

**Table 3. Fertilizer recommendations for some vegetable crops.**

Crop	Nutrient, kg/ha		
	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cabbage	150	125	100
Cauliflower	150	60	40
Tomato	110	60	95
Brinjal	120	80	80
Okra	60	50	30
Carrot	56	28	56
Radish	84	30	30
Onion	135	45	22
Peas	50	50	25
Bitter Gourd	56	28	28
Mean	96.21	51.71	53.14
NPK Ratio	2	1	1

structures is also dependent on the use of these commercially produced fertilizers.

The production of 100 million tonnes of vegetables from 8 million hectares by 2000 and 170 million tonnes by 2025 will require 0.35 and 0.5 million tonnes each of P and K, respectively (Table 4). During the same periods, India will need 140 and 200 million tonnes of farmyard manure at the recommended rate of 25 t/ha. Its application is an accepted and popular practice followed by vegetable growers. Any correction in supply of nutrients through organic sources is not going to reduce the demand for mineral fertilizer plant nutrients.

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**Table 4. Projection of plant nutrient needs of vegetable crops.**

Particulars	Year		
	1995	2000	2025
Population (m)	900	1,000	1,700
Requirement of vegetables (m.t.)	90	100	170
Area under vegetables (m.ha.)	5	6	8
Productivity (t/ha)	14	20	30
Farm yard manure (m.t.)	125	150	200
Nitrogen (m.t.)	0.50	0.70	1.00
Phosphorus (m.t.)	0.25	0.35	0.50
Potash (m.t.)	0.25	0.35	0.50
Total NPK (m.t.)	1.00	1.40	2.00
(m = million)			

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## Liu Rongle Joins PPI/PPIC Beijing Staff as Agronomist

Mr. Liu Rongle has joined the international staff of PPI/PPIC.

He was appointed to the position of Technical Assistant (Agronomist) in the Beijing office on May 1, 1996. He will be assisting Dr. Jin Ji-yun, Deputy Director of the PPI/PPIC China Program, in agronomic research and education efforts with focus on north China.

"Mr. Liu brings a strong background in soil and fertilizer research to our China program," said Dr. David W. Dibb, President of PPI.

During 1986-1995, Mr. Liu was employed as assistant and associate professor at the Sciencetech Documentation and Information Center of the Chinese Academy of Agricultural Sciences (CAAS), working on soil and fertilizer related information processing and retrieving. Before joining PPI/PPIC, Mr. Liu had transferred to the Science and Technology Management Department of CAAS, as an associate professor for coordinating national research projects.

Born in Hebei, China, Mr. Liu completed his undergraduate training in agronomy at Hebei Agricultural University in 1982-83. He continued with graduate study at CAAS and received his M.Sc. Degree in Soil Science in 1986.

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