

Climate Change Information for *Your* Decision Making

Necessary
Sufficient
Credible

- I'm a granddad fighting for *our* grandkids' futures
 - They will experience 24 times the number of extreme weather events that I have
- I'm an experienced consultant
 - I'm not looking for work but can help if wanted
 - I cost less than many TDC staff

Is *anyone, anywhere, competently*

- collecting
- synthesising and
- making *credible* economic, environmental, social and cultural climate recommendations ***specific to South Canterbury?***

Essentially, all climate actions are local

4 examples of climate change complexity that impact the Timaru District

1. Drought in Central America
 2. Destabilisation of the Antarctic circumpolar vortex
 3. Globally evolving Scope 3 emission standards
 4. Global vegetarian trends
- (and many more)

So what have they got to do with the Timaru District?

Drought in Central America

1. What's happening?
2. 1/3 reduction in shipping through the Panama Canal
 1. Ships having to go the long way around Cape Horn
3. How significant is it to us?
4. Decreasing demand for sheep products and shipping costs partly to blame for the likely closure of Smithfield

Increased shipping costs and scope 3 emissions

Destabilisation of the Antarctic circumpolar vortex

1. Our early September weather was not business as usual
 1. 5 days nor-west then 5 days southerly
 2. 174km/hr gust at Lake Ohau.
2. Destabilisation of the Antarctic circumpolar vortex - same with the Arctic circumpolar vortex (<https://www.facebook.com/watch/?v=1056948995791531>)
3. **10 day** heat waves/polar weather in Europe, China and Canada/USA >50°C
4. Does anyone know the implications for Canterbury's food production? Is anyone even asking the question?

Multi-multi-million dollar threats and opportunities for South Canterbury

Globally evolving Scope 3 emission standards #1

1. 63 countries have/are developing them (warning to farmers' conference by CEO Rabobank)
2. 80% of our export markets for Canterbury's high-emission products (KPMG)
3. Major overseas customers (Nestle, Tesco, Daone and many more)
4. Overseas markets want inherently low-emission products (they won't accept off-setting)

Globally evolving Scope 3 emission standards #2

5. South Canterbury's beef and lamb and dairy exports are the highest emitting globally traded food commodities (apart from farmed prawns)
6. Emissions creating beef protein are 100 times the emissions from creating pea protein
7. Emissions creating dairy milk protein are 20 times the emissions from creating pea milk protein
8. Water use to create dairy milk is 5 times the water use to create pea milk

Greenhouse gas emissions per 100 grams of protein

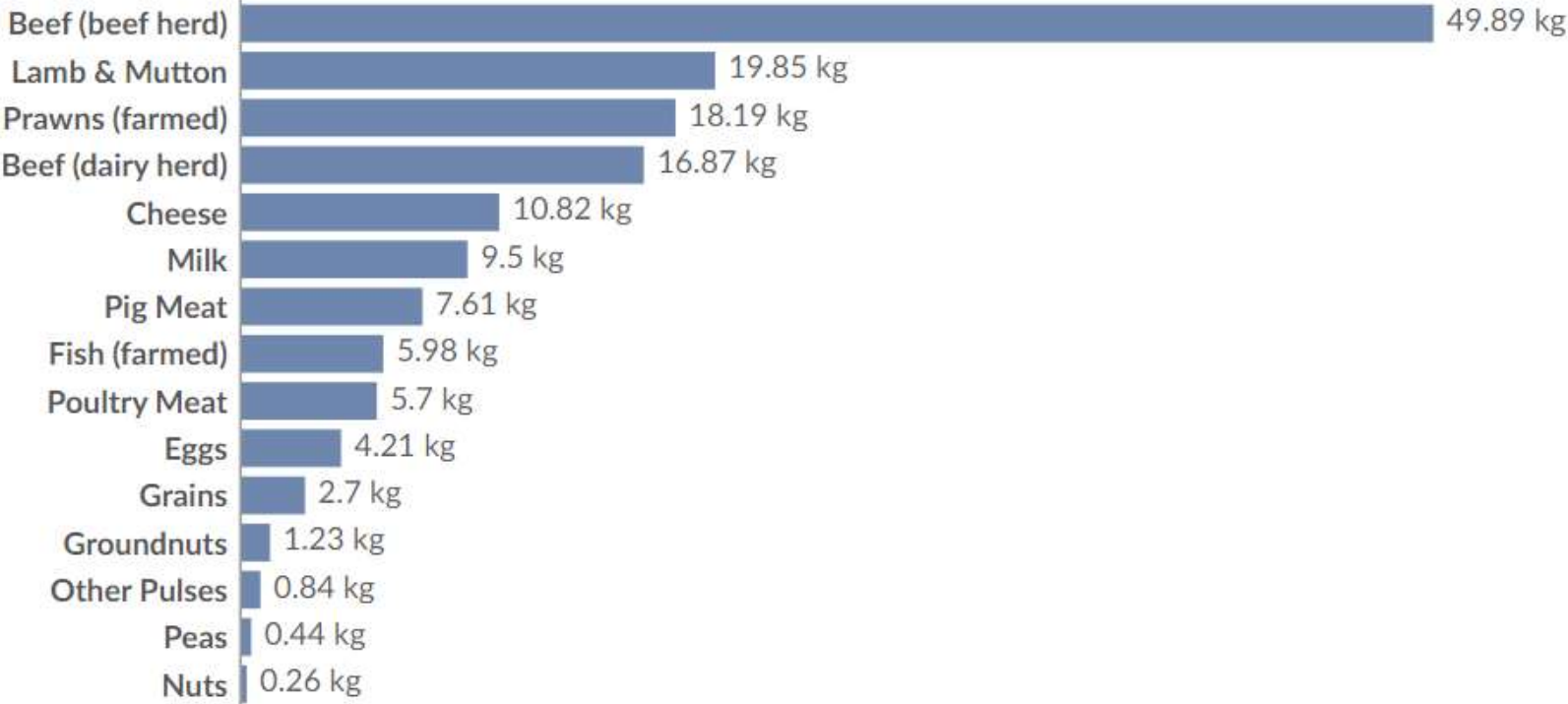


Greenhouse gas emissions are measured in kilograms of carbon dioxide-equivalents.

Table

Chart

Edit foods



Major South
Canterbury
Food Exports

Globally evolving Scope 3 emission standards #3

- 10. *Best case* reduction in red meat emissions = 30% reduction using a *feedlot* chemical that is toxic to humans (Still *66 times worse than pea protein*)
- 11. Pea and nut protein products *do not need to replicate meat* – they just need to be nutritious, tasty and inexpensive
- 12. We can grow many low emitting foods but it could take years to gear up production/exporting – so the sooner we start the better

BIG threats and opportunities for South Canterbury food production and export

Global vegetarian trends

- 16% of baby boomers are vegetarian
- 27% of Gen Z are vegetarian
- Gen Z:
 - 79% eat meatless > once/week
 - 65% want more plant-based options
 - Purchase decisions:
 - Taste
 - Price
 - Availability
- 40% vegetarians globally by 2040 (~ double 2024 %)

Impacts in the Timaru District

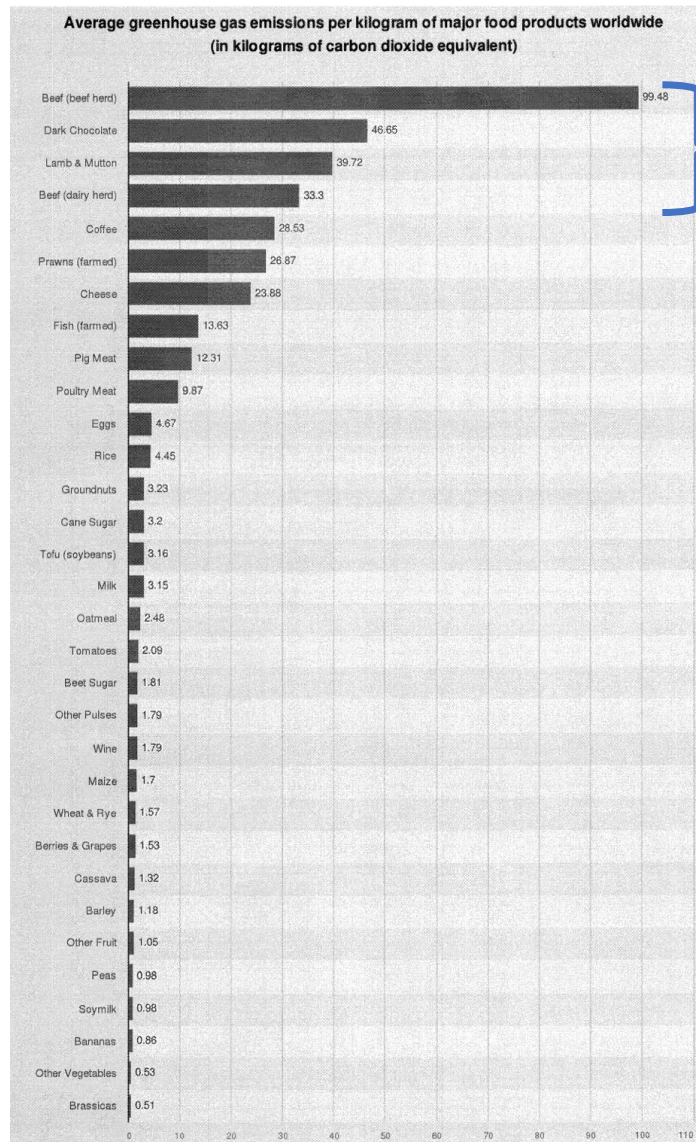
- Global issues (e.g. Central American drought; polar vortices; Scope 3 emission standards; vegetarian trends) will impact our economy
- So will dozens of other climate-related issues
- **To make informed decisions**
 - we all need to know (quickly triage) when and by how much? (\$100s of millions)

Will we:

- Fly blind and hope for the best? or
- Fondly hope that 'someone' will turn up to *urgently* give us all the answers we need? or
- Set up a Climate Leaders Group to understand and advise all Timaru District stakeholders on our climate threats and opportunities?
- Who will lead this?
 - *TDC - as our locally elected representatives as no-one else is taking responsibility*

Climate Leaders Group

- A legal entity so it can apply for additional funding
- 4-6 local *leaders* with skin-in-the-game
- Meet monthly to *synthesise* the most relevant climate information
- *Triage* the likely impacts and opportunities
- Produce *trusted/credible* recommendations to all South Canterbury stakeholders whenever they confirm major issues
 - Is more information needed?
 - Who will be affected, and how?
 - Possible responses
- ~ \$100k/year catalysing-support from council



Major South
Canterbury
Food Exports

	Emissions	
Beef	99	
Lamb and mutton	37	
Dairy beef	33	
Milk <i>solids</i>	30	
Pork	12	
Eggs	4.6	
Oatmeal	2.5	
Maize	1.7	
Wheat and rye	1.6	
Barley	1.2	
Fruit	1	We grow good fruit
Peas	0.96	and peas!
Most vegetables	0.5	

Beef emissions = 100 x peas

Lamb and mutton emissions = 38 x peas