



## A PRODUCER'S APPROACH TO SUSTAINABLE FARMING

Alan Druce, "Green Grove", Kamarah

### INTRODUCTION

I often receive a letter or a phone call asking *"How can I get into chemical free farming?"*, prompting two other questions;

- How important is chemical free, organic or sustainable farming?
- Can it be done economically?

Is it important?

Let me answer that by showing you some recent newspaper headlines and articles:

*"The Killing Fields!"* The Bulletin

*"How much poison did you eat today?"*

*"If we were cannibals we would have to change our lifestyle because not one of us is fit for human consumption."*

*"Licensed to Kill!"* The Bulletin

*"Warning: Food is a Health Hazard"* The Daily Advertiser

*"Cadmium in our Diet"* Sydney Morning Herald

*"Agricultural Chemicals Linked to Cancer"*

*"Shock Poison Levels in our Blood!"* Sun Herald

This last article is perhaps the most frightening of all. There are tens of thousands of ME (Myalgic encephalomyelitis) or Chronic Fatigue Syndrome sufferers in Australia alone. One feels completely enervated, debilitating tiredness, aches and pains, dizzy, disoriented, mental confusion, loss of short term memory, nausea and many other symptoms. It can go on for years. Most doctors don't recognise it because they haven't been trained in this area - but some few do because they, or their immediate family have it.

There is a Dr. Donohoe of Erina Heights, near Gosford who has formed a Toxins Company. He is sending blood samples of his ME sufferers to the USA for testing. Some of the results are showing up to ten times more poisons than those of USA patients. They said "Something ought to be done about it!"

The Australian Wool Corporation is getting into the act, warning farmers about poisonous residues in their wool.

In 1988 there were over 200 farmers in Victoria alone who were suing their State Government for damages. The Government through its Department of Agriculture had said, "Yes, spray with this or that," and then at a later date said, "Oh, what do you know, your beef has unacceptable levels of dieldrin. Your cattle are confiscated and your farms are quarantined until further notice."

Whether we like it or not, there is a growing perception in the general public that all is not well with our food. Indeed we are poisoning our city cousins - and ourselves.

And now the Soil Conservation Service are telling us that we are killing our richest farm land. Mind you, they use polite terminology like:

- Land degradation
- Sheet and rill erosion
- Dryland salinity
- Induced soil acidity

And on and on it goes! Is it important? Indeed, it is serious! It is critical!

#### HOW THEN, CAN A FARMER GET INTO CHEMICAL-FREE OR ORGANIC FARMING?

I would like now to give you a number of points in order of importance.

1. You must understand the **ECOLOGY** what it is, what it does and how it works.

More and more doctors and scientists are warning us that we are poisoning and killing both ourselves and the biosphere. This biosphere or ecology: feeds us, it clothes us, and to a large degree, houses us.

Surely, it is crazy to kill it.

Because, basically we are red dirt. And when we die we rot back to dirt. Every farmer knows this.

The problem is to turn red dirt into grass. (Any farmer can turn grass into food). It is the soil fauna that does this. A fertile soil is teeming with life. This life, much of it microscopic, is delicately balanced, and it is symbiotic or interdependent. That is, everything depends on everything else, for the well being of the whole.

Let me give you an example. You know how we have a bacteria in our stomach which breaks down and helps digest our food. Similarly the plant roots secrete a substance that attracts and feeds a certain type of bacteria. In return the bacteria **MANUFACTURE** and **RELEASES VITAMINS, HORMONES** and **SECRETIONS** that help feed the plant. Others help feed the plant by actually invading the roots and conveying nutrients right into the root system. Many other things, like earthworms play their part.

To support a growing world population we need a growing ecology, not a diminishing one.

Therefore, a farmer needs to be a husband to the whole ecology.

2. NASAA - stands for "The National Association for Sustainable Agriculture Australia Ltd. They are a volunteer group who are concerned about the quality of our food and who have worked with the standards of overseas groups plus the needs of Australian Agriculture to develop a set of STANDARDS. I strongly recommend that you buy a copy of these standards, and become conversant with them. Moreover it would be worth it, economically, to seek their accreditation.

Please see me afterwards if you would like some of their brochures or more information.

3. Economics. Budget for a down turn in your income for the first two or three years. I experienced this when I stopped using artificial fertilisers which unnaturally force the growth of the crops and pastures. But afterwards you can expect an improvement in your income because:

- a. As your soil fertility improves compared to your neighbours, whose fertility is down, it is only a matter of time and your income must improve. In my case, when I started 29 years ago, I was up to my ears in debt. Today I am free, out of debt.

- b. But there is another point. Because of growing concern in the cities about pollution in their food some will travel clear across the city and pay any price for food they are sure of. In just the last few months we have seen a 60% increase for our NASAA certified, chemical-free, lean meat, compared with what you would get in the saleyards, and 100% mark up for our wheat compared to what the Australian Wheat Board pays. And I am hoping to sell our certified wool direct to Germany @ 30% mark up.

There is a worthwhile premium today for certified food.

4. Have soil tests done. Find out what minerals are deficient. In my Riverina red loam soils I would expect most farms to show deficiencies in:

Phosphates  
Calcium  
Magnesium  
Nitrogen  
and acid pH

To rectify these deficiencies we are using Trical from NATCOM MARKETING of Kandos, or REACTAPHOS from AUSTRALIAN MINERAL FERTILISERS of Mt. Gambia, SA. These products are made from imported soft rock phosphate and are treated with lime or dolomite. They give better results than super over a longer

period of 2 or 3 years, they do not damage the soil fauna, they also supply the deficient calcium and magnesium, and they help in correcting the acid pH.

According to top agronomists and organic farmers in England a generation ago, the nitrogenous fertilisers are even more damaging to the soil fauna there is superphosphate. However, Australia leads the world in the use of legumes for fixing nitrogen.

5. Poisonous sprays. Stop immediately! Surely it is crazy to spray, for whatever reason, not knowing what damage it might be doing to the ecology. But secondly, it kills the natural predators and so opens the way for worse infestation. I refer to Rachel Carson's book "Silent spring".
6. Rest the ground. At home most farms are dreadfully over-cropped and therefore wheat sick. I would look into scratching in legumes and grasses like sub-clover, medics, lucerne, wimmera rye grass and supply the missing minerals as previously explained.
7. Stock judiciously. Not only do stock return organic matter to the soil, but also when the bacteria which helps digest the grass in the stomach of ruminants is dunged or urinated onto the soil in ideal moisture and temperature conditions, it will re-inoculate the soil and will help digest the locked up soil minerals.

We run 1,000 pure merino breeding ewes plus lambs, rams, etc. They are a hardy, easy-care, meaty type, of 21-22 micron wool. We do not drench for worms but we do rotate them on the paddocks and the harder type grasses of the hills and scrub. We have far less fly-trouble than we used to. Part of the reason is that the feed is healthier and more natural than back in the years when we used to artificially force the growth with superphosphate. But we also shear and crutch at judicious times. We have very little body strike compared with the days when we used to dip with arsenic or diazinon. Some dips cause dermatitis which in turn becomes fly-struck in excessive wet. When a sheep does become fly-struck, we shear the wool closely and well back from the infected area, swat the maggots with a flat stick and let the animal go, to be culled at a later date.

I see no sense in dipping if your sheep are free of lice. We haven't dipped our own sheep for 6 or 7 years but right now we have a lice problem and so we are experimenting with NEEMOIL. (I refer to Dr. Martin Rice of Qld. University).

We do not cross breed, therefore we do not have to buy another's culls for our breeding ewe replacements. Therefore, we greatly reduce the risk of importing diseases like foot-rot and lice. Also we sell the culls, keep the best and so can take a pride in building a better quality type.

In regard to our cattle (50 breeding cows plus calves and bulls) we similarly do not dip or drench. We have next to no trouble with bloat, pulpy kidney or similar troubles.

8. Weed control

Skeleton weed ) - both are low fertility weeds and cannot stand improved Saffron thistle) nitrogen levels from legumes.

Bathurst Burr - we control by mowing.

Spiney Emex or Cat's eye - cannot stand competition from grasses.

Cape weed - similarly, can't stand competition and will fade from the scene.

Paterson's curse - I don't know yet.

9. Cropping. After a number of years under pasture and stock (we have a 7 year rotation) the fertility builds up and the coarser grasses like corkscrew start to come back. So we take a couple of crops off - hard wheat on the fallow, then oats, rye or soft wheat the second year in the stubble. We use disc plows because a tye implement like a scarifier or a chisel plow will not give a good enough kill, in the thick, vigorous pasture. We use diligent and judicious cultivation to control subsequent weeds and to form a fine, compact seed bed. We sow unpickled seed with imported Soft Rock Phosphate about May.

If you get an excessively wet season like we did two years ago - you will probably grow a lovely failure like I did - a sea of cape weed with a head of wheat sticking up here and there. However, some of my neighbours used expensive, poisonous sprays and still failed to grow a crop.

After harvest we graze the stubble hard, disc it very lightly (about 3/4" deep) and sow with disc combines. We do not burn because all that straw is wonder food for the soil fauna. But it is important to keep the straw on top. If you incorporate it, you will get a temporary nitrogen deficiency plus toxins that inhibit the young crop. We also undersow with lucerne, sub-clover and wimmera ryegrass.

10. Grain storage. We find that weevils do not like quality hard wheat. They do, however, like soft wheat but they can be controlled in sealed silos, using carbon dioxide.

## CONCLUSION

In conclusion, let me summarise in the clearest possible terms:

Scientists are warning us, the biosphere is dying.

Our environmental armageddon is at our door.

We don't have to kill the ecology or ourselves.

There is a better way.

It is economically possible.