

12. Weighing Machine	1
13. Thermos	1
14. Radio	2
15. Table Fan	1
16. Watches	2
17. Scooter DLQ-5231	1
18. Jeep DLL-6171	1
19. Cycles	3
20. Crockery	—
21. Clothes	—
22. Shield	—

Import of Caffeine

5513. SHRI DEVINDER SINGH GAR-CHA : Will the Minister of FOREIGN TRADE be pleased to state :

(a) whether Government import 50 to 70 tonnes of caffeine every year to meet our domestic requirements ; and

(b) the extent of savings of foreign exchange every year by producing caffeine in the country ?

THE DEPUTY MINISTER IN THE MINISTRY OF FOREIGN TRADE (SHRI A. C. GEORGE) : (a) Import of caffeine has been arranged through the S. T. C. to the extent necessary to meet the domestic demand after taking indigenous production into account. Imports in 1970-71 were 27.7 tonnes and did not exceed 33. 2 tonnes in any year for the last 5 years.

(b) At the current level of domestic production, demand and prices, the estimated annual saving in foreign exchange by indigenous production is of the order of Rs. 15 lakhs per annum.

Process Developed by Regional Research Laboratory, Jorhat for Producing Caffeine from Tea Waste

5512. SHRI DEVINDER SINGH GAR-CHA :

SHRI K. M. MADHUKAR

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state :

(a) whether Dr. M. S. Iyengar of the Regional Research Laboratory, Jorhat has developed a process by virtue of which caffeine can be produced from the tea waste; and

(b) if so, the particulars of this process and the quantity of caffeine which will be produced every year ?

THE MINISTER OF PLANNING AND MINISTER OF DEPARTMENT OF SCIENCE AND TECHNOLOGY (SHRI C. SUBRAMANIAM) : (a) The Regional Research Laboratory, Jorhat, has developed a process for producing caffeine from tea waste.

(b) The process comprises of mixing tea waste with suitable proportion of lime and subjecting the resultant mix to solvent extraction in a continuous solid-liquid extractor using counter-current principle. The solvent used is trichloroethalene. The caffeine goes into solution and is recovered by distilling the solvent. It is purified and crystallised by further extraction with hexane to give the British Pharmacopocia (B. P.) quality.

M/s. Assam Pharma Co., Jorhat (Assam) who have been Assigned this process, have intimated in July, 1970 that they will go into production soon. No further intimation has been received. Licences have been issued to two more parties-

Process Developed by Regional Research Laboratory, Jorhat for making board from Agro-Industrial Waste

5514. SHRI DEVINDER SINGH GAR-CHA : Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state :

(a) whether Dr. M.S. Iyengar of the Regional Research Laboratory, Jorhat has developed a process of making board using agro-industrial waste ; and

(b) if so, the particulars of this process ?

THE MINISTER OF PLANNING AND MINISTER OF DEPARTMENT OF SCIENCE AND TECHNOLOGY (SHRI C. SUBRAMANIAM) : (a) The Regional Research Laboratory, Jorhat has developed a process for making boards using agro-industrial wastes.

(b) The process basically comprises of taking finely divided agro-industrial wastes like paddy husk, groundnut husk, bagasse,