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SOIL RESOURCE DEVELOPMENT INSTITUTE

MINISTRY OF AGRICULTURE

MRITTIKA BHABAN, FARMGATE, DHAKA-1215

Executive Summary

During 2018-19 fiscal year Updated “Upazila Nirdeshika” survey was carried out at 50 Upazilas where remarkable changes in land use were observed in every Upazila and in some cases changes in land types were also found. It is observed that vegetables cultivation gaining popularity among the farmers. Fifty Upazila Nirdeshika was published.

Changes in soil fertility due to land use and management practices were observed in monitoring sites. In general soils are deficient in organic matter and nitrogen. Changes in Phosphorus, Potassium, Calcium, Magnesium, Manganese, Sulfur and Boron were erratic. There is also, evidence of lower pH value in many Upazilas.

In Khulna region soil salinity in shrimp cultivated area gradually increased from 1990s. This salinization may be due to the effect of saline water flooding for long period, slow permeability, presence of highly saline ground water at shallower depth almost throughout the year and lack of flashing facility after shrimp harvest etc. River water salinity of Satkhira district is higher than that of Khulna and Bagerhat district. In Satkhira, river water salinity was found highest in May/June whereas in Khulna and Bagerhat it was highest in April/May. Different river water salinity in Khulna and Jashore district of 2019 has been decreased than that of 2018. River water remains saline during April-June as rainfall is low during this period. In Barisal both soil and water salinity was higher compared to previous year due to long droughty condition. During the dry season most of the DTW and STW water remains saline. Generally Barisal experiences lower rainfall during November to March. In Patuakhali, both soil and water salinity starts to increase in January/February attains its peak in March and starts to decrease in June/July at the onset of monsoon. In Chittagong soil salinity starts to increase in December attains its peak in March and then gradually decrease at the onset of monsoon. Water salinity starts to increase in January attains its peak in March-May. In greater Noakhali soil salinity starts to increase in January and attains its peak in March. The highest salinity is observed in Baraitala, Kabirhat over time followed by Abu Majhirghat, Companiganj and Chairman ghat, Hatiya. Water salinity starts to increase in November-December attains its peak in March/April and then gradually decreases. Noakhali canal at Baraitala (Kabirhat), Chhilania river estuary at Jagatpur (Daganbhuiya), little Feni river at Abu Majhirghat (Companiganj) and Chhilania river at Chhilania Bazar (Daganbhuiya) experiences highest salinity in dry season.

Some innovative technology for slopping hill soil management was generated by Soil Conservation and Watershed Management Centre (SCWMC), Meghla, Bandarban of which Development of Integrated Watershed Management, Management & Ecomomic value of Murtai Patibet, Selection of different species for controlling soil erosion,Bench Terrace for year round crop production, Gabion check dam for gully erosion control, Jute Geo-Textile for rehabilitating degraded land, Establishment of hedge rows in farmer's field for soil erosion control are most important.

Some innovative technology for saline soil management was generated by Salinity Management and Research Centre (SMRC), Batiaghata, Khulna of which Maize trasnplanting & Dibbling cultivation under zero tillage, Flying bed for vegetable cultivation, selection of different suitable vatrities cultivation in saline soil was proved worthy. This technique can be disseminated to other saline areas.

During 2018-19 Static Laboratories conducted soil analyses for both physical and chemical parameters, plant and water analyses for chemical parameters and fertilizer samples analyses under different programs. In Static Laboratories (Central and Regional Laboratories) 27,607 (23, 594 soil samples, 42 water samples, 51 plant samples and 3,920 fertilizer) samples were analyzed. Imparted training to the officers and scientists of SRDI, BARI, BRRI and BINA on Chemical Analyses of Soil and Fertilizers, Identification of Adulterated Fertilizers at Field Level and Soil Sample Collection and Balanced Fertilizer Applications.

Training was imparted to 1200 Officers of SRDI/DAE/CDB/NGO's on various aspects of soil management/capacity building & skill development; 10,470 farmers/fertilizer dealers/ SAAO's/Entrepreneurs of Union Information Center on the use of Upazila Nirdeshika/soil sample collection technique/identification of adulterated fertilizer etc. About 250 local public representatives were briefed on SRDI generated technology for soil health management. Departmental training was provided to ninteen newly recruited BCS (Ag.) cadre and non-cadre officers for 15 days.