REFLECTIONS by Kevin Twigg, 2020.

My life, as anyone's life is, has been a journey. A journey of challenge, enormous personal growth and courage. It has been both a shared and an individual journey. Through this paper I share some of these experiences with you.

Between 1946-1950 my parents were share farming at Cohuna. They were milking 75 cows - which was a big herd in those days. In that time, I never saw one dead cow. There were no vets servicing the farmers and no knackery trucks picking up dead cows. They left Cohuna and bought a small farm at Gunbower in 1951. This was an old tobacco growing farm on the sand hills. Here they grew Lucerne and strip grazed with an electric fence.

Then the inevitable happened. The cows broke through the fence one night and there were three dead cows with bloat the next morning. My mother never left my father out of her sight for two days as she thought he would kill himself because the devastation of losing so many cows was such a great blow to them - 3 cows out of 30. That was the first bloat I had ever seen. It was also on that farm that I saw my first case of milk fever. Although the farmers that came to help had seen milk fever before and had treatments for it on hand. It was so different to later life when so many of our cows went down with metabolic disorders (grass tetany, milk fever, acid anaemia).

When I was about 12 years old, we moved from Gunbower to Kyabram to a dairy farm with a small intensive piggery. We had a buttermilk contract from the local butter factory. The buttermilk was the main source of feed for the piggery. I had a very dear friend milking cows on an old orchard property in Kyabram. This was a small acreage, heavily stocked and heavily fertilized. He was having so much sickness (metabolic problems) with his cows that he went to the local research farm to see if they could tell him what his problem was. They could not help, saying it was not their department. They referred him to a university. The university said they would contact and send out the local government vet. This did not happen. After some time, he knocked on the vet's door. The vet said to him I am sorry I did not call on you, but I am trained to diagnose and treat disease. I am not trained.

My dear friend had a stud jersey herd and one of the men who went around the district classifying jersey cattle told him he thought he knew a man who could help him. This man was Alex Podolinsky. That was the introduction of Biodynamics to this area.

One of my heroes is Dr Albecht. He was the professor of soil science at the Missouri University, USA. Several of his articles on soil were published in an American eco- cultural magazine (Acres USA) that I happened to come across. He pioneered soil analysis until the university research grant was conditional to the man's resignation. Some call this

science! Dr Albrecht's paper entitled "The influence of rainfall and temperature on the development of soils", states that those huge herds of bison that roamed in America, were never in the east, where rainfall had leached the elements from the soil, but rather in the west, where precipitation up to that time, had not leached the elements from the soil. Thus, the soil could still grow protein. Protein equals health to all living organisms. The degradation of soils is the removal of the elements and hence the life cycles from the soil.

Dr Albrecht also superimposed his soil findings to the dental caries in the USA defence force recruits and said you could almost tell the area the recruits came from by the number of caries in their teeth. They then superimposed the intelligence of students on the same map and obtained a similar result.

It was not until BD (Bio Dynamics), that we realised that the problem of animal health was related to the degradation of the soil. There is a book written by J Hamacher entitled "The Survival of Mankind," that views climate change from the aspect of the function of a living earth. Then Charles Walters condensed this book for the forward of a book called "Bread from Stones" (available from acresusa.com). The sea is salty because the elements from the soil have been washed into the ocean until there are not enough elements in the soil to grow healthy plants.

There are balances throughout nature. When the CO2 builds up in the atmosphere, the soil can grow more vigorous plant life, provided that the elements are in the soil to support this growth and the microbes are active in the soil to support a living soil. As the microbes die out of the soil, the soil dies too. It is this living soil that prevents erosion. There have been six dust storms in Mildura this year, 2020. This is our surface soil (topsoil) blowing away, never to return.

In a natural life cycle, soil elements wash down into the ocean and what the oceanic life does not use forms sedimentary layers in the ocean. These sedimentary layers move across the hot spots in the earth and then volcanic action blows the soil up and the cyclonic winds and other climatic conditions spread this soil (hence the elements) back over the earth. Observe the cyclones, the tidal waves and the volcanic activity, and the dust storms as the earth sets about returning the elements to the soil. Ultimately this leads to an ice age. Who was it that mentioned Egypt before the sand?

Our BD experience started when Alex Podolinsky visited our farm and took a shovel and showed us the soil profile.

A layer of undigested cow manure about an inch thick laying on the surface of the soil, another layer where the subsoil met the clay. Each layer so distinct you could slice them apart with a knife. What had happened to the soil microbes in our soil, whose job it was to make the soil turn over, like water in a boiling kettle. In a healthy soil, soil microbes continually turn over carrying the surface nutrients down into the soil. There are no layers in a living soil, just a gradual change as we go deeper.

The other thing Alex showed us was the clover that grows around a cow pad (the cows won't eat this clover). Our clover stems around the cow pads were hollow and the leaves all buckled. This was due to the extra water the plant had to carry to dilute the excessive amounts of salt in the clover plant. Such a plant cannot transpire as nature intended, nor can it take in light as nature intended.

If you turn a herd of cows into such a pasture you would have dead cows in about an hour. I wonder, because much of our food is grown hydroponically, if this is the reason, we have ever increasing levels of sickness in the community.

Our first BD experience was on a Lucerne paddock, where we had sprayed the 500, (BD preparation) that was about to flower. I was back in this paddock a week later and it was almost like a bee swarm where I had sprayed the 500 and where I had not sprayed the 500 there was hardly a bee to be seen. To me this was nature answering my activity.

Over the months we watched the soil become alive. The cow manure on top of the soil had started to be carried down into the soil by the microbes. These microbes were now flourishing in our soil. It was truly amazing. Even the health of the stock steadily improved.

We watched the pasture balance change back to a protein growth clover and away from a carbohydrate growth (paspalum). An old farmer once told me that when paspalum first appeared in pasture the farmers used to dig it out as a weed, because it was a

very clear indication of a degrading soil.

Something of the lessons that I have learnt:

The natural function of the soil is to slowly wash the elements from the soil into the ocean until there are not enough elements left in the soil to grow healthy, protein crops. Animal manure was then used to simulate growth. This was the beginning of the degradation of the Germanic people (Julius Hensel – Soil from Rocks) and of course then came soluble salt fertilisers, completely outside the organisation of nature.

Now we have got to the stage where nature is replacing those elements to the soil. Notice the cyclonic winds, volcanoes, dust storms, tidal waves, all to tear the earth apart.

I remember the earth mite attacking the sub clover. Easily fixed with a toxic spray. A little while later the crickets were in plague proportions. Dr Albrecht said that these huge plagues of grasshoppers that periodically devour Europe always start in these degenerative soils in Northern Africa. We learnt there was another way to handle these pests and that was with soil fertility.

We had a small intensive piggery. The health of the animals was deteriorating. Then synthetic feed supplements were introduced which changed the picture completely. The animals started getting the nutrients they required and their health improved. Then I asked myself if we did not need feed supplements for our livestock 50 years ago, why we need them now. It was a degenerating soil that no longer had the elements to produce healthy, protein rich food.

We learnt that as a soil degenerates it can less and less grow protein and more and more grow carbohydrates. Where the precipitation is in excess, it washes the elements out of the soil, and the soil has less capacity to grow protein. A rainforest is largely a carbohydrate growth because the elements have been washed out from the soil.

One of our problems was to understand grass growth. When we stopped using soluble salts, the soil was so tight that the clover would only grow up a half an inch and go into full flower.

We had to learn to graze the pasture off and grow it up again. Every time we did this the root system went a little deeper and the clover grew a little higher. This was our ultimate aim.

The other big problem we encountered was trying to function without adding anything to the soil. The end of this was the cows chewing into the cement bricks of the dairy. We put out calcium licks and the cows devoured these until we had a soil analysis done, spread the recommendations on the soil and the cows instantly stopped using the licks.

I suppose, at our worst, 20% of our cows would go down with milk fever and I mean down. As our soil changed, so did the incidents of sickness in our stock.

We never got to the stage of having no sickness. Bloat was really the first to go once we grew clovers that did not have hollow stems and buckled leaves. Such clovers did not blow the cattle. My experiences have taught me to expand my knowledge and understanding about nature and life through widely reading alternative papers, observing, responding to and reflecting on what is around me and being prepared to face ridicule for decisions I have made and the path I have chosen to take. I thank my wife for joining me in this journey. I would not change anything.

Kevin.