Fertility of soil

1058. DR. T.N. SEEMA: Will the Minister of AGRICULTURE be pleased to state:

(a) whether Government has conducted any study to evaluate the fertility of soil across the country;

(b) if so, the details of such studies and the data regarding deficiency of micronutrients in soil, State/UT-wise;

(c) the details along with the success rate of schemes and projects under implementation to check the declining fertility of agricultural land and improve the fertility of soil during each of the last three years and current year;

(d) whether Government has any plan to incorporate use of science and technology to find out techniques for improving the fertility of soil; and

(e) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (DR. SANJEEV KUMAR BALYAN): (a) and (b) Yes, Sir. Indian Institute of Soil Science has developed GIS based soil fertility maps of 19 States using data of different soil testing laboratories in the country. The assessment revealed that about 59, 49 and 9% soils are low in available nitrogen, phosphorus and potassium respectively. The extent of micronutrient deficiency in soil (State-wise) studied under the All India Coordinated Research Project on 'Micro and Secondary Nutrients and Pollutant Elements in Soils and Plants' is given in Statement-I (*See* below).

(c) The Government through the National Project on Management of Soil Health and Fertility and National Project on Organic Farming promotes soil test based balanced and integrated nutrient management and use of organics (manure/composts, biofertilizers etc.) to prevent decline in fertility of agricultural land and to improve soil fertility. The achievements made under different components of these projects are given in Statement-II (*See* below).

(d) and (e) The Government uses science and technology, namely, Geo-referenced soil sampling technique, GIS based software for soil fertility mapping, prescription equations for soil test based fertilizer recommendation, liquid biofertilizer formulations, soil genomics, bio-enriched composting/vermicomposting, fertigation and Resource Conservation Technologies (RCTs) for improving fertility of soils. Besides, nano technology application is also being explored.

Statement-I

Extent of micro-nutrient deficiency in different States in India

State	No. of samples analysed	Per cent Samples Deficient				B	
		Zn	Fe	Mn	Cu	No. of samples analysed	% deficiency
Andhra Pradesh	9,780	22.8	17.3	2.9	1.5	6,486	19.2
Assam	5,146	27.4	8.6	0.0	3.9	5,098	15.2
Bihar	2,963	44.2	5.8	2.9	2.7	3,597	33.3
Gujarat	5,218	34.2	23.6	6.6	0.4	2,247	20.4
Haryana	5,673	15.3	21.6	6.1	5.2	3,401	3.3
Himachal Pradesh	1,400	9.6	6.3	3.7	1.2	4,895	31.1
Jharkhand	443	9.4	0.0	0.0	0.2	443	57.1
Madhya Pradesh	6,713	60.3	9.8	1.6	0.2	2,475	1.9
Maharashtra	7,819	53.7	22.8	4.0	0.2	1,295	18.3
Odisha	2,621	20.5	1.7	1.0	0.3	2,367	49.3
Punjab	1,098	21.9	5.8	26.8	3.5	692	17.7
Tamil Nadu	14,557	62.2	9.5	8.9	13.1	16,282	14.4
Uttar Pradesh	4,788	33.1	7.6	6.5	6.3	4,382	16.9
Uttarakhand	2,212	9.8	1.7	5.5	1.4	2,412	3.6
West Bengal	2,171	8.5	0.8	1.7	1.1	2,176	51.8
Overall	72,602	39.9	12.9	6.0	4.3	58,248	19.7

Statement-II

Component-wise achievement/progress made under different projects to check decline in soil fertility.

Components	National Project on Management of Soil Health and Fertility			
	2011-12	2012-13	2013-14	2014-15
*Setting up/ strengthening of Soil Testing Laboratories	15	1	17	0
Training for STL staff/extension staff/farmers	297	0	160	62
Field demonstrations	210	0	472	220
	National Project on Organic Farming			
	2011-12	2012-13	2013-14	2014-15
Technical assistance to Bio-Fertilisers and Organic Fertilisers production units	300	190	-	-
Training programmes	80	119	185	3

* now subsumed under National Mission for Sustainable Agriculture

Assistance to farmers

1059. SHRI BAISHNAB PARIDA: Will the Minister of AGRICULTURE be pleased to state:

(a) whether it is a fact that India's agriculture economy is a low growth and risky loss-making sector;

(b) if so, whether to overcome this, farmers need assistance in planning, cultivation, marketing of produces, managing finances etc.; and

(c) if so, the action plan of Government to address the problems of farmers to improve their economy?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (DR. SANJEEV KUMAR BALYAN): (a) No, Sir. Agriculture sector registered an average