

Soil Science Division

BARI Head Office, Gazipur

Activities

Soil Science Division of Bangladesh Agricultural Research Institute consists of four Sections for rendering physical, chemical, micro- nutritional and microbiological aspects of soil management research as one of the biggest reference Laboratories of the country. Each Section has its own mandates of research activities done independently and/or in coordination. The following activities are generally done by different Sections.

Soil Physics

Soil Physics Section is the pioneer body of Soil Physical Research in Bangladesh which performs pivotal role in maintaining congenial physical properties of soils. The major thrusts of physical aspects of soil management research are conservation tillage for better tilth and root proliferation, assessment of crop water requirement using lysimeter and development of irrigation scheduling, crop residue management for soil moisture conservation and organic carbon retention. The Section is also working for the management of problem soils (saline, drought prone, coarse textured, hard pan, poorly drained etc). Another spectrum of researchable issue is the management of hill soils to reduce soil erosion for sustaining crop yield and soil fertility.

Soil Chemistry

Soil Chemistry Section deals with the management of soil fertility depletion and plant nutritional disorders since the establishment of BARI. This Section is currently working for soil fertility improvement and organic matter enrichment through IPNS and INM systems of crop cultivation, organic composting like preparation of vermicompost through waste management towards sustainable crop production and environmental protection. Updating of national Fertilizer Recommendation Guide through extensive field trials and laboratory studies is one of the major issues of this Section. Rendering technical services to the farmers, students, scientists of NARS Institutes, DAE, BADC, MoA by analyzing and interpreting soil, plant, water and fertilizer samples are prime duty of Soil Chemistry.

Soil Micronutrient

Micronutrient section is devoted to solve emerging issue of micronutrient deficiencies through diagnosing and updating fertilizer recommendations for responsive crops and cropping patterns including flowers and fruits. This Section also deals with the assessment of heavy metal pollution in soil-plant-water system under industrially polluted and intensive crop cultivation areas. Development of mitigation strategies in aid of reducing arsenic pollution in the food chain is also a major task of this Section.

Soil Microbiology

Soil Microbiology Section is involved in developing nitrogenous bio-fertilizers for all kinds of legume crops. Research works on Mycorrhiza, Phosphate solubilizing bacteria are also going on for the development of phosphetic bio-fertilizers in supplement of reducing chemical fertilizers for sustainable crop production. Isolation and characterization of beneficial soil microorganisms,

mineralization of nutrients from organic manures and bio-chemical turn over of nutrients are also the researchable interests of this Section.

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