

# Pepsi extends focus to wet seaweed

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AFTER initiating contract farming for dry seaweed exports, Pepsi has extended its focus to wet seaweed, whose derivative is a liquid fertiliser that significantly increases yields of various plants.

Trial results have shown that yields of plants such as brinjal, onion, corn, black gram and paddy have increased 30 per cent when treated with Eucheuma Sap — a wet seaweed extract— along with NPK fertilisers, said Mr Abhiram Seth, Executive Director (Exports & External Affairs), Pepsi Foods Ltd. Similarly, okra (lady's finger), paddy and tomato yields have gone up by

over 20 per cent. The sap is able to drive up the yields, as it contains plant growth stimulators such as auxins, gibberellins and cytokinins. These results were obtained by applying sap (in foliar sprays) with dilution levels ranging from two per cent to ten per cent for different plants. (NPK fertiliser contains nitrogen, phosphorus and potassium as its main nutrients.)

"We are trying to find out the optimal levels of dilution for each plant," said Mr Seth, adding that the company expects the product to hit the domestic market in about six months. On the pricing front, he said: "We have not really decided the exact levels, though the idea is to keep it at economically feasible levels with an application

PLANT YIELD	
Plant	Increase in yield (%)
Brinjal	32
Okra	22
Onion	36
Banana	19
Cotton	21.9
Paddy	33
Corn	36
Potato	12
Black Gram	36.1
Wheat	10.9
Tomato	26.6

cost below Rs 500 per acre." The sap will not really be effective on paddy. Even though it increases productivity, the grains become heavy and tend to fall off the plants, he added.

The company has sourced the technology for extracting

'sap' from wet seaweed from the Bhavnagar-based Central Salt and Marine Chemical Research Institute (CSMCRI), a constituent laboratory of the Council for Scientific and Industrial Research (CSIR). Mr Seth said the company had acquired exclusive marketing rights for three years from CSMCRI for the technology. CSMCRI holds an international patent for the extraction method. To the seaweed farming community, Pepsi pays Rs 7.50 a kg of dry weed and 75 paise for one kg of wet weed.

According to CSMCRI analysis, Eucheuma Sap also contains nitrogen, phosphorus, potassium, organic matter, sodium calcium, magnesium, manganese, iron, copper, zinc, cobalt, molybdenum, sulphate

and chloride.

Incidentally, applying sap at the germination stage has also shown impressive results in terms of increase in growth of roots and shoots. "We have done the foliar spray treatment and germination trials separately. We would now try testing the combination of both to check the results," said Mr Seth.

Moreover, while the increase in yields resulting from the usage of Eucheuma Sap as a supplement to NPK have been established, tests are now being carried to check the effectiveness of the sap without the use of NPK.

Over the last two years, the company has exported 15 containers (300 tonnes) of dry seaweed, with "each container

fetching them about \$10,000" in the market. From the total seaweed cultivation, around ten per cent is extracted as dry weed and the rest is wet weed, which earlier had no use.

The company has been carrying out seaweed farming along the Tamil Nadu coast since 1999 for cultivating a variety of red seaweed — *Kappaphycus alvarezii*. The demand was for an extract from the red sea weed — Carrageenan, which is a gel-forming agent and is widely used in the pharmaceutical, cosmetic and pet food industry.

Pepsi had acquired the dry seaweed extraction technology also from CSMCRI. Later, the CSIR body studied the characteristics of wet seaweed and extracted the Eucheuma Sap.