., Pucher, G. W., and Deuber, C. G., *J. Biol. Chem.*, 1942, 145, 45. 2. Jodidi, S. L., and Kellogg, E. H., *J. Agr. Research*, 1918, 15, 385.

WANTED A MUSEUM OF EVOLUTION

I HAVE read Mr. Randhawa's note entitled "Wanted a Museum of Evolution" in the November issue of *Current Science* with interest. This is a suggestion of far-reaching possibilities. Unless a deliberate attempt is made now by the leaders of public movement to wean the Indian mind from the futile ideological pursuits which pass under the name of religion, the state of "virtual civil war" between rival religious ideologies in this country will remain and perhaps increase in volume.

The best substitute for this so-called "religion" would be the right type of knowledge of fundamental facts of science, which, if imparted and diffused in the manner suggested by Mr. Randhawa, is sure to fertilise the mind of the average man, woman and child and lead it to constructive healthful pursuits. At present negative action and attitude of mind are rampant in many phases of our national life.

Of the branches of science none is likely to appeal more to our people than the science of Life-Biology, which comes nearest to their innate philosophical susceptibilities. Such "museums", after the first inevitable doubts and criticisms will soon become popular and unconsciously, in course of time, make people science-minded. A science-minded India will take its rightful place in the world more easily than the present ultra-religious minded population, seething with fissiparous tendencies and scenting danger to their faiths in all moves for common action or unity.

Ten lacs of rupees will give a fair number of such "museums" to our principal cities. The donor of this gift will give to India monuments more lasting and beneficial than any number of temples, mosques or churches.

New Delhi,
December 19, 1945.

D. N. WADIA.