



THE HALLMARK

RON HALL EDITOR-AT-LARGE

Contact Ron via e-mail at rhall@questex.com.

Without healthy soils, we're history

Only water approaches soil's importance in sustaining life on our beautiful blue globe. As obvious as that might seem, seldom do we give soil the attention it warrants in light of its crucial role in our livelihoods — not to mention our existence.

Perhaps like you, I've unthinkingly looked at soil and dirt as being one and the same. There's a vast and vital difference, of course.

Living soil — replete with minerals, organic matter, invertebrates, macro-flora and micro-flora — is the foundation we build upon to populate our urban environments with beautiful, life-enhancing green material. Healthy soil is a marvelously complex and synergistic mixture of living and non-living material that engenders plant health.

Dirt, which is often lifeless, cannot do this.

Do we focus too narrowly on treating the symptoms of plant woes, rather than determining and fixing the root cause, which is usually damaged or poor-quality soil? Perhaps. Sometimes, of course, we have no choice, inheriting pre-existing conditions in the form of lifeless dirt. Then we must choose

between improving the soil's capacity to sustain healthy plant life or launching a maintenance regimen that, in the long run, might turn out to be wasteful, expensive and potentially harmful to the environment. Economics and revenue considerations often loom large in determining which course is selected.

Why is soil top of mind for me now? An enlightening Earth Day presentation by Dr. Rattan Lal, a world-famous soil scientist, at

the Wooster, OH, campus of The Ohio State University re-opened my eyes to its vital importance — not just to our industry, but to our future well-being and survival.

I hope that you find Lal's 10 laws of soil, which he shared with an audience of several hundred Earth Day celebrants, as enlightening as I did:

- ▶ **Law #1:** The biophysical process of soil degradation is driven by economic, social and political forces.
- ▶ **Law #2:** When people are poverty-stricken, desperate and starving, they pass on their sufferings to the land.
- ▶ **Law #3:** It is not possible to take more out of a soil than what is put in it without degrading its quality.
- ▶ **Law #4:** Marginal soils cultivated with marginal inputs produce marginal yields and support marginal living.
- ▶ **Law #5:** Plants cannot differentiate among the nutrients supplied through inorganic fertilizers or organic amendments.
- ▶ **Law #6:** Mining carbon has the same effect on global warming, whether it is through mineralization of soil organic matter and extractive farming, burning fossil fuels or draining peat soils.
- ▶ **Law #7:** Even the elite varieties of plants cannot extract water and nutrients from any soil where they do not exist.
- ▶ **Law #8:** Soils are integral to any strategy of mitigating global warming and improving the environment.
- ▶ **Law #9:** Sustainable management of soils is the engine of economic development, political stability and transformation of rural communities in developing countries.
- ▶ **Law #10:** Sustainable management of soil implies the use of modern innovations built upon traditional knowledge. Those who refuse to use modern science to address urgent global issues must be prepared to endure more suffering.

If you would like to view Lal's complete PowerPoint presentation, which he kindly shared with me, email me at rhall@questex.com.



Dr. Rattan Lal