

(c) whether it is also a fact that if harnessed on large scale the cotton mills in the country can cut down by at least half their dependence on coal and the cost of generation will be really small as the basic raw material is at present being thrown out as waste or sold for a nominal price; and

(d) whether Government would give a sincere trial to the above innovation and if so, what plans have been made, if any, for this purpose ?

THE MINISTER OF STATE IN THE MINISTRIES OF AGRICULTURE AND RURAL DEVELOPMENT (SHRI R. V. SWAMINATHAN) : (a) Yes, Sir. Cotton willow dust or willow waste, which is a waste product in textile mills can be used for producing bio-gas by anaerobic batch fermentation process. This gas from willow dust is similar to gobar gas (bio-gas). Bio-gas can be used as fuel to run an internal combustion (IC) engine. IC engines particularly diesel engines are used to run generators. M/s. Kirloskar Oil Engines Ltd. have developed a fuel engine running on diesel as well as bogar gas (bio-gas). This engine can be coupled to a generator also. However, the total quantity of bio-gas from willow dust will not be sufficient to keep a generator functioning for reasonably long periods of time. The economic of production of electricity from bio-gas has not been worked out.

(b) A laboratory unit of 100 kg capacity has been set up in the Cotton Technological Research Laboratory, Bombay and experiments have been carried out. Cotton willow dust is treated with alkali and allowed to ferment in open for about 3-4 days then it is transferred in anaerobic digester added with 6 litres of water for every Kg of willow dust. During the first week of fermentation, the gas produced contains considerable quantity of carbon dioxide and hence not suitable as fuel. After the first week the methane content in bio-gas increases to 55-60 per cent and can be used as a fuel. The gas produced can

be collected over water in a suitable gas holder. After the first month when gas production decreased the slurry is removed and a fresh charge is placed in the digester. Besides bio-gas a 100 kg of willow dust yields 50 kg of excellent manure.

(c) It is too optimistic to expect so much of energy saving from bio-gas production possible from the willow dust. It is estimated that the textile mills if country produce KWH elec to 33,000 tons of willow dust only. From the technology developed at C.T.R.L., Bombay, it is possible to produce 5.28 million cubic metres of bio-gas per year which will be approximately equivalent to 3 million litres of diesel oil or 17 million KWH electricity. This gas can be used for various purposes in the textile mills such as singeing of yarns, use in the laboratory and canteen etc. Generation of electricity from willow dust bio-gas is yet to be studied, for use in the textile industry.

(d) It has been decided in a meeting held recently in the Planning Commission that a Pilot Plant would be set up in one of the Nationalised Textile Mills in Bombay to find out how far the use of this gas will be feasible in a textile mill.

Increasing Berthing Charges for Fishing Trawlers

5698. SHRI MOHAN LAL PATEL:
SHRI DAULATSIMHJI
JARDEYA:

Will the Minister of AGRICULTURE be pleased to state:

(a) whether it is a fact that high rates are being charged for berthing and other facilities at fishing harbours in the country;

(b) if so, the details of the rates charged; and

(c) whether Government will consider the rates in view of the economic difficulties of the fishing industry?

THE MINISTER OF STATE IN THE MINISTRIES OF AGRICULTURE AND RURAL DEVELOPMENT (SHR R. V. SWAMINATHAN): (a) and (b): The rates for berthing and other facilities at some of the important fishing harbours in the country are:

(1) *Madras Fishing Harbour (as on 11-7-1981).*

(a) *Warfage on Fish Catches:*

Upto 10 M	Rs. 11.00 per trip
Above 10 M & upto 15 M	Rs. 22.00 ,, ,,
Above 15 M & up to 20 M	Rs. 27.50 ,, ,,
Above 20 M & up to 25 M	Rs. 38.50 ,, ,,
Above 25 M.	Rs. 44.00 ,, ,,

(b) *Berth Hire Charges:*

(i) Daily rate: Rs. 6.0 per day or part thereof per trawler or boat.

(ii) Monthly rate: Rs. 50/- per calendar month or part thereof per trawler or boat.

(c) A rate of Rs. 16.80 per 1,000 litres for supply of fresh water.

(2) *Cochin Fishing Harbour (as on 11-12-1980).*

(i) Berthing of fishing boats: Rs. 3.00 to Rs. 5.00 per day depending on the length of vessel. For purseion boats, the daily fee is Rs. 15 and Rs. 10 depending on the length of vessel.

(ii) Agents fee: Rs. 100/- per month.

(iii) Entry fee for merchant Rs. 10/- and Rs. 30/- depending upon the mode of removal of fish catches from the

Quay viz. lorrys or band-carts or bicycles.

(iv) Rs. 100/- per month for net makers.

(v) Daily entry fee at the rate of Rs. 4/- per lorry; Rs. 2/- per tempo-van; Rs. 1/- per hand-cart and autotruck and Paise 50 per bicycle.

(3) *Visakhapatnam Fishing Harbour (as on 17-10-1980).*

(i) Berth hire charges on fishing boats: Rs. 5.40 per day or part thereof.

(ii) Berth hire charges on fishing trawlers: Rs. 107.50 per day or part thereof.

(iii) Wharfage charges on fish landed through fishing boats: Rs. 53.80 per boat per month.

(iv) Wharfage charges on fish landed through fishing trawlers: Rs. 537.50 per trawler month.

(v) Slipping charges ranging from Rs. 15/- to 50/- per tonne and repair berth hire charges ranging from Rs. 350/- to Rs. 650/- per vessel per the 1st day and Rs. 175/- to Rs. 325/- per the subsequent days.

(c): These rates are decided by the Port Trust in respect of major fishing harbours and State Governments in respect of minor fishing harbours. The State Governments and the Port Trust authorities have been requested to examine the representations from the fishing industry in this regard.