

Listen to Your Plants

According to horticultural experts, who are not climate scientists, the weather is warming and they know this because their plants have told them so. Comparison of the records kept over decades, the science called phenology, has convinced them. Amazingly, the longest kept records are those kept in Burgundy, France on Pinot Noir grapes from 1370 to the present. Those records contain the dates of bloom time, blossom set, and harvest.

Unfortunately, although we may enjoy having tropical plants in our gardens that were once not hardy here, the shift in hardiness zones has more disadvantages than advantages as the change affects so many factors that are essential in a healthy biosphere.

The late Thomas Berry, philosopher, theologian, and historian wrote, "Only in a viable natural world can there be a viable human world."

Even those of us who rarely put a foot on an unpaved surface are as dependent on the natural world as the bees, birds and polar bears. We need to study and understand the structure and functioning of the earth processes: we need to study the history of the physical changes of the earth itself over millennia: we need to understand what effect our living on the planet is having today that may prevent our species from continuing to live on it. Unless of course we can manage to have billions of us beamed to a new planet?

Perhaps we need to rethink how we define progress and what constitutes 'enough.' Without touching on any waste in the system, we need to evaluate our desire for more and more energy. Fossil fuels are not the only source of Co₂, carbon dioxide, emissions, the largest source of global warming. Burning forests, for example, releases one billion tons of carbon globally each year.

Our complacent disinterest in climate change may be due to our inability to take what we learned in grade school arithmetic and apply it in the real world. We know climate change is not new. The planet has changed astonishingly over many thousands of years but what has changed is the rate of change. Differences that once spanned centuries can be seen in decades, making our adjustment to the changes a critical challenge. The emissions of carbon dioxide (Co₂) have hit an all time high this summer, which is not good, but the more important factor is that the rate of increase is making it extremely difficult to stabilize the earth's climate.

Half of the Co₂ that is released from all sources stays in the atmosphere: the other half is absorbed by oceans and plants. However, the Co₂ absorbed by the ocean make it so acid that its chemistry is changed, weakening the ocean food chain. This damage has been observed over decades in various instances including the destruction of coral reefs. The carbon dioxide gas remaining in the atmosphere acts like a greenhouse, trapping heat.

The effects of higher temperatures include disappearing Arctic sea ice, rising sea levels, more heat waves and declining yields of food crops. This situation does not have to get worse. Alternate choices are possible. Not-very-sunny Germany uses solar heat to power eight million homes and far away Kenya generates 25% of its power from geothermal energy. The potential is there, if we can find the will.

Carbon emissions have dropped where power plants have switched to natural gas and as the use of carbon free wind energy has quadrupled. Unfortunately Co₂ emissions in developing countries have soared as their burgeoning populations seek to raise their standard of living. When you look at the carbon footprint of the people inhabiting different countries you get a different picture. On a per person basis the United States emits 4.4 tons of carbon pollution, twice as much as in China. In oil-wealthy Qatar, the figure per person is 11 tons.

It is hard to solve a problem if you deny you have a problem. Before we undertake radical and destructive efforts to obtain more carbon-emitting energy, we need to study any possible efficiencies in our current practices and we need to search for potential alternatives as well as to investigate any unintended consequences of using earth changing and destructive methods.

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