

The Remineralising Imperative

by Graeme Sait

We are now 80 years into a failed experiment - A post-war decision by industrialists lamenting the loss of income from closed armament factories resulted in the rechannelling of those tools of war (ammonium nitrate, etc) to the farming sector. It was not the first time that farmland has been used as a dumping ground to refuel industrial profits, and it will probably not be the last. However, it should always be understood that the "new deal" - the "crop in the bag" campaign, which unleashed the chemical farming revolution on an unsuspecting farming community in Europe and the US earlier this century, was not some sort of thoroughly researched scientific advancement. It was solely about money and profits, as most things are in this world, and it turned out to be an easy sell.

Chemical nitrogen produces rapid results, and in 1920 there was little indication that a soil mining operation had begun that would eventually strip our soils of their capacity to sustain a healthy population. However, this is where we find ourselves at the dawn of a new millennium.

We are in the midst of a cancer plague, where some form of this insidious disease will now strike one out of every two of us at some stage during our lifetimes. Coronary artery disease, arthritis, diabetes and asthma are just some of the degenerative diseases running rampant in modern society. Science may have increased our lifespans by a decade, but we are an ailing population where an ever-increasing armoury of drugs is needed to manage our multiple disease symptoms.

This vicious cycle of chemical dependency is mirrored in agriculture. Our 80-year experiment should have taught us one thing that relates to both human and soil health: Chemicals and drugs treat symptoms. They very rarely offer cures, as they do not address the cause of the problem. Chemicals beget chemicals in both arenas - the more chemicals you pour on your crop to treat pest and disease, the more chemicals you will need to retain control. Similarly, the more drugs you take to manage disease, the more you will eventually require.

Nutrition is the missing link in both situations. **Poor nutrition is the cause of most human and animal disease**, and it is also the source of pest, weed and disease pressure in crops. Every living cell (microbe, plant, animal or human) needs 70 minerals for maximum efficiency. Our chemical experiment, using high-leaching fertilisers, has effectively stripped the majority of minerals from our soils.

In a short period we have managed to undo millions of years of evolution, and these serious deficiencies are arguably the most urgent problem we need to address in the coming century.

Happiness, Health and Minerals

Good health and happiness are the obvious goals of human existence, and the two are inextricably linked. It is difficult to enjoy a state of well-being and real happiness when suffering health problems. Understanding the role of minerals in the health / happiness equation really requires consideration of our evolution as a species.

All life on earth evolved during the Pre-Cambrian Era in the mineral-rich Pre-Cambrian Sea. This primeval mineral soup contained a balanced blend of all 70 minerals, and the full range of these minerals was incorporated in the single cells that eventually became plant, animal and human. Ancient soils were so rich in minerals that trees grew 10 metres (25 feet) every year!

Some conception of the mineral density of prehistoric plant-life can be gained when considering the animal life sustained by these plants. The mighty thunder lizard (or Brontosaurus) weighed in at 70 tonnes, and yet this creature had a mouth roughly the same size as that of a horse. Any good livestock manager will be aware of nutritional parallels. Nitrate-packed hay grown in deficient soils is required in much larger amounts than a higher quality, more nutritious product, to achieve comparable animal weight gains. The Brontosaurus must have grazed on plant-life with 30 times higher mineral content to enable this enormous size with such limited intake capacity.

The point to understand about this mineral density was that it involved 70 different minerals, not the 17 minerals usually involved in fertility analysis or the three minerals (N-P-K) contained in simplistic fertiliser blends. All of these minerals were included in the original cells from which all life stems, and the human body still requires each and every one of them to operate at peak efficiency. The key point here, which few people understand, is that **plant-derived mineral colloids** are what is required to sustain optimum human health and disease resistance. Metallic minerals have bioavailability ranging from 8 to 12%, but plant-derived minerals have a **98% bioavailability**. This is why we simply cannot bypass the soil. Hydroponics may have a role to play in the mass production of food, but this food will not contain the mineral diversity associated with a healthy soil.

Soil health is a major factor in human health, and it's time we all accepted and understood this indisputable fact.

The Pursuit of Profit at the Expense of Health

There is obviously an increasing awareness in the general community that things are not as they should be. Vitamin, mineral and nutritional supplements are the huge growth industry of the late nineties. Last week it was announced that, for the first time ever, a greater percentage of the Australian health dollar was spent on natural health and supplements than on conventional doctors and drugs. The medical community is in uproar - "How could these charlatan quacks, peddling their herbs and potions, possibly be usurping the life-saving power of medical science?"

The answer is simple: **The medical community does not understand nutrition**. The warning was sounded and ignored 14 years ago. In 1985 in the US the prestigious National Research Council published its report on "Nutritional Education in US Medical Schools". The council concluded that "Nutritional education programs in US medical schools are largely inadequate to meet the present and future demands of the medical profession.

This institutionalised knowledge gap is no different in Australia or any other developed countries. In fact, traditional medicine has always had an anti-nutritional bias. The medical establishment has resisted acknowledging the role of nutritional deficiency as the etiology of hundreds of diseases for centuries. A long, hard fight was involved to achieve grudging admission of the most obvious deficit-related diseases like scurvy and beriberi. The **profit motive** is, once again, the criterion for this lack of interest. There are no large profits in unpatentable trace minerals. There will always be more profit in treating symptoms with drugs rather than offering nutritional alternatives.

There is no suggestion that individual doctors are intentionally this callous or mercenary, it is simply that they are often the victims of institutionalised commercial relationships with drug companies. There is simply no financial motivation for medical schools to offer better nutritional training. Once again, the soil science parallel is blindingly apparent. There are no large profits in balanced, remineralised soils. Nitrogen requirements are minimised in this situation, and there is far more profit in urea than in limestone. It is not just the reduction in ongoing fertiliser requirements (which sticks in the throat of chemical suppliers), but also the associated reduction in the need for toxic rescue chemicals. Herbicides, pesticides and fungicides are the big money-spinners in today's agriculture. In essence we've all been puppets, manipulated and duped in the pursuit of profit, but the ultimate con has only just begun:

The Folly of Frankenstein Food

Genetically Modified Food (GMF) has the potential to eclipse all of our previous mistakes. The people who brought us Thalidomide, Agent Orange and a large proportion of our precious agricultural poisons are now telling us that, if given one more chance, they can be our saviours. Apparently we desperately need untested, untried, new concepts, like the drenching of staple foods like soybeans in herbicide to simplify weed control (soybean products are involved in up to 60% of processed foods). Despite the fact that genetically modified crops have never been able to outyield conventional crops, they are apparently essential to feed the starving world (for some reason

the huge stored surpluses of all major food crops were never mentioned in this context).

The terrifying thing is that despite the pitiful track record and obvious profit-centred selfishness of some of these companies, they appear to be actually pulling off the latest con job. The American public in their "progress", worshipping ignorance, appear to dutifully accept all that is thrust upon them in the name of science. They are currently enjoying a strong economy, and if science is progress, and progress appears to have put money in their pockets, then the questions or complaints are usually minimised. They do not have GMF labeling requirements, and consequently they have effectively become 250 million guinea pigs for a frightening, new technology.

Fortunately the less gullible English and Europeans are fighting to stem the tide. In this regard, Prince Charles's well-reasoned opposition may yet prove to be the most valuable social contribution from a Royal in history. Recent surveys reveal that 90% of consumers would prefer GMF labeling. If 90% want labeling, it is safe to say that a large percentage of these consumers would choose not to buy GMF, if given the opportunity (with the extent of big business cronyism it is not hard to guess why the government is dragging its feet with regards to GMF labeling).

The moneymen need a message that society will not tolerate untested concepts, which have the potential for ecological disaster. In fact, in Australia, at present, we have a huge opportunity to benefit from the GMF backlash. We can present ourselves as a clean, green alternative as the food basket of Europe, but only if we steer clear of the Frankenstein technology. In this context it was disturbing to witness the abject stupidity of a Federated Farmers representative on A Current Affair recently, stating that "we need to keep up with the Americans, or we will lose ground. " Where is inspired leadership when it is desperately required, or, just as significantly, where is the uproar from Federated Farmers members when they are represented so ignorantly?

Nutritional Naivety

The human health / soil health link is so poorly understood that the majority of the hundreds of thousands of consumers, who now dose themselves daily with vitamin and mineral supplements, have no idea of the real reason that they need this nutritional support. Often supplements are simply thrown at symptoms with the same aimless abandon as doctors prescribing drugs. How would you have responded to this single multi-choice question prior to reading this article?

Question: What is the root cause of human health problems?

- (a) Toxins and pollution in our modern environment.
- (b) The degeneration associated with aging.
- (c) Overconsumption of sugary and fatty junk foods.
- (d) Increasing stress on a personal level and increasing violence on an interpersonal level.
- (e) The demineralisation of our agricultural soils.

I would wager that less than 1% of readers would have answered correctly (ie option (e)). All of the other choices listed above have some validity, but the soil is the starting point for mineral nutrition. The other options are also nutrition-related, and an explanation of this nutritional link should prove illuminating:

(a) Toxins and pollution:

Many of the pollutants that inevitably create health problems are toxic residues associated with pest, disease and weed control in agriculture, but they are a secondary rather than a primary cause of problems. Just as we require the full spectrum of minerals to fire our immune systems, plants require the same mineral fuel to develop optimal pest and disease resistance. The more depleted the soil, the more the need for toxic chemical control.

(b) The degeneration associated with aging:

All species have a "genetic potential" or upper limit for longevity - dogs - 23 years; horses - 32 years; chimpanzee - 52 years and man - 140 years! There are five known societies that have attained

this maximum genetic potential. All five cultures have one thing in common: They are all highland communities in sheltered mountain valleys where their water source is derived from glacial melt. This mineral-rich opaque-coloured water is widely known as “glacial milk.” These metallic minerals are fed to cultivated plants, which convert them to organic colloidal minerals that are 98% available to humans. It is this mineral-rich diet that is the main secret to health and longevity rather than the drugs, vaccines, antibiotics, steroids or transplants. There are none of the degenerative diseases that plague our aging population - soil health equates to human health.

(c) Overconsumption of sugary and fatty junk foods

This western failing is perhaps the most obvious and insidious symptom of our mineral malnourishment. Salt and sugar are the main food items the body craves when it is screaming for minerals. The “junk food” manufacturers are well aware of these cravings, as all snack food and the majority of processed food contains copious quantities of these two additives. You may well ask the question: “Why do our bodies mislead us with salt and sugar cravings when we really require minerals?”

The answer is complex, but a simple explanation is possible: Fruit and vegetables are supposed to be sweet tasting. There is a direct link between plant sugar levels and mineral content. **Nutri-Tech Solutions** utilise refractometers to measure brix levels (a measure of sugar and mineral content) in the crop monitoring process. Our bodies respond to a sweet taste because there is supposed to be an associated mineral reward. Unfortunately junk food doesn't contain the mineral payload. We are temporarily satisfied until the body realises the deceit. Then the craving returns and we “snack on the crap” in an ongoing, unfulfilled odyssey until premature death or serious illness intervenes.

Salt is a slightly different scenario. Contrary to popular medical opinion, salt is a critical and essential food additive. Sea salt is a highly mineralised material with numerous health benefits. Rock salt also contains a significant mineral component. Rock salt is a substantial dietary component in all of the five cultures that have achieved their genetic potential (Their input is dozens of times higher than levels recommended by the medical establishment). The body does not mislead us when we crave for salt. Salt has always been a major source of minerals in our diet. It has only been since we changed the sodium / mineral ratio in iodised salt that salt has become a high-sodium liability.

The cravings associated with junk food indulgence are actually examples of a phenomenon called Pica. **Pica** refers to irresistible cravings that are satisfied by inappropriate food or non-food sources. The literature catalogues numerous bizarre instances of children eating ants, ash, lead paint, leather, raw grain and lizards, in a subconscious attempt to address deficits in their mineral-starved bodies. In our society the Pica phenomenon is characterised by a craving for more socially acceptable substitutes, but these sweet and salty carbohydrate snacks still qualify as nutritionally inappropriate, non-food items. This deficit-charged Pica phenomenon remains more prevalent than ever, but now chocolate bars and potato crisps replace the more bizarre alternatives.

(d) Increasing stress on a personal level & increasing violence on an interpersonal level:

Numerous laboratory studies exist, which catalogue increases in physical and psychological stress associated with mineral deficiencies. Just as stress resistance in plants is reduced in depleted soils, the minerally depleted human body and brain cannot handle anxiety and pressure. The increase in social violence is another symptom of a minerally deficient society. In his book “Rare Earth's Forbidden Cures”, Dr Joel D Wallach cites numerous examples of sociopathic teenage violence, which he believes could have been averted with a sugar-free diet and daily supplementation of the 90 essential nutrients (minerals, vitamins, amino acids and essential fatty acids), including copper, chromium, vanadium and lithium.

Dr Wallach has been nominated for the Nobel Prize for his discovery of the link between selenium deficiency and cystic fibrosis. Dr Wallach argues that the reason for the high incidence of teenage violence amongst 14 to 18-year old males is related to an explosive mix of the male hormone testosterone, mineral deficiencies and high sugar intake (colas, ice creams, sweets and boxed cereals). Economic background is always considered an important variable in the predisposition toward

violent crime, but analysis will invariably reveal that the high-starch, high-sugar, low-mineral food intake of the poor is the underlying causative factor. Dr Wallach believes that the murderous riots in Haiti and the ethnic cleansing horrors in Rwanda, Somalia and, more recently, Serbia, can all be directly linked to sociopathic violence associated with mass mineral deficiency. The problem with a high sugar diet is related to the fact that excess sugar intake increases mineral losses through sweating and urination by 300%. We crave sugar because we are minerally deficient, but we satisfy this craving with snack food - we are actually further increasing our original problem. A vicious cycle begins which can sometimes end in vicious, anti-social behaviour.

(e) The demineralisation of our agricultural soils

This option has already been considered at length. Mineral malnourishment is now a major health problem, as our soils have been stripped of the mineral diversity needed to ensure our health and well-being. **Nutri-Tech Solutions P/L (NTS)** are the Australian leaders in remineralising technology. From patented, composted high-carbon fertilisers like **Nutri-Store 180**, which utilises ancient mineral-rich, colloidal plant materials like those that sustained the Brontosaurus, to **Nutri-Phos** colloidal soft rock phosphate - mineral-rich, colloidal clay with exceptional plant-availability. **Soil Therapy™**, our free fertility analysis service, balances major elements and primary trace elements to ensure maximum uptake of the full range of rare earth minerals that are always included in **personal prescription blends** designed in response to Soil Therapy™. **Nutri-Score**, a highly paramagnetic, volcanic clay derived from crushed lava, contains an impressive mineral load and all 40 ocean-derived liquid fertilisers contain the full spectrum of 60 to 70 trace minerals. **Nutri-Tech Suite Seven™** is a new product that contains chelated versions of all seven recognised trace elements in a fish and kelp base, which also covers the 60+ unrecognised fertility components.

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