

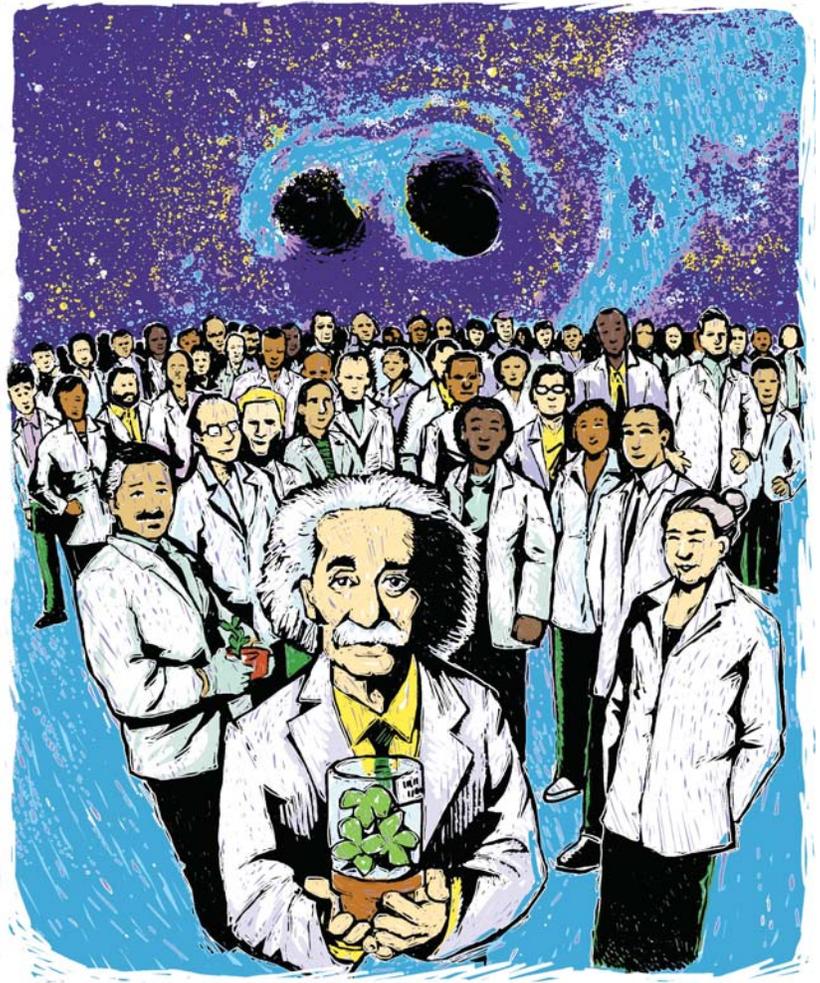
PLANT NUTRITION LESSONS FROM GRAVITATIONAL WAVES

In 1916, based on the equations of general relativity, Albert Einstein predicted the existence of what he referred to as gravitational waves. These waves are distortions in “spacetime” resulting from huge shifts in mass somewhere in the universe. According to general relativity, it’s the same phenomenon by which massive objects warp spacetime resulting in gravity. On February 12, 2016, a journal article was published that reported the physical measurement of gravitational waves. Computer models showed that the waves detected were caused by the merger of two black holes 1.3 billion light-years from Earth. On September 14, 2015, the resulting gravitational waves were measured at recently upgraded research facilities in Washington state and Louisiana, for the first time providing physical evidence that Einstein, 100 years ago, was right! This undoubtedly will be viewed as one of the major scientific advances of the century.

Now for the lessons on plant nutrition . . .

This absolutely amazing advance at first appears as a singular event. However, it was actually just one step (though very dramatic) in a century-long process of incremental advances by numerous scientists, each adding to the discoveries of those who went before. It’s no different in the field of plant nutrition where our knowledge of products, practices and the systems they are a part of advance one study at a time. The contribution of each study is defined not only by the original data it contains, but also by the meta-data that connects the new study to previous ones and to those yet to come.

The second lesson resides in the authorship of the journal article itself. The article has 1,000 listed authors, occupying nearly three pages of the paper! Not only did this advance in the world of physics result from incremental advances across a century, it resulted from 1,000 researchers collaborating and sharing ideas and data. A key role of IPNI is to promote such collaboration through funding structures like Global Maize and by organizing regional conferences and workshops where personal relationships are built that open doors for collaborative efforts. It’s the best way to “make waves” in advancing the science of nutrient stewardship.



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