

What does it mean to be an Organic Dairy Farmer ??.



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Contents

- My Background
- Organic Farming in Australia
- What are the types of farming?
- Organic Standards
- Treatment Options

04/06/2016

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About Me

- 1983 BVMS (Hons.)
- Farming and Vet for 30 +years
- Organic farming for 9 years
- Nuffield Scholar 2006: Practical Approach to Biological Farming
- MF Hom .Practicing Vet homeopathy for 9 years



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Organic Farming

One of the fastest growing industries in Australia



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Organic Farming in Australia

- The Australian Organic Report 2014 estimated industry to be \$1.72 Billion
- 2009 to 2014 sustained average growth rate of 15.4%
- 2014 was 18%
- Global recession had no serious impact on organic food and beverage sales



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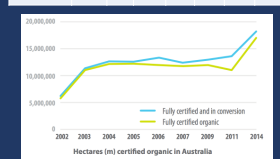
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Organic Farming in Australia

Table 1: Distribution of certified organic operators 2014

	NSW	VIC	QLD	SA	WA	TAS	NT
Operators	873	590	5211	311	192	65	15
% of Total	34	23	20	12	7	2.5	0.6



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- 1707 primary producers in Australia
- Australia has the largest area of organic land in the world
- 22.69m ha is organically farmed
- Conventional Beef growth expected 2%
- Organic beef businesses in 2014 up 45%
- Dairy 22.3% of organic farmgate sales

What are the types of farming?

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Conventional Farming

- Any inputs allowed
- Rely heavily on artificial fertilizers, herbicides, fungicides, and pesticides
- Animals may be treated with any registered products for animals
- With hold periods must be observed



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Organic farming



- Use renewable resources, conservation of soils, energy and water
- Recognize livestock welfare needs and provide environment to express normal behaviour
- Produce food that is free from agricultural chemicals, antibiotics, hormones and genetic modifications
- Produce nutrient rich food

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Biodynamic Farming

- Developed by Rudolf Steiner in 1924
- Aims to activate soil and plants, develop soil structure and enhance nutrient cycles
- Same as organic but uses preparations to energise biological systems



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Why not conventional?

- More stable price and profitable !!!
- Research shows marked decreases in mineral content of 7 essential nutrients for life
- Analysis of historical data spanning 50 to 70 years shows declines of 5 to 40% in mineral, vitamins and protein groups of foods, especially vegetables
- Pesticides etc. regularly found above legal limits on fruit and vegetables eg: strawberries



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Figure 2: Changes in Food Mineral Composition from 1940 to 1991

Element	% Change in Vegetables	%Change in Fruit
Copper	-76	-19
Sodium	-49	-29
Calcium	-46	-16
Iron	-27	-24
Magnesium	-24	-15
Potassium	-16	-22

Source: *The Composition of Food*. The Ministry of Agriculture, Fisheries and Foods and the Royal Society of Chemistry, UK

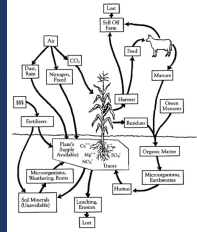
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About the Organic Industry

certified organic is cruelty free, pasture fed, socially responsible, free range, sustainably fished, biodiversity friendly and grown and processed without synthetic pesticides and herbicides, genetic modification, antibiotics and artificial hormones.



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Changes to your farming Practices

- Soil: change cultivation practices? Tillage. Reversible Mould Board Ploughing (\$15000). Power harrows with seeder attached \$15000 Advantages: aerated compact soils, decrease diseases and pests, able to turn in organic matter eg green crop manure or compost, effluent.
- Rethink fertilizers. Compost, commercial products becoming more available. 2.5T compost @5% N =125units/N.Cf to 150-300 units conventional
- Our autumn soil tests showed 100 u of accumulated N in our soil from Lucerne. This supports vigorous annual grass growth over winter.

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Soil Pasture: cont.

- Understand and nurture your soils!! 2.5T compost @5% N =125units/N. Phosphorus is 2 to 3%.
- All initial conversion back to tillage practices was done by contract. Over time we purchased our own machinery.
- Ploughs, seeders, harrows, compost spreader, compost making equipment. Purchased new compost spreader \$60000.
- Telehandlers latest \$1000000 for compost making
- Changed to partial irrigating...8T/ha land \$2500/ha. Improving water use efficiencies.
- Key component of our business is self sufficiency in all fodder.

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Livestock Management

- Prevention is better than cure ,best husbandry practices
- Be prepared to cull heavily HCC cows. Know your pathogens and how they infect cows- we have 30% replacement which is what we had when we were conventional seasonal
- Have vet identify through antigen tests bacteria in your herd
- Many herd health problems disappear through different management eg LDA, Ketosis
- We don't lead feed, can use calcium drips ,check no GMO content

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Milk Production

- Usually because of buffer problems feed less grain
- Lower production (8500l/cow to 6500l/cow)
- Test gone from Protein 3% to 3.5% BF 3.8 to 4.3
- Production very dependent on rainfall season

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Feeding

- Rolled Barley : ave 1.4 T as fed / cow
- Silage : varies with season.
- 120ha of partially irrigated lucerne 2 to 3 mgs shoulder irrigation
- Hay:
- seaweed, apple cider vinegar and cod liver oil

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Principles for Livestock

- Produce optimal quantities of food and fiber
- Produce food with high nutritional value
- Provide livestock with conditions to satisfy their behavioural and physiological needs and feed
- Maintain or increase genetic diversity of animals and plants (No GMO)



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Animal sources

- Only animals born, raised and gestated from the last trimester on organic farm are fully certified organic
- Non organic animals must be from farms free of infectious disease
- <10 % conventional replacements can be bought in per year
- Milk can be sold as organic after 6 months



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Breeding

- Animals must be able to practice normal behaviours eg. natural mating and birth
- Embryo transfers and cloning prohibited
- No synthetic hormone treatments
- No birth inductions or heat treatments
- A.I. is allowed but not with sexed or other modified semen
- Synthetic growth promotants are prohibited

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Diet and Nutrition

- Organic feedstuffs and /or pasture. Energy and protein to meet requirements
- Free access to mineral supplements
- Feed supplements of non organic origin can be **vitamins, minerals and trace elements only if from natural sources**
- Feed supplements of agricultural origin must be certified organic origin
- Derogations for up to 5 % of animal DMI may be allowed

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Newborn animals

- Colostrum from mother within 6 hours of birth and be reared by mother for min 12 hours
- Derogation for disease risk management-organic milk, same species for minimum of 8 weeks
- No offal, urine or faeces to be fed
- Non certified organic meat meal may be fed to fowl and pigs max 2 % diet. Not to same species

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Permitted ,restricted and prohibited feeds

Table 2

PERMITTED	RESTRICTED	PROHIBITED
Certified organic feeds	Seaweed	Urea and other synthetic nitrogen compounds
Pasture from certified organic farm	Molasses	Artificial colourants
Minerals	Lime	Hormones
Organic food industry products	Bentonite	Manures
Natural Vitamins	Fish by Products	Slaughter by-products of the same species
	Meat meal (non ruminant only)	Solvent treated feeds
	Vitamins-sourced from non natural sources	Synthetic feed additives, appetizers and preservatives
	Yeast	Synthetic growth promoters and stimulants
	Apple Cider Vinegar	Amino acid isolates
		Synthetic anti-oxidants
		Emulsifiers and antibiotics
		Synthetic fodder preservatives such as acetic, formic and propionic acid
		GMO derivatives

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Disease treatment and Prevention



- Good management practices to promote healthy disease resistant animals
- Approved veterinary treatment an adjunct to NOT a replacement for good management practice

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Standards State;

- Reliance on substances rather than management practices not in accordance with OFP(organic farming principles)
- **If animals suffer disease despite appropriate management, conventional veterinary treatment must not be withheld**
- **Protocol of medicinal treatments is in following order:**
 1. **First Line Homeopathic or Phytotherapeutic**
 2. **Only if above products are not successful and further treatment required to prevent suffering or distress to the animal conventional veterinary treatment may be given under the veterinary supervision**
 3. **Use of Vet drugs without disease is prohibited eg. Dry Cow Tx.**

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Animals treated with prohibited substances

- Quarantined for 3x the drug w/h or 21 days, whichever the greatest
- Permanent loss of organic meat status
- Milk must be withheld for 6 months
- Eggs may be 60 days or permanent depending on certifying body
- Animal offspring if dam treated in last trimester

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Animal treatments

Table 3

PERMITTED	RESTRICTED	PROHIBITED
Copper Sulphate	Rotenone	Synthetic parasiticides on a routine basis
Magnesium salts	Monosodium fluorosilicate	Antibiotics on a routine basis
Homeopathic remedies	(Animals must be quarantined for 3 weeks after treatment)	Medication in the absence of illness
Herbal Remedies	Pyrethrum	Subtherapeutic doses of antibiotics
Limestone and dolomite	Neem	Hormones
Natural vitamins	Hydrogen peroxide	Proprietary anthelmintic agents
Vegetable/Herbal oil extracts	Vaccinations	Chemically synthesized tranquilizers
Clays	Tallow	Modified organisms or products thereof
Sulphur		Prophylactic use of allopathic medicine
Garlic, garlic oil and extracts		Synthetic growth promoters and stimulants
Seaweeds		Synthetic substances used to suppress natural growth
Seaweed meal or extracts		Test Seal
Sea salt and salty water		
Cider Vinegar		
Zinc Sulphate		
Diatomaceous earth		

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Vaccine Rules

- Can use Vaccines when an endemic disease is present if can't control with management
- Any products containing /from GMO substances permanently removes organic status of that animal. Eg Vaccines



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Livestock Welfare: Surgical treatments permitted

- Castration
- Tail docking lambs
- De-horning
- Nose ring bulls
- Mulesing
- Nose rings pigs
- **Veterinary surgery with the use of anaesthetics-Will not loose Organic Status**
- Ear tagging and micro-chipping NOT Ear Notching
- NASAA has additional requirements

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Livestock Handling

- Use of synthetic chemical tranquillizers prohibited
- Electric prodders prohibited

Dairy teat sprays:

- MAspray – Chlorhexadine base
- Bluguard- Efficacy not as good and especially if organic matter on teats.



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What roles can the vet fulfill on Organic farms?

- Advising on best practice animal husbandry
- Make conventional Diagnosis
- Supplying expert knowledge in allowable treatments.IVA
- Provide allowable treatments as often Non veterinarian individuals only source of advice



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For example on a dairy advise on;



- Milk performance
- Production diseases
- Nutrition and feeding
- Cow environment
- Reproductive Management
- Dry cow management
- Calf and heifer Management
- Herd health monitoring
- Hygiene
- Treatments for individual and herd

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What is available for treatments:

- Phytotherapy (herbal)
- Homeopathy
- Acupuncture
- Chiropractic

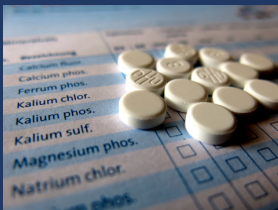


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Homeopathy



- Many organic farms use this worldwide
- I use this on our farm and have had many successful cases
- Very complex modality , over 2000 remedies
- Many studies/trials do not match the remedy to the patient symptoms
- Just because we can't understand something does not mean it does not exist or work.

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Advantages of Homeopathy

- No with holding periods on animal or products
- No antibiotic resistance
- Easy to use, administer via mm eg: in water, per os, per vaginal, infuse.
- Can use simple first aid remedies
- Disadvantage: no credible Vet course currently in Australia - HPTG in UK.



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Chris Day Trials

Table 4

Parameter	Control Group	Treatment Group
No. of sows in group	10	10
No. of live births	103	104
No. of stillbirths	27	12
No. of sows with stillbirths	8 (80%)	3 (30%)
% stillbirths	20.8%	10.3%

Table 5

Month	No. of Sows	Stillbirth rate %
March 1983 & before	Range 15 - 40	18 - 22%
April (the month of the trial)	-	-
May	31	8.5%
June	26	8.2%
July	19	3.5%
August	20	2.6%
September (alteration mid-month)	19	5.6%
October	22	11.4%
November (reverted mid-month)	21	14.4%
December	29	8.1%
January 1984	38	1.9%

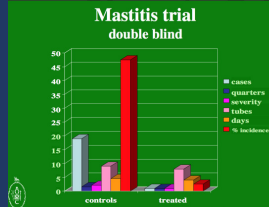
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Mastitis study Put in graphs on controls and treated group

Graph 2



Graph 3



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Use of Alternative therapies in Spain

Table 6

Type of Herd	Milking Cows	Milk yield (L/cow/year)	Bulk SCC (x10 ³)	Veterinary treatments (no treatments/cow/year)	
				All diseases	Clinical mastitis
Allopathy	32.1	18.4	111	0.54	0.02
Homeopathy	31.7	19.3	162	0.13	0.03
Homeopathy & phytotherapy	20.0	17.6	137	0.60	0.30
Phytotherapy	63.8	18.9	117	0.52	0.03
Total	34.8	18.5	120	0.25	0.03

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Phytotherapy

- Synonym for herbalism
- Plants contain combinations of compounds that work synergistically
- Excellent resource books and course in Aus for Vets: CVIT
- Fresh, dried, infusions or tinctures
- Palatability can be a problem
- Drench, larger amount of liquid
- Time to mix and administer

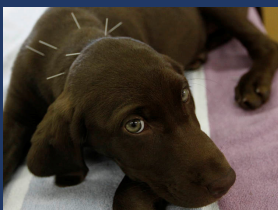


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Acupuncture and Chinese medicine



- Treat various conditions eg. Lameness, reproduction, GIT
- Used diagnostically
- More widely accepted by conventional vets
- B Fraser lecture

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Summary

- Understand standards organic farms adhere to
- Expertise in herd management
- Nurture soil to grow your feed
- Provide alternative therapy veterinary advise or refer to experts
- Provide conventional treatment when required
- Prevention is better than cure .
- Be committed to being Organic.

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Questions?

Thank you!



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Organic Herd Health
Natural Pet Management



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The Natural Vet