

# SEA-WATER FLOODED FIELDS IN BELGIUM PRODUCE BUMPER CROPS DURING THE SECOND WORLD WAR

**Chris Mermuys a farm columnist and co-owner of a health food store living near Montague, Prince Edward Island, Canada writes a bi-weekly column for *The Island Farmer* titled "A reader writes and cites." He is a long time reader of *Acres U.S.A.*, a publication that advertises itself as a voice for ecological agriculture. In the following letter to Robert Cain of SeaAgri, inc. he summarizes his personal knowledge of seawater flooding of his family's farm in Belgium during WWII and shares his thoughts on Dr. Murray's research and soil remineralization.**

In an interview of David Yarrow published in *Acres U.S.A.*, he told of meeting a man at an Acres U.S.A. conference who had a friend who had told him of his parents' farm getting flooded with seawater during WWII. A phone call to Yarrow confirmed that he had indeed been speaking about my parents' farm. In that interview Yarrow stated, "The usual purveyors of conventional wisdom told the farmers, 'You won't be able to grow any crops this year, because your land's been poisoned by seawater.' Farmers being farmers, they went out and tried to grow food again, only to discover that the year after the lands had been reclaimed from the sea, they grew the *best crops they had ever seen* on their soil, demonstrating on a large scale what we're trying to do with Maynard Murray's research today." As is often the case with stories retold again and again, the details get changed in the re-telling again and again, but my parents' farm and some others in the Dudzele, Belgium area did indeed get dosed with seawater, and they did indeed get a crop the next year – albeit my father never said that it was the best crop ever. He did say that on account of the war, fertilizer was unavailable and that it was a good thing it was unavailable. Implying that any more fertility would have been too much.

As I was born a few years after the war, even my information isn't first-hand information and I have no definitive knowledge as to how widespread that flooding was, or exactly how much seawater was on the land, but one of my sisters has a couple of old photographs. One of them shows the land all under water, and the other shows my father going out to harvest beets in a rowboat.

Unlike some parts of Holland that are many feet below sea level, my parents' farm was lower than sea level at high tide and higher than sea level at low tide. Sea-gates were used to let the fresh water from inland out to the North Sea at low tide, and those were closed to keep the salt water at bay at high tide. At this point, it is impossible to know how much the sea water was diluted by the fresh water coming from inland and/or rainwater, but whatever the case, their land was dosed with seawater that fall and produced good crops the next year.

My parents never did say whether the flooding of their land by the Nazis – who opened the sea- gates when they should have been closed – had been done for a tactical reason or out of intended harm.

At this point there are more questions than answers, some of which are: How much salt water did their land actually receive? Had their clay soil contained considerably less clay, and had their farming depended far less on manures and far more on chemical fertilizers, would the agronomic experts have been correct?

When the article had appeared in *Acres U.S.A.* earlier about the actual work of Dr. Maynard Murray, a medical doctor who experimented with the use of seawater and sea solids on soils as a means of remedying the declining mineral content in the food supply that article was – with cause – doubly intriguing to me on account of the stories I had heard earlier.

It is noteworthy that seawater includes all kinds of microbial life – as does the soil; it is also noteworthy, as one person put it, that the microbial life in the soil doesn't exist in the soil *per se* but rather in the films of water that surround the soil particles, roots, humus and organic matter; and last but not least, it is also worth noting that September seawater of the highly productive North Sea would contain much more microbial life than the same water would in the dead of winter.

Dr. Maynard Murray was by no means the only medical person who was concerned about the declining mineral content of the food supply and its consequences. In 1930s, which is about the same era that Dr. Murray started doing his studying of sea solids and related matters, an article by Rex Beach was presented to the U.S. Senate about the work with minerals by Dr. Charles Northen and that document is available on the internet and supposedly from the United States Printing Office.

One website claims that another one has an extra sentence inserted because of a vested interest in a certain formulation of minerals, but even such counterfeiting of that document doesn't rob Dr. Northen's concerns about the need for proper soil mineralization.

Readers can check out for themselves that the issue of demineralization of the soil and food supply was already an issue back then. Ongoing analyses of the food supply over the decades indicate that the problem hasn't resolved itself as studies have shown that the average mineral content of the food supply is heading steadily downward. That shouldn't be surprising in light of the overemphasis on N, P and K by the agronomic advisors, and the devaluation and even denigration of manures, compost and other organic cropping inputs by many of those steeped in N, P and K thinking – and last but not least, the increased processing of more and more food which, among other things, more often than not depletes minerals from the food and at the same time destroys enzymes and other complex compounds and/or makes them less available or unavailable to the consumer – be it livestock or humans.

Science is slowly learning more and more about the role of more and more micronutrients, or trace elements as they are sometimes called, in plant, animal and human life. Back in the 1965 edition of Roy L. Donahue's textbook *Soils: An Introduction to Soils and Plant Growth* it stated, "There are 16 elements that have been demonstrated to be essential for plant growth and reproduction. These essential plant food elements come from air and water and from soil and fertilizers. Nitrogen was the first proved to be essential for plants in the eighteenth century; seven more were proved essential in the nineteenth century, and this far in the twentieth century, eight additional elements have been shown essential. The last element that was proved essential was chlorine, in 1956. As a result of more refined research methods, other elements probably will be proved necessary."

At that time, the situation was not much different for essential elements in human and animal nutrition but it is known today, for example, that chromium and vanadium play key roles in the regulation of blood sugar. Those elements weren't on either list back then.

At one point Dr. Henry Schroeder, author of *Trace Minerals and Man* speculated that unless the pace of discovery increased, it would take another 400 years before science understood what the role is of all the various trace elements.

From reading a reprint of Dr. Maynard Murray's book, it is apparent that he wasn't overly concerned as to what each of the 90 some elements present in seawater and sea solids played in plant, animal and human nutrition. His interest was to see if seawater and sea solids applied to the land could help improve plant, animal and human nutrition. From reading his book and later talking with someone who worked with him, it appears that his scientific work yielded some really positive results in both the plant and animal kingdom in terms of both quality and/or quantity.

It has been said that in spite of all the hunger in the world that there is more than enough food produced for everyone. Hunger is often apparent but what is often less apparent is the hidden hunger that comes from what is often termed "empty calories," which are foods lacking in essential nutrients and compounds which are the consequence of less than the best of science in both farming and food preparation.

Readers might do well to also look up and from there to access the Price Pottenger Nutrition Foundation. The Price in that organization was Dr. Weston Price, an American dentist who in the same era as Dr. Maynard Murray and Dr. Northen (another dentist) were doing their work, traveled around the world to those often isolated parts of the world where people were reputed to live long, healthy lives. His objectives were to see if those stories were true – and if true, to determine what was contributing to that healthy longevity. He has been called the Charles Darwin of human nutrition but unfortunately his work is largely unknown.

In this day and age of awe towards modern science and the technologies it gives birth to, much that is old is deemed of little or no value, but old books can often reveal what was

known long ago and ignored or missed in the mad rush that is deemed to be progress. The work and words of the aforementioned medical doctor and dentists – and other people not mentioned here – help illustrate that things have not been nearly as progressive as is commonly portrayed. If the dramatic rise in cancer, diabetes and other diseases and conditions in the previous century is part of the price of progress, we could well do with a less of what is deemed progress and take it a bit slower by using more caution, and among other things possibly learn more from old books and other writing to make progress with far less side-effects.

As to old books, here's a bit of food for thought: the following words had been read before but hadn't really registered until after having read of Dr. Maynard Murray work in the Acres U.S.A. article. Luke 14:34, 35 in the Bible states, "Salt is good, but if it loses its saltiness, how can it be made salty again? It is fit neither for the soil nor for the manure pile; it is thrown out. He who has ears to hear, let him hear." In Dr. Bernard Jensen and Dr. Donald V. Bodeen's book *Visions of Health* it stated, "They say there is nothing new under the sun. Maybe there isn't. But sometimes it takes a long time, even thousands of years, for people to rediscover things. What they find may have been discovered before, but it surely is new to them."

If, as alluded to earlier, increased dependence upon chemical fertilizer and less active humus has lowered the threshold as to how much seawater or sea solids can be safely applied at one time, all that means is that new thresholds need to be determined and more research needs be done to help address the concerns of Dr. Murray, David Yarrow and other who dedicated decades of their life to addressing nutrition from the soil up – and in Dr. Murray's case, from the soil up with help from the sea.

The time is ripe for farmers, ranchers, gardeners and scientists to research the use of seawater, sea solids, as well as rock dusts and other minerals for use upon the land and in manure and compost for the benefit of crops, livestock and humans. One thing that may be relatively new in the historic sense is foliar feeding sea solids, whereby relatively small amounts of inputs can yield significant improvements. Approprsmall-scalescale experiments by farmers, ranchers, gardeners and scientists could well contribute to ultimately help improve the mineralization of the food supply.

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