AN ANALYSIS OF SUBSTANCE ABUSE IN CONVENTIONAL AGRICULTURE

The Phosphate-Fluoride Link

Whenever a growth industry emerges from agriculture, we are required to take notice. Three times a week, thousands queue in front of dialysis clinics nationwide. Thus tethered to a machine, there patients can earn the right to life for weeks, months or years. These clinics are opening rapidly and filling up just as rapidly.

In perhaps 65 to 80 percent of the cases, the degenerative disease trails back to adult-onset diabetes, and diabetes connects to an inability to metabolize sugar and starches. Thus the thyroid gland comes into focus, and beyond that lurks fluoride, the single halogen that displaces other halogens, and by its record of mischief should rule itself out of the environment. Blunders have a way of branching out. But the locus of the fluoride blunder will always connect to agronomy's inability to understand the role and anatomy of phosphate fertilization. Phosphates, after all, are irrevocably linked to fluoride contamination in nature. The fluoride that tags along on the phosphate molecule — even after being scrubbed or sent through a kiln — would be serious enough. Yet it is a matter of record that the fluoride contaminant is harvested and injected into the water supply based on the specious theory that fluoride will service the apatite crystal of human teeth.

FERTILIZER

So essential, it finds a role in every leaf, in cell division — in making plants thrive or waste away! Phosphate is an anion, but it unites rapidly with divalent calcium to become insoluble. The carbonic acid from a plant root is not powerful enough to activate bound up phosphates. Phosphate rock becomes available quite reluctantly, for which reason soils should be at least slightly acid.

Considerable phosphate in usable form reaches the soil in organic material. Release of this phosphorus depends on decomposition of organic compounds by microorganisms. That is why manures — green and barnyard — are so valuable.

As noted, all plants contain phosphorus. Concentration is greatest in young plants, seeds and flowers. Photosynthesis, the breakdown of carbohydrates, even energy transfer — all require phosphorus.

Superphosphate, triple superphosphate, rock phosphate, even organic fraction phosphate — all are labile. This means that while physical change is taking place, these phosphates are not necessarily available.

The agricultural colleges can be blamed for some parts of the interconnected blunder of which we speak. They set the hydrogen target at neutral. This dictum made it necessary to use water-soluble fertilizers. Was this ignorance speaking, or thoroughly informed self-interest?

Even so, below pH 6, phosphorus tends to become complexed with iron, aluminum and manganese.

The open door to toxicity can be seen. Above pH 7, phosphorus becomes complexed by calcium.

Agriculture's drift to water-soluble salts has become an insurance policy for the distribution of tag-along contaminants, chiefly fluoride.

With the metes and bounds of the phosphate connection well in mind, it is appropriate that we examine the commercial phosphates and their impact on soil and human health.

The purest form available on the market is concentrated superphosphoric acid. This is about 70 to 75 percent. Because of the impurities — aluminum or manganese, etc. — the trades invoke a solvents extraction process. The process calls for removal, or the acids become so concentrated they crystalize. This means the purest form still contains many impurities.

Fluoride is a contaminant in phosphate. As it emerges from the vein in Florida, the running load is 3.5 percent fluoride on the average. Sulphuric acid is used to bathe the rock. This creates a slurry. About 33 1/3 percent of the volume goes off as tetrafluorosilicates or tetrafluoride gas. This is captured in the pollution scrubbers along with other contaminants assaulted during the process. The washing process is somewhat effective. Within the scrubber, the maximum concentration is a 23 percent solution before crystallization takes place.

When mixed phosphates are run through a kiln, the material is heated to 2,700 F. A manifold furnace is used. Heating takes place on a bed of air that drives off contaminants not allowed by regulations. A total of 10 ppm fluorine is allowed, as are 10 picocuries of radioactivity. The impurities are generally washed away. It ends up in the water and into the air.

A four-stage scrubber is now state of the art. In some scrubbers, the solution has to be alkaline. This means they have to add sodium hydroxide in order to achieve reaction with contaminants to take them out of the air.

There is no clear and final way of telling how much bad air the Canadians get. Testing is often lackadaisical. In short, anyone who permits dumping is bound to receive a share of this technology. Few cities run the appropriate tests. Blending with fluorosilicic acid is an industrial option.

Animal mineral supplements figure in the equation. The Potash Corporation of Saskatchewan does this in Hamilton County, Ontario, Canada.

There is presently an underground rumble about poisoned phosphate miners in Florida. The EPA has taken notice, and a few lawsuits are popping, pollution and illness being the legal handle.

The best quality becomes animal feed — your calcium phosphate, essentially. This is the reason for cookers, to drive off impurities. Chickens are an early warning system. Feeding them phosphates often kills them. Raw phosphate rock fed to pigs and cattle debilitates them. The most noticeable problem is kidney failure. The material tears up kidneys, as evidenced by pustules of fibrotic buildup, some of this a consequence of fluoride contamination.

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RESEARCH

Most of the research backing agriculture's tryst with acid-treated phosphates

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comes from the very industry that sells phosphate. In other words, the industry is grading itself. Check-offs fund the research which always, it seems, has the appropriate answer.

The Tennessee Valley Authority also does quite a bit of research. Government agencies seem to sidetrack concerns not identified as air and water pollution.

A consideration seldom proposed is one that belongs on the table as pollution and contamination become inescapable nationwide. All plants pick up fluoride. The synthesis process in a plant metabolizes it. Indeed, a lot of plants metabolize the fluoride ion into fluoroacetate. This effect turned up with soybeans in the 1960s. Soybeans were treated with hydrogen fluoride to combat fungus. The beans took up the fluoride ion and metabolized it into fluoroacetate, one of the most poisonous things known.

Per ton of phosphate, 1 to 1.2 percent will be fluoride. It all depends on the form being used. Often, phosphoric acid is married to nitrogen as the field is sprayed. Based on the tonnage of phosphoric acid used, it is safe to make computations with the 1 percent number, generally 1 pound per 100. A couple of tons per field is not an unusual fix.

Fluoride and cadmium and radionuclides tag along, as does the whole decay chain.

Conclusions have to flow from the facts. Fluoride is a halogen. It dominates iodine. There is a Law of Halogen Displacement, and it is well supported by disciplined studies.

As the iodine is displaced by fluoride, the thyroid gland is deprived of the wherewithal for making thyroxin. Without thyroxin, metabolism of sugar becomes either difficult or impossible. Is this the reason diabetes has achieved pandemic proportions?

Laboratory workers provide us with some indication of what is wrong with the phosphate connection made under the N-P-K banner. Workers are turning up with fibromyalgia, chronic fatigue syndrome, diabetes and brain cancer.

Phosphate uptake is marginalized at best, possibly 9 to 11 percent. And yet the tons go onto the acres year after year, slowly poisoning the population. The soil has become addicted.

Disruption of the decay system means cancellation of sustainability. Diammonium phosphate — nitrogen and phosphate — delivers quick growth with little sustenance. Once on the fertility needle, the road back becomes a rocky trail that often is nonexistent.

But the cheering crowd in the university gives thumbs-down to eco-farming and counsels, "Pour those on."

The addiction is worldwide. Annihilation of the web of life is one horn of the dilemma. Equally disturbing is the creation of forward mutation of microbes in the soil. The recent history of Benlate as contaminated Flusilazole is an organic fluoroacetate. This one blunder caused the worst agricultural loss in the history of fluoride. Workers exposed have developed fungal infections and can't work. Fungi in the soil mutated to deliver animal-killing toxins via plant life with resultant deformities and stock losses. Most devastating, soils lost so much life they produced only marginally if at all.

There is no simple solution. Blunders have to run their course, often taking down civilizations with them. As long as authority figures continue to tout fluoride, as long as classrooms defend worthless bibliographies, the gullible public will continue to walk its death mile. Deprived of mental acuity, the great population can do no different.

HISTORY

As the atomic age dawned, the phosphate industry was producing most of the uranium oxide used in the nuclear industry. The original extraction process involved the old furnace process. They extracted the uranium from the fluorosilicic acid. The Tennessee Valley Authority was very much involved. Random dumping was overlooked, a procedure that became critical by the 1960s. The EPA came into being and cracked down. Pollution scrubbers also came into being.

As a consequence, the industry had to find a way to get rid of fluorosilicic acid, the processing source of fluoridation today. The sales job was easy. As a liquid, the fluorosilicic acid easily substituted for sodium fluoride.

Almost all fluorides are captured air pollution. Almost any material containing fluoride qualifies as a water fluoridation agent.

If the product was from the aluminum industry, the resident contaminants will be those inherent to aluminum manufacture. Out of the phosphate industry, the contaminants will be those found in phosphate mines. No two batches are ever the same. The uptake by the corn plant will be different, field to field.

REALITY CHECK

A reality check requires reexamination of the basic premises Dr. Bill Albrecht handed off the very month *Acres U.S.A.* started publication. Bad botany will always be bad botany, regardless of sanctification bestowed by the self-serving pretending science.