



भारतीय कृषि एवं खाद्य परिषद्
INDIAN COUNCIL OF FOOD AND AGRICULTURE



SOIL HEALTH MANAGEMENT IN INDIA





Soil Health Management in India

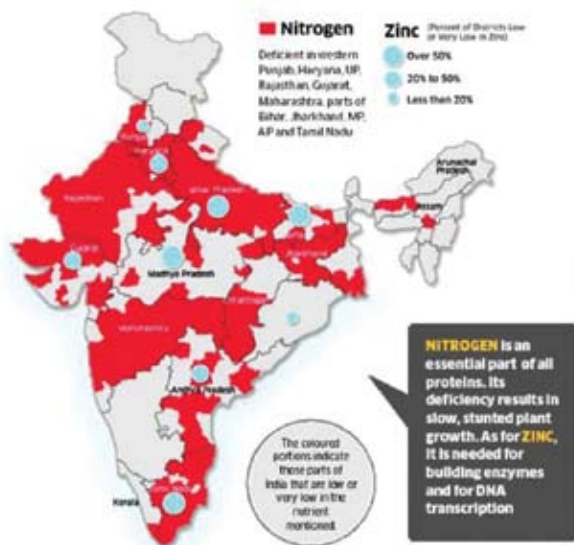
The nature and extent of deficiencies of nutrients in soil varies with soil type, crop genotype, management and agro-ecological situations. Soil organic carbon and nitrogen are primary indicators of soil health.

Most of the arable lands across the country show low levels of organic carbon with deficiencies ranging from 11% to 76%.

SOIL HEALTH MANAGEMENT

In order to improve the soil health of the Indian soils, gov-

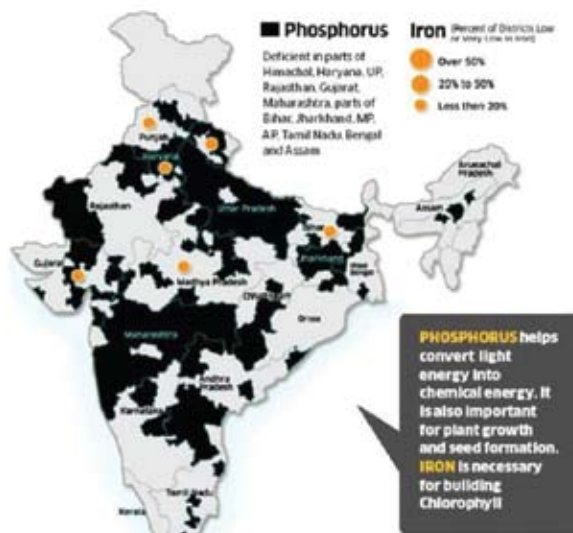
NITROGEN AND ZINC DEFICIENT INDIAN SOILS



ernment of India has initiated two major schemes namely,

- Soil Health Management Scheme (SHM)
- Soil Health Card Scheme

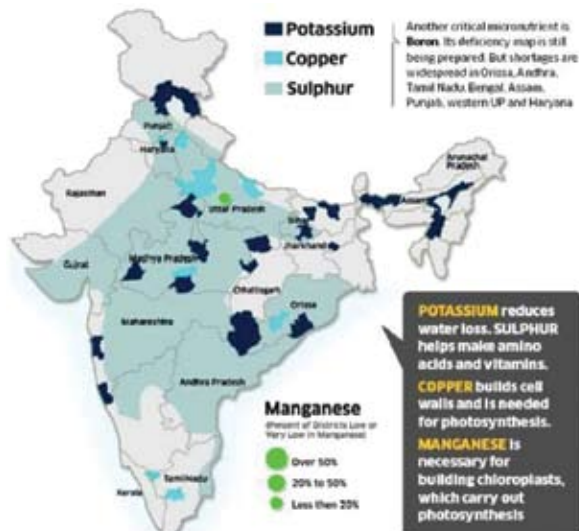
PHOSPHORUS AND IRON DEFICIENT INDIAN SOILS



SOIL HEALTH MANAGEMENT SCHEME

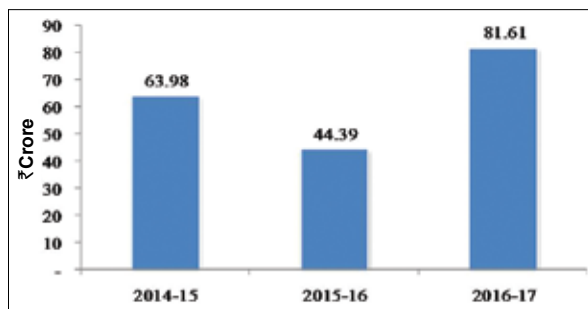
Soil Health Management (SHM) is one of the most important interventions under NMSA. SHM aims at promoting Integrated Nutrient Management (INM) through:

PHOSPHORUS AND IRON DEFICIENT INDIAN SOILS

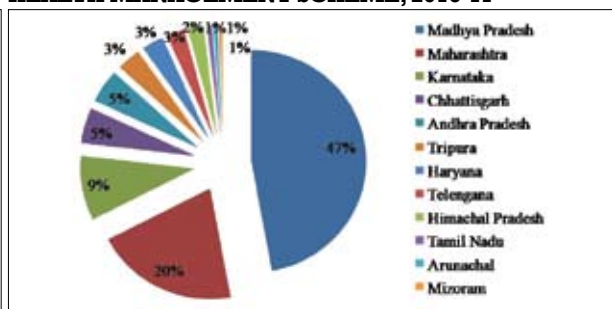


Source: Company Presentation

FUNDS RELEASED UNDER SOIL HEALTH MANAGEMENT SCHEME



STATE-WISE FUNDS RELEASED UNDER SOIL HEALTH MANAGEMENT SCHEME; 2016-17



Source: Ministry of Agriculture and Farmer's Welfare, Note: 2016-17 till 30th Jan 2017

- Judicious use of chemical fertilizers including secondary and micro nutrients in conjunction with organic manures and bio-fertilizers for improving soil health and its productivity;

- Strengthening of soil and fertilizer testing facilities to provide soil test based recommendations to farmers for improving soil fertility;

- Ensuring quality control requirements of fertilizers, bio-fertilizers and organic fertilizers under fertilizer control order, 1985;

- Up gradation of skill and knowledge of soil testing laboratory staff, extension staff and farmers through training and demonstrations; promoting organic farming practices etc.

This component is implemented by State Government., National Centre of Organic Farming (NCOF), Central Fertilizer Quality Control & Training Institute (CFQC&TI) and is sanctioned by INM division.



In 2016-17, the fund was released to only 12 states.

SOIL HEALTH CARD SCHEME

In February 2015, the central government had launched the Soil Health Card Scheme. Under this programme,



the government plans to issue soil card to farmers to help them get a good harvest by studying the quality of soil. The major components of the scheme are:

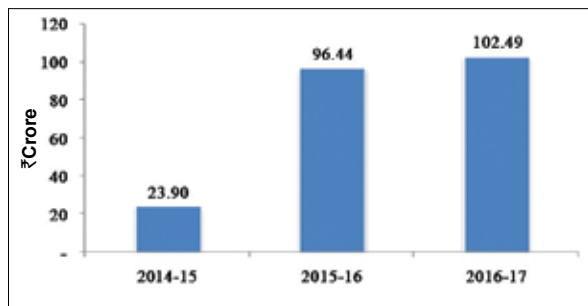
- Issue of Soil Health Cards
- Training for soil analysis
- Financial assistance for package of nutrient recommendations
- Capacity building and regular monitoring and evaluation
- Constitution of the Project Management Team (PMT)

The fund was released to the limited number of states during 2016-17, of which Uttar Pradesh, Madhya Pradesh, Maharashtra, Rajasthan and Karnataka were released maximum funds, which totaled to Rs.71.69 Crore, accounting approximately 70% of the funds released.

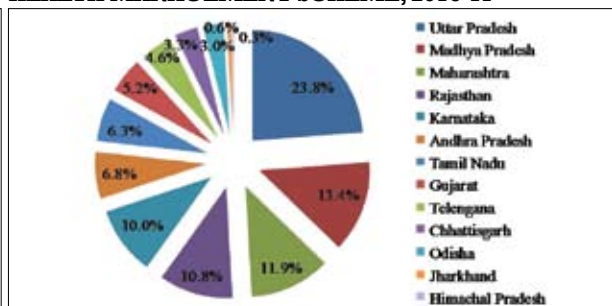
PERFORMANCE OF SOIL HEALTH CARD SCHEME

The government of India has covered

FUNDS RELEASED UNDER SOIL HEALTH CARD SCHEME



STATE-WISE FUNDS RELEASED UNDER SOIL HEALTH MANAGEMENT SCHEME; 2016-17



Source: Ministry of Agriculture and Farmer's Welfare, Note: 2016-17 till 30th Jan 2017



STATE-WISE SOIL HEALTH CARDS ISSUED TILL 11.05.2017

| S. No. | State Name | Number in Lakh | | | |
|--------|-------------------------|------------------------|------------------------|----------------|-------------|
| | | No. of Samples Entered | No. of Farmers Covered | Samples Tested | SHC Printed |
| 1 | Karnataka | 15.09 | 83.87 | 11.33 | 61.45 |
| 2 | Tamil Nadu | 13.64 | 52.32 | 11.81 | 41.64 |
| 3 | Chhattisgarh | 7.47 | 46.74 | 6.72 | 40.99 |
| 4 | Uttar Pradesh | 15.93 | 45.11 | 9.87 | 29.15 |
| 5 | Maharashtra | 12.60 | 37.56 | 10.63 | 25.53 |
| 6 | Telangana | 10.10 | 28.62 | 9.56 | 21.31 |
| 7 | Andhra Pradesh | 14.26 | 41.07 | 12.69 | 16.25 |
| 8 | Haryana | 5.94 | 15.52 | 4.75 | 12.17 |
| 9 | Odisha | 3.68 | 13.38 | 2.38 | 8.20 |
| 10 | Jammu & Kashmir | 1.60 | 6.80 | 1.19 | 4.81 |
| 11 | Himachal Pradesh | 1.16 | 6.04 | 0.94 | 4.74 |
| 12 | Gujarat | 20.45 | 30.62 | 15.23 | 4.71 |
| 13 | Madhya Pradesh | 5.75 | 11.96 | 2.88 | 4.01 |
| 14 | Kerala | 1.92 | 6.06 | 1.26 | 3.30 |
| 15 | Uttarakhand | 1.25 | 4.71 | 0.98 | 3.26 |
| 16 | Jharkhand | 1.08 | 4.74 | 0.18 | 0.69 |
| 17 | Meghalaya | 0.24 | 0.95 | 0.20 | 0.67 |
| 18 | Tripura | 0.20 | 0.66 | 0.17 | 0.61 |
| 19 | Sikkim | 0.12 | 0.50 | 0.11 | 0.45 |
| 20 | Goa | 0.22 | 0.22 | 0.19 | 0.19 |
| 21 | Assam | 0.17 | 0.62 | 0.04 | 0.14 |
| 22 | West Bengal | 0.91 | 2.38 | 0.03 | 0.11 |
| 23 | Arunachal Pradesh | 0.08 | 0.08 | 0.08 | 0.08 |
| 24 | Nagaland | 0.07 | 0.07 | 0.07 | 0.07 |
| 25 | Puducherry | 0.05 | 0.05 | 0.04 | 0.04 |
| 26 | Andaman&Nicobar Islands | 0.07 | 0.07 | 0.06 | 0.03 |
| 27 | Mizoram | 0.08 | 0.08 | 0.04 | 0.03 |
| 28 | Punjab | 0.17 | 0.18 | 0.04 | 0.03 |
| 29 | Rajasthan | 9.02 | 9.74 | 8.12 | 0.00 |
| 30 | Bihar | - | - | - | - |
| 31 | Chandigarh | - | - | - | - |
| 32 | Dadra & Nagar Haveli | - | - | - | - |
| 33 | Daman And Diu | - | - | - | - |
| 34 | Delhi | - | - | - | - |
| 35 | Lakshadweep | - | - | - | - |
| 36 | Manipur | - | - | - | - |
| | Total | 143.34 | 450.74 | 111.59 | 284.68 |

Source: Soil Health Card Website



approximately 45 million farmers under this scheme as on 12th May, 2017. The State of Karnataka has issued most number of the soil health cards to the farmers.

The government targets to cover all the farmers of the country by 2017. They are providing funds to the states to issue soil health cards to their respective farmers.

The following table depicts the total number of soil health cards printed by each state of India.

Over the years, farmers have increased their reliance on chemical fertilizers and have abandoned or reduced the use of organic manure drastically. Low levels of soil organic matter along with multi-nutrient deficiencies are the major stumbling blocks for bridging yield gap in Indian agriculture. Therefore, large quantities of carbon and other nutrients contained in agricultural and domestic wastes can be recycled to cut the rising costs of chemical fertilizers.

Incentives are required to promote the use of organic manure/fertilizers as well as biological sources like bio-fertilizer in order to encourage farmers to adopt INM approach. For example, options should be provided to the farmers to either avail DBT through cash transfer to their bank account or cash vouchers to buy organic manure from these recognized outlets. ■



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