The Vitamin "A" Contents of Ceylon Leafy Vegetables

BY

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DURING recent years increasing attention has been given to the problem of nutrition in Ceylon. It has been found that the diet of most people in Ceylon is deficient in milk, butter and eggs which are rich sources of vitamin A. This deficiency can be remedied to a large degree by the use of leafy vegetables in the diet.

Leafy vegetables are known to contain carotenes—alpha, beta and gamma, which are precursors of Vitamin A and are converted into Vitamin A in the body and stored in the liver. These carotenes are yellow pigments which can be estimated by colorimetric methods. Twenty-five leafy vegetables of local origin were analysed by the method adopted by C. R. Austin and J. Shipton—Journal of the Council for Scientific and Industrial Research (Australia) 1944, Vol. 17, p. 115.

RESULTS

The following are the results of the analysis of 25 local leafy vegetables and those of American, Indian and Malayan leafy vegetables. The figures wherever possible for the vitamin A contents of the same leafy vegetables as the local ones reported in the United States Department of Agriculture Hand Book, No. 8, 1950, the Indian Health Bulletin, No. 23, 1937, and the Department of Agriculture, Federation of Malaya, Scientific Series, No. 23, 1949, respectively, are furnished for comparison:—

	Botanical and English Names	*Sinhalese Names*	*Tamil Names*	*Vitamin A contents in I.U/100 grammes*			
				Ceylon	*American*	*Indian*	*Malayan*
1.	Alternanthera triandra	Mukunuwenna	Ponnankani	536	—	—	—
2.	Sasbania grandiflora	Kathurumu-runga	Ahathi	1,916	—	—	—
3.	Raphanus sativus (Radish)	Rabu	Mullanki	325	—	—	—
4.	Hydrocotyl asiatica	Gotukola	Vallarai	355	—	—	—
5.	Daucus carota (carrot)	—	—	1,050	—	—	—
6.	Amaranthus viridis	Kurakola	Sirukeerai	1,620	—	—	2,667
7.	Rivea ornata	—	Musuttai	1,900	—	—	—
8.	Moringa oleifera	Murunga	Murungai	2,750	—	11,330	—
9.	Amaranthus olaraceous	Thampala	Keerai	3,366	—	—	—
10.	Amaranthus gangaticus	Rathu Tham-pala	—	2,216	—	2,500	3,333
11.	Spinacea olaracea (spinach)	Niviti	Pasali	978	9,420	2,630	8,000
12.	Talinum patens	Gasnivithi	—	771	—	—	—
13.	Ipomea aquatica	Kankun	Kankun	2,476	—	3,270	4,667
14.	Brassica olaracea	Gowa	Kowa	1,538	80	2,000	4,333
15.	Boerhaavia diffusa	Saarana	—	2,183	—	—	—
16.	Solanum Nigrum	Kalukanweriya	Manalthakkali	9,666	—	—	—
17.	Lasia spinosa	Kohila	—	1,231	—	—	—

	Botanical and English Names	*Sinhalese Names*	*Tamil Names*	*Vitamin A contents in I.U/100 grammes*			
				Ceylon	*American*	*Indian*	*Malayan*
18.	Portulaca olaracea	Genda	—	2,373	—	—	—
19.	Cardiospermum halicacabum	Valpenela	Mudakkottan	3,360	—	—	—
20.	Aerua lanata	Polpala	—	4,260	—	—	—
21.	Lactuca sativa (lettuce)	—	—	828	540	2,200	1,620
22.	Manihot utilissima	Manjoca	Maravalli	2,933	—	—	—
23.	Allium ascalonium (onions)	Rathu lunu	Eravenkayam	2,616	50	—	—
24.	Ipomea batatas (ord) (sweet potato)	Batala	Vattalai	1,423	—	—	7,770
25.	Ipomea batatas (yellow) (sweet potato)	Batala	Vattalai	2,026	—	—	—

DISCUSSION

An examination of the results indicates that most of the popular leafy vegetables grown in Ceylon are potent sources of Vitamin A. One common but rarely known leafy vegetable—Kalukanveriya, S., Manalthakkali, T. (Solanum Nigrum) gave the highest figure. The divergence in the figures for the same leafy vegetables of America, India and Malaya, compared with those found for the Ceylon leafy vegetables, is not difficult to explain. It is known that the Vitamin A contents of leafy vegetables can vary as a result of climatic and soil conditions.