

The Holistic View of Health:

- If everything is in balance, then we will have health and harmony.
- If things are in balance then parasites and other challengers will not harm the host.

Some agents are non-virulent!

Other agents may be pathogenic!

Resistance to Infection

Pathogens: Virulence, numbers, synergism etc

- Resistance: Immunity, genetics, health, nutrition, environment etc

Living in harmony with parasites

The Holistic View of Health:

- Stressors on the host tips the balance in favour of the pathogen:
 - Under nutrition
 - Overcrowding
 - High challenge dose

Overcrowding & high challenge dose!

The Holistic View of Health:

Disease is a sign that something is wrong!

- A sign that things are out of balance. eg Stress, -physical, mental or social.
- If things are out of balance, then the host will find something to die from.
Eg no colostrum

Health is good when things are “balanced” & Bad when things are out of balance

Holistic View of Health

- Healthy soils lead to healthy plants
- Healthy plants lead to healthy animals (herbivores ie meat)
- Healthy animals and plants lead to healthy people (top of the food chain)

Nutrition of Plants vs the Disease Resistance of Animals

- Sir Albert Howard, “An Agricultural Testament”
- Holistic picture: Compost grown plants or crops increase the resistance of animals to disease.

Foot & Mouth Disease:

- Dr William Albrecht principles; feed the Soil Biology; balanced minerals.

Competition: Good Bugs vs Bad Bugs

- The Probiotic Effect
- Good bugs fill the ecological niche & don't allow the bad bugs to multiply
- “Nature abhors a vacuum”, eg weeds

Raw vs Processed Organics

- Raw products = high risk
- Compost = low risk
- Humus = ~zero risk.

Dilution Effect

- “The Poison is in the Dose”
- If some is good, more is not necessarily better!
- Many substances are beneficial (or harmless) in small doses and toxic in large doses.

Sources of Organic Material

- Manure : Cattle yards
Feedlots, piggeries, poultry farms,
stables (Horses) human faeces etc
- Council waste collection, wood chips, rice hulls,
- Abattoir waste eg rumen contents, blood & bone etc (bloat capsules)

What are the Risks? Contamination

- Chemicals / Drugs / Antibiotics
- Heavy metals, cadmium, mercury, lead etc
- Bacterial: Johne’s Disease, Salmonella, Yersinia, Anthrax, E coli – “Food poisoning” especially on fresh vegetables.
- Viruses??????????
- Parasites eg worms, coccidia
- Physical, wire, glass plastic, rocks etc
- Weed seeds

What are the Risks? Accreditation

- If you wish to become a certified organic producer, you must check the requirements for accreditation as an Organic Food producer.
- These certification requirements may vary with different products!

Risks? Sheep Scours vs Water Quality

- Breech staining (scours) was independent of worm numbers (FEC)
- Scours were correlated with water quality
- Faeces and organic matter getting into the water supply.
- Need to fence off water sources and create organic matter filters round dams and creeks.

Risks? High Nitrogen

- Nitrate toxicity
- BUN / MUN
- Lameness, scald, foot abscesses
- Fertility, embryonic losses
- Poor food conversion efficiency

Time to Become Safe?

- Sunlight / UV – sterilises microorganisms
- Time: more is better
- Moisture / rain to wash off plants
- Pasture growth
- What are the “certification rules” for spelling pasture after applying compost?

What are the Benefits? - Biology.

- Soil microorganisms break down organo-chlorines eg DDT, Dieldrin
- Antibiotics eg penicillin, are mainly produced by soil micro-organisms and also broken down by them.
- Bacteria used to clean up mine sites of toxic residues.
- Environment eg China: organic vs chemical fertilisers

What are the Benefits? - Chemistry.

- Minerals in a bioactive form
- Balanced source of minerals
- Improved plant growth (More “nutritious” pasture) vs Nitrogen forced pasture with urea.
- Synergism; greater than the sum of the base minerals.

Benefits: Better Nutrition

- Good soil management leads to a longer growing season and more feed grown.
 - David Rendell on drench resistance: “Feed the bastards”.
- Better fed sheep had less worms. (Longer pasture and better immunity).
- Good nutrition tips the “balance” in favour of the host animal.

Biosecurity: Keep compost in perspective!

- Compost is much safer than hay/straw/cropping seeds as a source of weed seeds
- Compost is much safer than live animals as a source of parasites, bacteria – footrot, or drench resistant worms
- Dirty farm equipment, vehicles, boots or clothing.
- Floods or drainage
- Wind & spray drift
- Double fence boundaries, tree strips etc

Used Sensibly, Organics can Result in Nature in Harmony