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Panacea food?

WHAT if I were to tell you about a certain kind of food that is rich in carbohydrates; in minerals such as Na, Mg and Ca; and in all the essential amino acids. Predictably, you would simply shrug your shoulder, and condescendingly say, *it is probably outrageously rich in fats too* – there can, after all, only be so much of a good thing. But what if I lean closer, and whisper into your ear, that this food is very low in fats. You would still not be interested: *Perhaps it is too expensive – like caviar*. But the food, I would reply, is abundant, particularly in the Indian subcontinent, and, rest assured, hardly costs anything; in fact, it is one of the poorest of the country who cook this kind of food. You would swing your head my way, and raise an eye-brow. Now, I have got your attention, have I not?

I am not talking about a wide spread of different delicacies selected by the most eclectic of dieticians. But just one single kind of food. A kind of food not found in the usual cookery manual, and most chefs would cringe even at the thought of it. I am talking about a kind of food relished by tribals residing in the thick forests of Kerala, India: The meat of the ant species *Oecophylla smaragdina*.

But there is more.

This ant meat is more than a nutritious treat. Indeed, the crushed paste of worker ants is used by the tribals to treat inflammation of joints and skin infection. *There is still more*. Whole-body extracts of worker ants are also endowed with significant antioxidant and anti-arthritis properties.

Still don't believe me? Your skepticism is understandable. But flip over to **page 572**, where a Research Article most emphatically backs up my claims.

So, given the positives of ant meat, one should not be surprised if, in the near future, humankind would include ant meat as an integral part of their diet. Don't we, after all, sink our predatory fangs into everything living?

Measuring a scientist's worth

INTRODUCED in 2005, the scientometrics tool *h-index* is often used to measure a scientist's worth. Verily, the *h-index*, by considering the number of citations and publications of a scientist, quantifies his scientific output – quantity and quality. Simply put, if a scientist has

an *h-index* of 5, it implies that he has a maximum of 5 papers each of which have been cited at least 5 times. Therefore, the greater the *h-index*, the more accomplished the scientist. But what if one has to his credit 6 papers out of which 5 have been each cited 5 times, but the sixth paper has been cited 10,000 times. His *h-index*, still remains at 5. Such a scenario would be most disconcerting for the scientist. Indeed, owing to this flaw in the definition of the *h-index*, some 'lesser' scientists have an *h-index* greater than even Nobel laureates.

Considering this, and other such flaws of the *h-index*, over the years several other tools have been developed – such as the *h_m-index*, and the *g-index* – to better quantify a scientist's output. But even all of these tools suffer from a serious shortcoming: They do not consider the 'performance of an individual relative to that of other scientists in the same field'.

A Research Communication, **page 596**, considers this flaw, and fixes it by developing a novel methodology of evaluating the output of scientists: the *M* score.

Soil carbon stocks

THE soil is a veritable carbon sink. Indeed, earth's soil has more carbon stored in it than what the atmosphere and the earth's biomass have combined. Over the last few decades, however, owing to imprudent land use practices followed by us – such as deforestation, and indiscriminate cultivation of land – soil organic carbon has been leaking out of the soil into the atmosphere as CO₂, thus exacerbating global warming. Not surprisingly, therefore, the last few years have witnessed a surge in the total number of scientific publications related to the earth's soil carbon stocks. A General Article, **page 513**, by using scientometric tools, quantifies this surge.

In this study, using databases on the internet, the authors retrieved research studies – published between the period 2000 and 2015 – related to soil carbon stocks. Then, they segregated the research papers, over 10,000 of them, on the basis of country, institution and journal. In other words, this research study answers questions such as: *How many papers related to soil carbon, over the last 15 years, have been published by different countries, by different journals, and by different institutions?*

From the results, one gathers that although the most significant contributors

to this field are, not surprisingly, developed countries, China, a developing country, is only second to the USA in terms of the total number of papers published. The number of papers stemming from India, however, is only a humble fraction of what China has published.

It is high time India woke up. We are after all one of the most prodigious emitters of CO₂ in the world, and it would only be in the best of our interests to better understand the dynamics between soil carbon, and climate change.

Quenching India's thirst for oil

INDIA needs oil. *Correction*. India thirsts for oil. India yearns for oil. We need oil to fuel our industry, to fire up the engines of our vehicles, and of course, to keep our cables crackling with electricity. But given its pitiful fossil fuel reserves, India is forced to import a full 70% of its petroleum demand every year – something simply too burdensome on the country's coffers. Not surprisingly, therefore, to meet the insatiable demand for oil, the Government of India, in 2003, launched the 'National Mission on Biodiesel'. The primary objective of this programme is to synthesize biofuels as a practicable alternative to fossil fuels. But several of these biofuels, although renewable, are synthesized from food crops, and in a food hungry nation like India, exploiting these would be most imprudent. *So how do we alleviate our fuel woes?* The answer: *Jatropha* seeds.

Jatropha curcas is a shrub – prevalent in tropical regions of the world – whose seeds are particularly rich in oil. But the primary reason why it is being promoted feverishly by the Indian government as an ideal substitute for other biofuels is that it grows just fine on lands that are otherwise unfertile, and hence are largely unproductive. Its large scale cultivation, therefore, would not deleteriously affect the country's food security, and would also provide employment to thousands. There, however, exists a problem. We know very little about *Jatropha* – 'Our knowledge concerning its genotype, phenotype, and environmental interaction is limited.'

A Research Article, **page 552**, addresses this lacuna in our knowledge.

Somendra Singh Kharola
S. Ramaseshan Fellow
somendrakharola@gmail.com