

A Brief History of Bio-dynamics - an Australian Perspective

In the 79 years since Biodynamics was first introduced, many have played a part in its development. The two most important contributors have been the uniquely insightful originator of the method, Dr Rudolf Steiner, and the main developer of the overall Biodynamic method, Alex Podolinsky. In 1924 Rudolf Steiner introduced the fundamentals of a new organic agriculture method which was to develop into what we now call Biodynamics. It was an immensely important seed that he sowed, requiring enormous vision and deep insight.



Rudolf Steiner

Biodynamic development was slow, and many mistakes were made. Even today, in many countries, Biodynamics is ineffectively applied and results are no better than one would expect on an organic property in terms of soil development, plant structure and flavour.

It wasn't until the early 1950s that Alex Podolinsky began the formidable task of developing the Biodynamic method (now known world wide as the Australian professional Biodynamic farming method) as a fully effective, natural agricultural system for the modern age. He followed and then further refined Pfeiffer's preparation making methods, introduced a powerfully effective new preparation and developed, together with the Australian BD farmers he trained, a complete natural agricultural system (including appropriate machinery), to complement the work of the preparations on all types of land and climate and for every type of agricultural product.

Before 1845, all agriculture was organic, though in varying degrees of sophistication. At its most basic, it consisted of "slash and burn", as still practiced in parts of Papua New Guinea, a patch of bush was slashed and burnt and vegetables

grown in the fertile soil. After a year, the soil was exhausted, the garden left to revert to bush, and a new patch prepared. In areas blessed by annual flooding of rivers, which deposited nutrient rich silt, the same fields could continue producing bounteous crops year after year without the need for much sophistication in soil care. In Europe, a highly evolved system of organic agriculture had developed, using sophisticated crop rotations, careful recycling of nutrients on the farm including composting of animal manures, and careful cultivation techniques. There, even without the benefit of annual silt deposition, the land was kept in a fertile state over many centuries by this careful, sophisticated organic farming.

In 1845, a German chemist, Justus von Liebig, discovered that plant roots can only absorb nutrients in solution. This important discovery quickly led to the commercial production and promotion of water soluble "artificial fertilizers", firstly super phosphate in the 1840's, and later, nitrogenous fertilizers in 1898. However, Von Liebig's discovery was only part of the picture of plant feeding and ignored the fundamental role of humans – he realized this later in life but by then the artificial fertilizer industry was unstoppable.

Traditional organic methods continued in many areas until the early 1990's (much later in some areas) but by 1920 many European farmers were becoming concerned by problems caused by artificial fertilizers – poor flavour, pest and disease problems, declining animal health, and reduced seed vitality. A group of estate owners approached Dr. Rudolf Steiner to ask him if he could help with their agricultural problems. Rudolf Steiner (1861-1925) born in Austria, A scientist and philosopher had demonstrated enormous insight in many areas. He had provided powerful new directions in education (Steiner schools are now widespread), science, medicine, architecture, art drama, dance, speech, intellectual disability and social organization to name a few.

When he eventually found time to speak on agriculture, in 1924, Rudolf Steiner was already in the last year of his life and unwell. He gave eight lectures at Koberewitz (now in Poland) in which the fundamentals of a new agricultural method were outlined. After each day's lecture, he travelled, and lectured on a medical topic at night. From his immense insight into nature, He was able to suggest a method of making eight preparations, which would enliven soils and plants. He approached a young scientist, Ehrenfried Pfeiffer to determine the most effective method of making each preparation and applying them. Other scientists who made major contributions to biodynamic research include E and L Kolisko and, later, M. Thun.

Few participants in the lecture series were practical farmers, and Biodynamic development was slow. There was no one with the capacity to develop the overall sustainable farming method to so essentially complement the soil building and plant structuring power of the biodynamic preparations. Dr.

Pfeiffer emigrated to America, becoming a leading nutritionist and microbiologist and pioneered large scale municipal composting in the US in the 1940s! However, he was not a farmer, and could not inspire conventional farmers to adopt biodynamics. Biodynamics in the US was limited to a few farms and a larger number of gardens.

In Europe, BD was pursued mainly by Anthroposophists (followers of Rudolf Steiner's "path of knowledge") who were enthusiastic but inexperienced in agriculture. Serious mistakes were also made - some time after Steiner's death, his original lecture notes were found, in which he described a different method of making the chamomile and dandelion preparations. He had changed his mind by the time he gave the lectures. Pfeiffer had experimentally confirmed that the method given in the lectures was the correct one, but many in Europe began making the chamomile and dandelion preparation according to Steiner's lecture notes - these preparations were ineffective. Worse still, the German BD association began *drying* the preparations for storage, and many other BD associations followed suit. Dried preparations are totally ineffective in activating soils, and, of the forty thousand acres of BD farms in Europe by 1980, many were little more than organic.

Alex Podolinsky wrote in 1998 "When I first visited Europe again some 30 years ago, I was amazed to find dry mouldy preparations, stored incorrectly, not carefully weighed, but just "pinches" taken. These preparations were dried and partly mouldy plant substances, much stem showing, not actual humic preparations, i.e. that had not undergone the essential transformation to the relevant humus substance typical for each... On this and subsequent trips I was disturbed at not finding the essential soil structure we are accustomed to on any of the farms in Europe I was taken to, and, of course of only these can I speak. The only working result I saw, apart from greater general care in some cases, was the effect of Maria Thun's "Kuhfladen" (cow pat pit - cow manure with BD preparations) suggestion, which, however, is akin to Pfeiffer's soil spray, rather an organic digester and not a real biodynamic activator... When I first attended Demeter International meetings and then showed photographs of our soil structure developments, it was reasoned, that on account of pollution in Europe such could not be achieved there. I had also, everywhere, seen more or less ineffective methods of stirring. This alone would have lowered effectiveness of BD drastically."

Other factors hampering BD development were the insistence (by European practitioners) that the one hour's stirring to activate the soil spray "500" must be done by hand, and that 500 should not be used until compost made with the BD preparations 502-507 had been applied to the land. Rudolf Steiner had said that hand stirring was best, but said the same to the chemists who developed the Weleda medicinal remedies according to his suggestions. "Their work developed more during his life time than Biodynamics. When the chemists informed him they could not continue onwards without mechanical equipment, he permitted such - so long as the work mechanically performed is held alive in the consciousness of the responsible workers."

In fact, without the development of a stirring machine which would retain the essential aspects of hand stirring, including a deep vigorous vortex, and an energetic, bubbling chaos, biodynamics would never have spread widely. In Australia,

the first BD preparations were made by Ernesto Genoni in Melbourne in 1927 and by Bob Williams in Sydney in 1939. Bob applied the preparations to a 2 acre property in Sydney from 1940. He supplied preps to a few small-holders and, later, for a few years, supplied some of the early farmers trained by Alex Podolinsky.

Alex Podolinsky was born in Germany in 1925, his Russian-Ukrainian parents having fled Russia in 1917. He began learning biodynamics as a child in 1929 from participants in Steiner's agricultural lecture series. In 1938 he and his sister lived in Dornach (Switzerland) and were tutored by some of Steiner's original students. Alex's biodynamic education continued here, and each day he walked past the place where the first 500 was made.



Alex Podolinsky

Alex and his family were trapped in Germany at the outbreak of the war and narrowly escaped forced repatriation to Russia afterwards, with the help of the French security services. Given the choice of emigration to Canada or Australia, he chose Australia, instinctively drawn to the "land of the Sun".

In the early 1950's, he started BD farming on a poor, shaley property at Wonga Park (now a suburb of Melbourne). His aim was to perfect the biodynamic method of agriculture to suit modern broad acre, low labour farming conditions. He ran a highly productive cherry orchard. In bad years for rot his cherries were sometimes the only ones in the market - spores from neighbouring conventional orchards blew through, but his cherries were unaffected.

He developed many of the fundamentals of modern natural agriculture here, such as deep ripping to loosen compacted subsoils, and the use of chisel ploughs under stress to "hammer" and loosen subsoils. Right from the start, rotational grazing through many paddocks, and strip grazing, were used, through the time when the Victorian Agriculture Department was promoting the now discredited set-stocking (one paddock) and decades before "cell grazing" became the latest buzz word.

Alex began making BD preparations following Dr Pfeiffer's methods and improved on Pfeiffer's technique with several, notably 504 (stinging nettle). This was acknowledged by Dr

Pfeiffer, with whom Alex exchanged preps for comparison from time to time.

In the mid-1950's, Alex moved to a degraded potato farm at Powelltown (Victoria) which he converted for dairying. Within a few years he had totally rejuvenated it without any inputs, and had increased the organic matter content in the top 4" (100mm) from 0.9% to 11.4%! Without feeding concentrates, he began topping Victorian dairy production figures, and many farmers and those in authority became interested. He began to train other farmers, and in the mid 1950s he founded the Biodynamic Agricultural Association of Australia (BDAAA) in Victoria with 27 of these farmers. In these early years, farming families were stirring up to 250 hectares of 500 twice a year by hand! It was obvious that a stirring machine was essential if BD was to spread widely.

In 1964 Alex called for a machine that would retain the essential characteristics of hand stirring, and within 2 weeks, Kevin Twigg had designed and built such a machine. Although minor improvements have since been made, this basic design is still in use worldwide. The machine uses paddles suspended from the top which create a deep vigorous vortex. When optimum vortex development is reached (not electronically timed!) the paddles reverse the direction, creating an energetic, bubbling chaos and then another vortex, continuing in this way for 1 hour. As the water becomes lighter, through increasing oxygen content, the time taken before reversal decreases.

Carefully controlled experiments carried out by the Biodynamic Research Institute (BDRI) in 1964, showed that the properly designed machine stirred a little more effectively than hand stirring with regard to soil and plant development, nutritive value and chromatography. The development of the stirring machine was a major breakthrough, enabling BD to spread widely.

A few years later, Alex made another important discovery which would accelerate the spread of BD. He found a method of incorporating the six compost preparations (502 – 507) with 500 to make a new preparation, called prepared 500. This could be stirred and sprayed on the land after several seasons of straight 500, to greatly accelerate soil structuring and fertility development. It also obviated the European rule that BD compost should precede 500 application (impossible on broad acres).

Alex developed a series of Biodynamic introductory lectures (later published) in which, for the first time, the fundamentals of modern, professional Biodynamic agriculture were clearly explained. Such concepts as the natural, sun – directed process of plant feeding, which had never before been properly understood, were explained. These lectures have been published in eight languages and are read worldwide. They are as important for the practical application of Biodynamics as Steiner's eight lectures were for its initial development.

Australian farmers are arguably the most independent, resourceful and creative on earth, working with some of the poorest soils and most difficult climatic conditions imaginable. Together with Alex, the Australian BD farmers developed the practical application of the BD method on every type of soil and for every farming enterprise that can be carried out in Australia. These farmers are true men and

women of nature. Deep thinkers and observers, they can assess a cow's constitution within seconds, or sense a plough's effect on their particular soil, imaginatively redesign it to better retain structure, and then build it. It is doubtful whether the Biodynamic method could thus have developed anywhere else on earth.

In 1967, the BDRI (Powelltown) registered the Demeter trademark in Australia. Alex pioneered certification of BD produce for the domestic and overseas market to assure consumers of quality. Along the way, many battles were fought and won with government bureaucracies making the path easier for the organic organisations which followed. He has worked tirelessly for unity in the Australian organic industry.

Alex vowed to keep money and bureaucracy out of the BDAAA and has never charged for his advice. Experienced farmers also advise others free of charge. 500 is only \$1 per acre. Alex founded the Biodynamic Marketing Company in the early 1980s to get BD produce to consumers as cheaply and efficiently as possible.

In the 1970s and early 80s, Alex trained gardeners and small-holders in various Australian capital cities, who formed BD gardening associations. The largest, the Biodynamic Gardeners Association Inc. has 400 members in five states.

By 1980, Alex's BDAAA farmers were farming over one million acres, producing almost every type of agricultural product. In the mid 80's ABC TV made a documentary on Alex and Biodynamic agriculture. Alex received thousands of letters every time it was screened and many more farmers converted to BD. BDAAA members now farm over two million acres in Australia.

Alex spends time each year training farmers overseas in Australian Biodynamic techniques. One of the best examples of the Australian BD method is in Italy, at Agri Latina, a BD farm which feeds 130,000 people, with 70 acres under glass, much more in market garden, and a 250 cow dairy. Using these methods, and preparations made the same way as Alex's, European farmers are seeing soil conversion and plant structure they have never seen before. A real BD renaissance is sweeping Europe.

Rudolf Steiner had the immense insight and capacity to bring a totally new impulse to agriculture. Alex Podolinsky and the Australian BD farmers, through fifty years of creative struggle, have brought this impulse into practical application on earth by building the modern, professional Biodynamic agricultural method.

References:

¹ (Alex Podolinsky, reply to Circular letter No.65 Autumn 1997 Goetheanum Division Agriculture, Natural Science Section, in Circular letter No.66)

