

trast to these high figures in *L. sativus* seeds analysis of seeds of cereals and other legumes from the same endemic area revealed low Mn content.

Testa (husk) of seeds showed on analysis much higher Mn content than cotyledons (Table II).

Analysis of *L. sativus* field soils from the endemic areas of Bihar, Madhya Pradesh and Uttar Pradesh showed a high Mn content as compared with the soils of Madras (Table III).

TABLE III  
Range of Mn in *L. sativus* field soils

Soil samples from	Mn in mg. %	
	Total Mn	Plant available Mn
Madhya Pradesh	39.5-67.5	13.7-32.5
Uttar Pradesh	15.0-39.0	6.5-13.7
Bihar	39.5-86.0	15.3-44.5
Madras	19.0-26.0	..

Preferential uptake of Mn in significantly high amounts appears characteristic of only *L. sativus* plants among those included in our analyses and even that only in certain years. For instance, the 1958 crop showed a high Mn in seed samples from several areas in Rewa District and the 1959 samples had uniformly low Mn content. As heavy rainfall in the area was registered in 1959, the question of Mn uptake being conditioned by soil moisture was explored. Controlled experiments showed a positive correlation between soil moisture and Mn uptake, the optimum being 20 to 40% moisture-holding capacity. In fact, at higher moisture levels Mn accumulation was almost half that at 40% level. An examination of the meteorological data for the years 1922 and 1945 recorded,<sup>1,7</sup> showed that the epidemics in both instances followed years of negligibly low rainfall during the winter crop season. This observation, however, could also mean that in

years of drought and consequent failure of other staple crop, villagers consumed more *L. sativus* than usual and for longer periods.

A high content of Mn in *L. sativus* samples had been reported from Spain, a finding which came to our notice later. In this Spanish report<sup>8</sup> Mn values of the order of 118 to 225 p.p.m. were recorded.

The significance of the high Mn content observed in some *L. sativus* samples required further elucidation through field studies and actual clinical investigation of patients. The clinical features of manganese intoxication in human subjects are akin to Parkinsonism and are thus different from the clinical picture of lathyrism. However, Mn may either be indicative or may potentiate the action of some factor in the *L. sativus* seeds responsible for the disease. In fact, Mn compounds as they occur in green leaves and seeds of mature plants have been shown to be much more active biologically than equal portions of a crystalline salt of Mn in synthetic diet.<sup>9,10</sup> On the other hand the occurrence of high Mn content in certain samples of *L. sativus* may be unrelated to the development of the disease. These possibilities have to be explored in future investigations. Such clinical and field investigations have been initiated in the Field Unit at Rewa.

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## INDIAN SCIENCE CONGRESS

THE 47th Session of the Indian Science Congress was held in Bombay under the auspices of the Bombay University from January 3-9, 1960. The session was inaugurated by Prime Minister Jawaharlal Nehru. Mr. Sri Prakasa, the Governor of Bombay and Chancellor of the Bombay University welcomed the gathering which included about 70 foreign scientists.

Prof. P. Parija, Vice-chancellor of the Utkal University presided over the session and delivered the Presidential Address on "Impact of Society on Science".

Besides the reading of papers in the different sections, presided over by the respective sectional Presidents, there were arranged a number of symposia and a series of popular lectures. One of the series was on "Atoms and Human Knowledge" by Prof. Niels Bohr.

The 48th Session of the Congress will be held at Roorkee from January 3-9, 1961, under the Presidentship of Dr. N. R. Dhar. Dr. B. Mukerji, Director, Central Drug Research Institute, Lucknow, has been elected General President for 1961-62.