A method to meet the needs of today.

‘An unedited excerpt from…’

A PRACTICAL INTRODUCTION

TO THE AUSTRALIAN DEMETER BIODYNAMIC METHOD OF FARMING.

CHAPTER I

GENERAL INFORMATION

A. BIODYNAMICS A METHOD TO MEET THE NEEDS OF TODAY

Agriculture was once the foundation of our cultural environment.
The word itself: Agri-CULTURE reflects this fact.

Production was based on an organic circulatory system – Nature's exchange between soils, plants & animals.

The current conventional farming system is based on Justus Von Liebig's discovery that plants can take in only water soluble elements. This has lead to the conventional system being increasingly hydroponic - almost totally disregarding soil and Nature's organization.

The organic farming system is incorrectly understood if one thinks that it is just changing the manure inputs from artificial to "organic" manures – coming from animals. Chicken pellets are loaded with water soluble Nitrogen as is urea. In both cases the problem is the water solubility. Furthermore, in all national and international standards continuous input of fertilizers in aid of an obviously inefficient organic production system is forbidden.

Since the time Justus Von Liebig discovered that plants can take in elements only when in water soluble form, conventional agriculture has increasingly become preoccupied with this method of feeding plants. It is continually looking for "deficiencies", i.e. for "something" not yet "discovered" in a system which factually tries to recreate creation. Deficiencies have to be rectified by "addition" – until "all" of Nature is covered. Vitamins were only discovered in the 1930's, and the important trace elements even later on. Whatever may as yet be awaiting? Hand in hand with these developments, farmers lost more and more ancient knowledge of farming and of soil cultivation etc.

In contrast Bio-Dynamics attempts to gain insight into the organisation of Creation.

Elements are held within rock in water insoluble form. In Nature the elements gradually become soluble – and thus useful to plants - by weathering, chemical action and finally by soil biology, worms and microbes "freeing" elements either of rock or plant origin. Under this activity these elements are not freed per se to appear unrestricted in soil water, instead they are encased in the colloidality of worm casts or soil humus. Within this Nature organisation, plants are not indiscriminately filled with NPK mineral salts when consuming their water requirements for the essential process of transpiration. In Nature soil water is clear of water soluble mineral elements. (More detailed information of this process is presented in "*Bio-Dynamics Agriculture of the Future*".)

Plants have no individual warmth organisation like man and animal have. ***Sun Warmth*** supplies the warmth that drives a plant's white feeder roots to enter soil humus and to take exactly the healthy amount of mineral elements required. It is a process regulated by Sun jurisdiction.

By applying water soluble fertilizers plants are force-fed through the soil water and grow larger than Nature intended. "Big is good" influenced in a materialistic age. – But at the same time imbalances occurred causing plant and animal diseases, pests, mites, fungi and weeds etc etc and the second main "skill" of the conventional agricultural system: "chemicals" became necessary and has grown increasingly. Plants fed indiscriminately ie outside of the jurisdiction of the Sun – for one instance – are overfilled with NPK salts and other mineral elements, and, since a plant's cell would collapse from this increased saltation – extra water has to be held in each cell. Thus such a plant becomes "blown-up" and increases in size (ditto humans eating such food). Pests are Nature's cleaning agents for sickness: We have direct counts of mites on Bio-Dynamic and conventional fruit trees (400 vs 6400: See *Bio-Dynamic Agriculture Introductory Lectures volume I, Lecture 2*).

To a large audience at the 2005 IFOAM Conference in Adelaide – comprising conventional and alternative agronomists - Alex pointed out that the conventional model of agriculture lacks a "Bank" that would hold the NPK elements and stop these elements running into rivers causing blue-green algae. Where such a Bank is present to conserve and preserve the NPK, a new assessment of inputs would be required. The Bank Nature provides is the colloidalness of humus, of which there is plenty on Bio-Dynamic farms. Under such a functioning system, there is a much lower input requirement.

A short time after the IFOAM Conference a government organisation sent a report indicating that nano-technology will provide a means to replicate the humus ability of soil by "holding elements" and releasing them as directed by computer(!)

When agriculture department agronomist in the early 1950's questioned what component of humus plants take in and decided – preoccupied with water solubility – that this could only be the humic acid, Alex Podolinsky filled a large preserving jar with dark humus and buried it in Spring 8cm under pasture sod. In six weeks all the dark substance had vanished and had been replaced by tightly packed white hair roots – like a piston in a cylinder.

The most important single substance in naturally functioning soil is air. We can live for weeks without food, days without water, but only a short period without air. Soil compaction commences with introduction of water soluble fertilizers.

When introduced into the generally well structured soils of 100 years ago (there were better and less good peasants), worms and microbes take in the soluble elements and fix them into humus (worm casts). But with each further application this worm and microbial activity reduces to almost nothing, because the soil life have lost their natural purpose: to take in roots and rock residue and conserve it for further use in humus form. In a relatively short time there is also a general loss of soil structure. As soils compact harder and harder and heavier machinery has to be used; more chemicals; more weeds. A world wide scenario of a vicious declining spiral.

During the 150 years between the beginning of industrialization until the second World War gross production was increased mostly using improvements to technical methods. In the 1950's however, a new development phase emerged through the specialization of farms, increased use of fertilizer and change to almost total outside dependence for farm energy resources. Work was replaced with chemicals and

animal factories emerged independent of supportive land. The drive stemmed from agricultural economics and the commercial result was remarkable. However, this upsurge required a three to fourfold increase in use of fertilizers and manifold increase in other chemicals.

Modern agriculture uses more energy than it produces in food calories.
It is no longer **primary** production.

Increasingly problems with the environment and the production of low-grade nourishment foods lead to a global renewal of "organic" agriculture.

Food supply and cost effective production do require certain intensifying of agriculture. The alternative can certainly not be a general return to production methods of yesteryear – soils have been too far degraded by the abuse of the last 60 plus years. A soil healing is required that will enable soil to once again function as a living, active and receptive organ of Earth. At the same time we must have endurable production methods that are determined by laws of organic life, rather than by technical laws.

Historically, new impulses have again and again arisen in response to the needs of humanity at that time. With the breakdown of the natural organic circulatory system a new impulse became necessary.

Towards the end of old, natural agriculture the new
soil building impulse of Bio-Dynamics arose.

The new impulse is found in the Bio-Dynamic preparations, and the supporting agricultural system that ensures their effectiveness. The most outstanding example of this has come to be known as the **Australian Demeter Bio-Dynamic Method**, since nowhere else in the world has the basic impulse of the bio-dynamic preparations produced such comprehensive and undisputed effect. Detailed attention to highest quality preparations; very carefully determined quantities and application methods; along with detailed farm management to support the new impulse has resulted in what can only be described as miraculous soil change. (Refer to "*Bio-Dynamics Agriculture of the Future*".)

When the Bio-Dynamic preparations are CORRECTLY applied, the chance of building new soil arises – far beyond that which occurs in Nature alone. Compacted conventionally farmed soils have been redeemed; even salinity affected land has been reclaimed back into healthy agricultural production.

Australian Demeter Bio-Dynamic Agriculture is more than
just putting on organic fertilizers and calling this organic.

Australian Demeter Bio-Dynamic Agriculture develops
soil structure and humus content
ensuring the soil can once again function as Nature intended.

Every aspect of general farm management, including soil cultivation,
has to be reconsidered in the light of such insight.