S U B M I S S I O N

TO: Western Australian Government
State Sustainability Strategy

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SUBJECT: A Submission based on a talk to ERA

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WELCOME

My name is George Kailis.
It is my honour to be the Patron of ERA, because ERA is a leader in Sustainable Agriculture, and its management & shareholders are deeply committed to a Sustainable world.

Again I quote the ancient Ayurveda tradition of India of 2500 years ago, in what could be the ERA Mission Statement of today:

Nature has created Man and Woman,
as the highest form of life,
and as life's guardian.

Our **survival** depends on
the fragile balance of nature
& living organisms.

We must ensure the purity of the water.
We must not poison the air.
We must not poison the soil.

We are **interdependent** on all other forms of life.

To maintain nature's **equilibrium**,
depends on our ability to live in **harmony**
with our **external** universe,
and our ability to live in **harmony**
with our **internal** universe,
ourselves.

So …**Why is Nutrient Re-cycling** … **Environmentally Responsible Agriculture???**
Allow me to introduce some evidence to support this statement, and move this subject to the **big picture** of …**SUSTAINABILITY.**

So… to quote **The Rodale Institute** findings from its 19- year-old **Farming Systems Trial (FST):** .

Quote:
Without scientific proof to counter their arguments, **advocates** and **critics** of **organic methods** have clashed regularly over three main issues: **yields, environmental benefits and economics**. The Rodale Institute's FST findings prove conclusively that not only is organic agriculture a **profitable alternative to conventional agriculture**, it provides a significant solution for an array of worldwide concerns such as soil quality, global warming, groundwater pollution, poverty alleviation and the preservation of human health.

Critics of organic agriculture have long suggested that **pesticides, fertilizers and biotechnology** are necessary to produce **yields** sufficient to meet the world's demand for food on today's available farmland. They contend that it would be necessary to plough under **thousands of additional acres of wild land** to produce sufficient **yields** using **organic methods**. However, assessing plots of equal size, The Rodale Institute's trials reveal that after a transitional period of about **four years**, crops grown under organic systems **yield** as well as, and **sometimes better** than, those grown conventionally.
In fact,in years of less-than-optimal growing conditions such as drought, organic systems can actually out-produce conventional systems.

Funded by The Rodale Institute, a nonprofit organization, and in cooperation with the **U.S. Department of Agriculture-Agricultural Research Service**, the **Farming Systems Trial** experiment covers 12 acres and compares highly productive, intensive corn/soybean systems under conventional and organic management. Although still in progress, the **Farming Systems Trial** is the first experiment of its kind to prove that **organic methods are as efficient, economical and financially competitive as conventional methods, as well as better for the soil and the environment.**

Most significantly, the yield results from the **Farming Systems Trial** undermine the argument of critics that organic agriculture cannot compete economically. Analysis of data produced by the trials indicates that organic systems can compete with conventional systems after a **transition period**. Projected profits ranged from **slightly below** to **substantially**

above those in the conventional system, **even though economic analyses did not assume any price premium for organically grown crops**.

The Rodale Institute's president…quotes… "… we have proved scientifically that organic agriculture works. It is a viable alternative to conventional farming because it's an economical resource that can empower people to build healthy soil, produce healthy food and sustain human and environmental health."

The findings show that the organic practices **improve soil quality significantly**, increasing the retention of moisture, carbon and nitrogen, and suggesting a role for organic agriculture in the reduction of negative environmental impacts such as erosion, drought, greenhouse gases and groundwater pollution. The organically managed soil also showed a higher level of microbial activity and a greater diversity of micro organisms. These long-term changes in the character of the soil promote plant health and **may positively affect the way in which elements such as carbon and nitrogen are cycled in the soil.**

I trust that is a compelling introduction as to…why is **Nutrient Re-cycling** is **Environmentally Responsible Agriculture.**

And now, to introduce the **big picture** of …**SUSTAINABILITY.**

ERA means **Environmentally Responsible Agriculture,** and by definition, our mission is **SUSTAINABLE AGRICULTURE**.

SUSTAINABILITY in the big picture means **our survival…our economic, social & environmental survival.**

We have been using the planet's resources UN-sustainably for so long, it is not just a nice greenie idea to be SUSTAINABLE...it's our survival.

A fisherman with no fish is UN-sustainable.

A farmer with dead soil is UN-sustainable.

A farmer whose customers are significantly effected by chemical residues, is UN-sustainable.

A farmer whose family is significantly effected by chemical residues, is UN-sustainable.

A farmer with increasing chemical costs and decreasing yields is UN-sustainable.

A quick perspective of what SUSTAINABILITY means for the ERA Farmer:

1. The ERA Farming System

…that is, a production method designed to work with nature through soil and plant management practices to produce ecologically clean, safe and healthy food, with rewards for everyone in the food chain.

2. Soil Fertility

…that is, the measure of the **nutrient density** in a soil from the perspective of its capacity to grow plants suitable for human consumption.

The level of **nutrient density** in the soil is directly related to the activity of soil organisms;ie, **The ERA Farming System** uses:

1. the addition of soil minerals in a form most able to be converted to plant-available ions, through the digestive processes of soil organisms.

2. the addition of microbial food sources to the soil, (such as molasses, seaweed, fish emulsion and sugar)

3. ERA Soil Test & ERA Products

ERA Soil Test produces data on:

1. **reproductive energy**
2. **growing energy**

ERA's UNIQUE interpretation of those 2 energies into correct balanced use of ERA Products, is what drives ERA success with Costs, Yields & Soil Fertility

4. Costs, Yields & Soil Fertility

ERA's business premise is that, **SOIL FERTILITY** drives **TOTAL INPUT COSTS** and **TOTAL GROSS MARGIN**.

The promise of chemical companies of **incremental outputs** from **incremental inputs,** ignores **TOTAL INPUT COSTS** and **TOTAL GROSS MARGIN.**

The **ERA Farmer** is interested in **TOTAL INPUT COSTS** of $100 per hectare, because current TOTAL INPUT COSTS of $150 – $200 are UN-sustainable.

And over time, the **ERA Farmer** aims for a **YIELD INCREASE** without increased costs.

5. Revenues

For REVENUES to be sustainable:

GROWERS MUST SELL what CONSUMERS WANT to BUY.

Research world wide proves year after year, 90% of CONSUMERS vote in favour of PURE FOOD issues.

THE MONEY IS WHERE THE CONSUMERS ARE.
The Consumers want PURE FOOD, and ERA aims to supply that need.

Mad Cow Disease gave a gigantic push to CONSUMER DEMAND for PURE FOOD. New Scientist magazine reports another gigantic push to CONSUMER DEMAND for PURE FOOD: **quote**…

> The **human version of mad cow disease** looks as if it will strike large numbers of people in England during the next 2 decades, even though the disease now seems under control in British cattle. The latency period for this disease is 25 to 30 years, and more cases are occurring in humans each year. During 2000, 24 people died of the disease in England, compared to 14 in 1999. Scientists had initially hoped the maximum number of victims would **not exceed 20,000 (persons dead)** but "now that looks unlikely".

So to expand on our premise that:
…for REVENUES to be sustainable:
GROWERS MUST SELL what CONSUMERS WANT to BUY
…a recent BBC report is a massive wake up call for agriculture world wide, including Australia;ie, BBC 29 January 2002, reports…

Quote:
Farming faces major shake-up:
A "watershed" report into food production and farming in England has called for reform of the European Union's Common Agricultural Policy, arguing the current situation is UNSUSTAINABLE.

Prime Minister Tony Blair welcomed the report saying that "the current situation benefits no-one: farmers, taxpayers, consumers or the environment".

Sir Donald Curry said his commission's vision, was of an industry that
…farms for profit,
…is respected by the public, and
…delivers positive benefits for the environment".

"Tinkering around the edges will not solve the problem," he said.

The commission was set up by Mr Blair last August, in the wake of the foot-and-mouth outbreak.

British farmers are deeply demoralised by the damage caused by foot-and-mouth, and by the continuing tragedy of BSE. Many are suffering economically and in other ways despite the £2bn ($2.8bn) the UK receives in direct payments (from) the EU.

Consumers are increasingly concerned about the quality of much of the food produced and the environmental cost of intensive farming.

The commission's …agenda for reform… proposals include:

*** requiring farmers to have licences guaranteeing they will work the land in an environmentally friendly way before they can qualify for subsidies**

The chief executive of the (UK) Environment Agency, (refers to) …"British agriculture drinking in the last chance saloon."

The shadow agriculture secretary (refers to) …(British agriculture as) an industry "already on its knees"…(and) "the government has to win back the trust of rural people before it can introduce effective reform."

The Liberal Democrats… propose…"moving **food and farming** away from **production** and towards **stewardship** schemes." …and …"Farmers must be able to **profit** while working in an **environmentally friendly** manner."

And for more evidence that SUSTAINABILITY IS GOOD FOR BUSINESS a recent ABC TV "LANDLINE" Report titled:

"Health concern drives organic farming boom" …concluded….
Quote:
Organic farming is now the fastest growing agricultural sector in Australia. Once the province of a few hippies on hobby farms, it has become a multi-million dollar business.

Major supermarket chains are now offering organic produce to the public and there are the big export markets opening up in Europe, America and Japan.

The Japanese alone last year spent close to $2 billion on organic products.

Behind the growth is a growing consumer demand for organic produce in the face of food scares and negative relation to **genetically modified foods**.

While Australia missed out on mad cow disease, it had problems with contaminated beef and salamis so riddled with killer ecoli the manufacturers were charged with manslaughter.

Claims of chemical contamination also recently rocked the wine industry.

On top of that, we are now being told that many of the foods we eat are already or are about to be **genetically modified**.

Today, Australia now has the largest area of farmland certified organic in the world - increasing from 372,000 hectares in 1990 to more than 7 million hectares.

Senior management… of Coles supermarkets in South Australia, Tasmania, The Northern Territory and the top end of WA …quotes… the demand for organic food outstrip supply over the past two years.
Coles - like other big food retailers - has **not** pushed the organic barrow but rather reacting to the demand in the market place.

Although organic foods are being touted as better for human health in the long term, it may be the fact that organic production is kinder to the **environment** that is the real selling point…**TO THE CONSUMER**..

Australia's organic growers are sending shipments to Europe but perhaps the biggest opportunity for farmers is **to supply organic and GM-free produce to the growing market in Asia.**

And for more evidence that SUSTAINABILITY IS GOOD FOR BUSINESS, the NEW SCIENTIST, recently quotes:
Low-tech "sustainable agriculture," (that is…shunning chemicals in favour of natural pest control and fertilizer), is **pushing up crop yields on poor farms across the world**, **often by 70 per cent or more**. The claim being made in the biggest ever survey of green-minded farming. The findings will make sobering reading for people convinced that only **genetically modified** crops can feed the planet's hungry in the 21st century.
A new **science-based** revolution is gaining strength built on **real research** into what works best on the small farms where a billion or more of the world's hungry live and work..."**sustainable agriculture**" sounds like a luxury the poor can ill afford,...but in truth it is **good science,**

addressing real needs and delivering real results. For too long it has been the preserve of environmentalists and a few aid charities.
It is time for the major agricultural research centres and their funding agencies to join the revolution.

And for new evidence that SUSTAINABILITY IS GOOD FOR BUSINESS, a Cardiff University study released 6 days ago on 14-Feb-2002, reports:

Quote: **…that**…farmers in developing countries are reaping the benefits of adopting 'green' agricultural practices far more than their western counterparts;ie, **Case studies** show that:

* In Madhya Pradesh, India, average cotton yields on farms participating in the Maikaal Bio-Cotton Project are 20 per cent higher than on neighbouring conventional farms.

* In Madagascar, SRI (System of Rice Intensification) has increased yields from the usual 2-3 tons per hectare to yields of 6,8 or 10 tons per hectare.

* In Tigray, Ethiopia, a move away from intensive agrochemical usage in favour of composting has seen an increase in yields and in the range of crops it is possible to grow.

* In Brazil, the use of green manures and cover crops has increased yields of maize by between 20 per cent and 250 per cent.

- In the highlands of Bolivia, the use of bonemeal and phosphate rock and intercropping with nitrogen-fixing Lupin species have significantly contributed to increases in potato yields.

The report's author, Nick Parrott of Cardiff University says: "The Real Green Revolution shows how organic and agroecological farming can significantly increase yields for resource poor farmers, improve food security and sustain and enhance the environmental resources on which agriculture in the South depends.

AND IN CONCLUSION…I WOULD LIKE TO QUOTE…
Researchers from the **University of Copenhagen** who recently reported that organically grown produce has higher levels of nutrients when compared with conventional produce.
Specifically, the organic crops had a higher concentration of vitamins and far more secondary metabolites, which are naturally occurring compounds that help immunize plants from external attack. Some of these metabolites are thought to lower the risk of cancer and heart disease in humans.

These findings on the **health content of organic food** CONTRAST with research indicating that **industrial agricultural practices** MAY have a detrimental effect on the nutritional value of conventional produce."

And in an article titled **"Farming, Plant Nutrition and Food Quality",** Jens-Otto Anderson of the University of Copenhagen, claims as his main hypothesis, that

...agriculture should be the primary health service.

When the CONSUMERS eventually see that far into the future, AND THEY WILL SOONER RATHER THAN LATER, ERA Farmers will be there to serve...with the world's purest and most nutritious food.

THANKYOU FOR COMING & THANKYOU FOR YOUR ATTENTION.