



FROM THE DESK OF RATTAN LAL
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We Are A Soil

Fellow Soil Scientists,

In the present era of soul-searching in soil science, it is important to accept the truism that **people are a soil**. Kenjiro Tekutomi (1868-1927), under the pen name of Roka Tokutomi, stated matter-of-factly in his book *Ramblings of a Worm*, “We are born above the soil, live by eating things produced by the soil, and after dying become soil. We are in the final analysis, soil in a different form.” Chief Seattle (circa 1852) stated that “We are part of the Earth, and it is part of us – what befalls the Earth befalls all the sons of Earth.” The German chemist, Justus Von Liebig (1803-1873), author of the Law of Minima and to whom the IUSS award is dedicated, stated that “for the soil to remain fertile, we must return to it everything that is taken from it.” Roy Simonson, an Ohioan soil scientist (1957), emphasized the importance of soil by stating that “be it deep or shallow, red or black, sand or clay, the soil is the link between the rock core of the Earth and the living things on its surface. It is the foothold of the plants we grow. Therein lies the main reason for our interest in soils.” In *A Sand County Almanac*, Aldo Leopold (1949) narrated “Land, then is not merely soil; it is a fountain of energy flowing through a circuit of soil, plants, and animals.” Therefore, the long-term objective of sustainable management of soil is to strengthen this circuit of energy flow through the **soil-plant-animal-atmosphere continuum**. It is of the utmost importance that, the humanity changes the way it treats the soil. Being a living ecosystem, management must ensure its health and functionality forever. Yes, soil-less systems of food production (aquaculture, aeroponics, hydroponics, sand culture, etc) and petri-dish hamburger have been and are being used and have a niche. Yet, there is no viable substitute of the soil-based systems of producing majority of the food grain staples (i.e., wheat, rice, corn, sorghum, soybean) and livestock (e.g., cattle, swine, sheep, goats) for 7.6 billion people destined to exceed 11 billion by the end of the century. People are mirror images of the soil that supports them. **If soil is degraded and polluted, people living on it are no better. If soil is healthy, so are the people and the environment connected with it.**

Sincerely,

Rattan Lal,
President, International Union of Soil Sciences

