

It is interesting to note that current chemical fertilization methods began with marketing stockpiles of gunpowder (phosphates) stockpiles left over from WWI and anhydrous ammonia developed to harden jungle soil in the South Pacific into runways for WWII bombers. Land grant universities tend to promote chemical use because fertilizer and pesticide conglomerates are major fiscal benefactors. However, scientists are discovering cumulative side-effects to such an approach.

Soil Chemicals

It has been noted in just two years of heavy nitrogen application with no addition of organic matter, that soil can become so hardened and compacted that farmers are forced to use rippers and bigger, more expensive tractors to break up resultant clumps. Ultimately more is required to effect less.

Additionally, the use of NPK fertilizers is heavy enough that the EPA is finding in some areas that nitrogen runoff from fields is actually higher than the amount applied that season; in other words, soil has reached nitrogen saturation which, in effect, “burns up” soil humus and creates severe nutrient imbalances.

Nitrates are converted by bacteria into dangerous nitrite form. Babies, the elderly, and those on frequent antacids do not have strong enough stomach acid to kill such bacteria and are at major risk for nitrite poisoning, *nitrosis*, which causes *meth-hemoglobinemia* or reduced oxygen-carrying capacity of the blood. Not only dangerous to humans, pregnant cattle and horses fed high nitrogen feeds can miscarry their fetuses due to the lack of blood oxygen and the binding of Vit A so necessary for mineral usage.

We found this to be true one year when we inadvertently fed our horses high-nitrogen hay and lost three *in utero* foals. The hay fields themselves had not been fertilized but they *had* been irrigated; apparently the nitrogen run-off from surrounding fields was sufficient to affect our mares. The *maximum contaminant level* for nitrate-nitrogen in public water supplies is 10 ppm.

In reality, NPK is rarely used alone but rather in conjunction with herbicides and pesticides necessary to quell opportunistic attacks on rela-

tively weak plants which grow fast and green but have little strength or nutritive value. Such chemicals, especially the *carbamate* insecticides and *triazene* herbicides, have been shown in a five-year study headed by Dr. Warren Porter of the University of Wisconsin, to react with nitrates thus forming substances which have “*measurable detrimental effects*” on the nervous (physical & mental), immune and endocrine (especially the thyroid) systems. [PESTICIDES & AGGRESSION BY PETER MONTAGUE at WWW.RACHEL.ORG]

It is Dr. Porter’s conclusion that: “*The usage [of carbamate insecticides and triazene herbicides] has continued to climb. There’s an enormous amount of these [chemicals being used] right now. There was a recent study that examined the urine of people across the country, [asking] if people are being exposed. On average, anywhere from five to seven compounds were being excreted. There’s a great deal of exposure to the general populace. And yes, the toxicities have definitely changed. [Some toxicities are now measured] in the parts-per-trillion range. I would point out that fetuses are sensitive to chemicals in the parts per quadrillion range.*”

Unfortunately, all these chemicals, and then some, also leach into formerly potable water, including wells. A very recent 2 year study done by Colorado State University was reported on by the Denver Post [01/20/05 by STAFF WRITER THEO STEIN]. “*There’s the potential for these chemicals to enter (water sources) wherever there’s human activity,*” said hydrologist Lori Sprague, the study’s co-author. The study concluded that water far from known sources now contained measurable amounts of not only agricultural chemicals but also antibiotics, hormones, detergents and the like.

Soil Minerals

Another side to modern agricultural methods is the loss of soil mineralization. If minerals are not within the soils themselves, there is no possibility of them being contained within crops, whether for animal or human use. And minerals, especially all trace minerals, are vital for every single function within all mammalian bodies.

Two-time Nobel Prize winner Dr. Linus Pauling stated that “*You can trace every sickness,*

every disease, and every ailment to a mineral deficiency.” And author Rex Ewing points out from an equine standpoint in *BEYOND THE HAY DAYS* that “A horse receiving an ample supply of minerals will require less feed and perform at a higher level than one that is not. It will have a greater resistance to disease. Energy levels and reproductive efficiency will be increased. Mares will cycle earlier in the year, conceive more quickly and be more apt to carry their foals to term. They will produce more milk; their foals will grow larger, faster, and will exhibit stronger, denser bone.”

He goes on to explain: “Farmers fertilize with nitrogen, phosphorus and potassium, and occasionally calcium, but that leaves 18 to 20 minerals essential to horses (and horsemen) that are not being returned to the ground...**The demineral-ization of our soil is not the slow process we might imagine.** Tests done on dehydrated alfalfa meal by the National Academy of Sciences between 1973 and 1981 yielded some disturbing results. Copper dropped from 11.2 PPM down to 9.5 PPM during that period. Iron went from 330 PPM to 270 PPM, and zinc fell from 21.5 PPM to 19.4 PPM.” [emphasis added]

In looking at these figures over twenty years later, it would appear that vital system functions are deleteriously affected at the very time when we are being assaulted by more and more chemicals which strain our bodies to their utmost and beyond.

Soil Respect

Did you know that healthy soil is actually an organism containing up to 2 tons of living beings per acre? Crops grown in healthy soils are stronger and do not put out the chemical “stress indicators” that draw insects to them. This in turn can eliminate the need for massive amounts of insecticides. Proper mulching, rotation, and companion planting eliminate even more unwanted insects while dramatically reducing the need for massive amounts of herbicides. Such respectful techniques are not new but have been in effect since humankind started learning thousands of years ago from nature itself.

The greatest of nature’s gifts are earthworms which actually build soils as they digest inorganic matter casting it off as organic. **DYNAMITE**® has discovered how to replicate this process in its balanced, bio-available line of colloidal-mineral-based fertilizers, both the **Prescription Treatment** foliar sprays and the **Humi-Zyme** soil supplements. With these fertilizers, **DYNAMITE**® is addressing the problem literally from

the ground up for every plant-growing need.

Prescription Treatment can be used not only with standard fertilizers during the perhaps lengthy switching-over process required for chemically-dependent soils, but almost any time indoors and out. **Humi-Zyme**, an organic liquid humus, binds NPK fertilizers to the top soil layer to prevent leaching while allowing them to work better as they are phased out. Added to compost piles, it can increase beneficial bacteria by 400%. Sterile soils such as some “top soils” literally receive new life with the *mycorrhizae*-enhanced **Humi-Zyme** + making it particularly useful for new or trans-plantings.

These fertilizers have been proven to strengthen plants appreciably during times of stress such as drought or extreme temperatures. Far less water is needed as the soil is better able to absorb and retain moisture and far less tilling is necessary as soils, even clays, become naturally friable and humus-rich with a neutral pH. They are non-leaching meaning they remain in the soil where they belong instead of entering into the water system. Instead of more being required all the time, continued use instead builds the soil resulting in an actualization of the “less is more” **DYNAMITE**® philosophy.

In fact, users with livestock have noticed their animals consume far less of **DYNAMITE**® free-choice minerals when they are on **Humi-Zyme** pastures or feed. People have found their fruits and vegetables grow stronger (not necessarily faster!) and larger and are far more delicious in flavor, denoting far more nutritive value, when sprayed with **Prescription Treatment**. One user reported that when she returned from a 3-week vacation, she expected to find her waterless garden dead during a Colorado drought. Instead she found her tomato plants had grown to almost 10’ tall with an abundance of ripe fruit ready for harvest.

Rather than continuing to degenerate physically and even mentally from chemical over-use and mineral under-availability, perhaps it is time to change the paradigm. Our country grew strong on it’s fertile fields and each of us, whether ranchers, farmers, nursery-stock growers or just plain home gardeners can contribute to it’s new fertility by changing how we nurture the soil that nurtures us in return. After all, we are utterly dependent upon our soil and only with healthy soil can we, and our descendants, hope to grow healthy in body and mind. ■