Engaging with Academia and Research Institutions (ARIs) to support Family Farmers and Food System Transformation During and Post COVID–19 Pandemic in Asia
When myths become fact: how misleading information can become a threat to food security

Gunnar Kirchhof

The University of Queensland, School of Agriculture and Food Sciences, St Lucia Campus, Brisbane, Qld 4072, Australia. g.kirchhof1@uq.edu.au
Agro-ecology

Forum for Food Sovereignty in Sélingué, Mali, 27th Feb 2007

=> Declaration of Nyéléni

New ‘push’ for Agroecology with FAO meetings in 2015
1. Latin America - Brasilia, Brazil in June
2. Africa - Dakar, Senegal in November
3. Asia-Pacific – Bangkok, Thailand in November

Number of publications

Number of citations
Figure 2.2: Potential for agroecological practice to be implemented within the next decade (Wezel, A et al. 2014).
“Currently at least 2 billion people are alive because the proteins in their bodies are built with nitrogen that came via plant and animal foods - from a factory using (the Haber-Bosch or Bosch-Meiser urea) process.”
Smil 1997
Cash and food crops – the agribusiness revolution

• Traditional subsistence agriculture:
  o grow food for own consumption (food crops)
  o sell surplus (cash crops)

• Industrial agriculture
  o all crops are cash crops, even the crops that are consumed *(eaten)*
People fed by one American farmer (USDA 2010)

2014 (globally):
• 43.7 million ha mainstream organic (1%)
• 2.3 million farmers (0.4%)
• These small values lead to remarkable growth rates!
Organic Farming:

No use of agro-chemicals:
- pesticides, fertilizers, herbicides, genetically modified organisms, antibiotics and growth hormones

More:
- Uses ecological processes, biodiversity and adapted to natural local conditions

More:
- Promote fair relationships and a good quality of life for all

More:
- Organic certification, bio-dynamic, …
Common knowledge about fertiliser:

Quotes from farmers:

• The food is unhealthy, tastes bad.
• If you use chemical fertiliser, our women will become infertile (Ethiopia)
• It poisons the ground and makes it sour (PNG)
• It is the *Suanggi* (West Papua)
• Biological transmutation \( \text{Ca} + \text{e}^- = \text{K} \)
• Microbes will make nutrients

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Where do these *powerful* messages come from?

- non-reviewed internet sites => accessible everywhere!
- NGOs who lack technical expertise => who are the volunteers?
- Predatory free-online journals, pay to publish and the push to publish!
- extremists ☺ where faith is more important then fact!
- EU, in particular Germany?

- What is the real reason why organic farming is promoted and so successful in the EU?
- Waste management!
Yield and food production issues

UK:
Organic farmers themselves can only generate $\frac{1}{2}$ the N they need!

Sewage:
Can recover 85% P and 15% N => but not allowed!
Country of 60 million can generate 35,000 t P

Don’t underestimate the benefit to soil structure which will also impact on yield!

2.3 diary cows, if kept indoors for 6 months, can produce the required 35 t manure to maintain high yields

If all wheat in the UK grown on 2 million ha, need 70 million t of manure

=> Twice the manure is needed than produced!
Nutrient accumulators and emitters
(resource relocation)

Developed Countries ← Developing Countries

Urban areas ← Rural regions

Organic waste recycling/reuse

- Plant material
- Animal Waste
- Human Waste

Mineral fertiliser supported organic farming