



From the Patron

SOILS, WHERE FOOD BEGINS: REVISITING THE SIGNIFICANCE OF SOIL REGENERATION

Food is the base of existence for all life forms on earth. With the development in human social life, food has turned out to be more than a resource of survival. These days food is a universal socialization language that brings people together across the cultures and societies. Estimations show that eighty-two percent of the global calorie supply is through plant based food. A lion's share of these foods comes from soils, one of the key substrata of life on Earth. Soils support plant growth acting as a medium for root anchorage along with supplying necessary nutrients and water to the growing plants, keeping favourable growing conditions for plants by maintaining relatively higher population of beneficial soil organisms and lower population of harmful organisms. Nearly half of the earth's habitable land surface i.e. 48 million km² is being utilized for the world food production.

Soil formation is a very slow process. It takes thousands of years to form a thin layer of soil. Hence, it is essential to preserve the existing soils healthy to make sufficient food available to the future generation. Any kind of irreversible soil degradation may greatly impact the world food security. Soil degradation data of FAO explicitly shows 33% of world soils has been degraded at various levels. Unsustainable agricultural practices result in an annual loss of 24 billion tons of fertile soil globally. Often, we forget that the soil below our feet is much more than 'dirt' and it could be a limiting factor in the future food production scenario. Also, value of productive soil is underrated when it comes to development initiatives and the reason why a considerable quantity of world's productive soils is being sealed beneath constructions in developing cities day by day. The multifaceted 'soil degradation' issue will remain as a burning topic among the world soil researchers till the concerns capacity of existing soil resources to sustainably feed the growing world population get resolved.



Dr. ASHOK K PATRA
DIRECTOR

ICAR-Indian Institute of Soil Science

To continue feeding the world with no shortage of food more intensified efforts are needed especially to conserve our good agricultural soils together with restoring the soil health of the degraded and/or degrading agricultural lands. Quite a number of technologies are available all over the world to reinstate the health and resilience of soils through improving organic matter content, water and nutrient retention capacity, microbial diversity and other properties. What is required is proper integration of these technologies with the farming techniques so as to generate highest production without negative impacts to the soil health and environment.

Ashok K Patra