

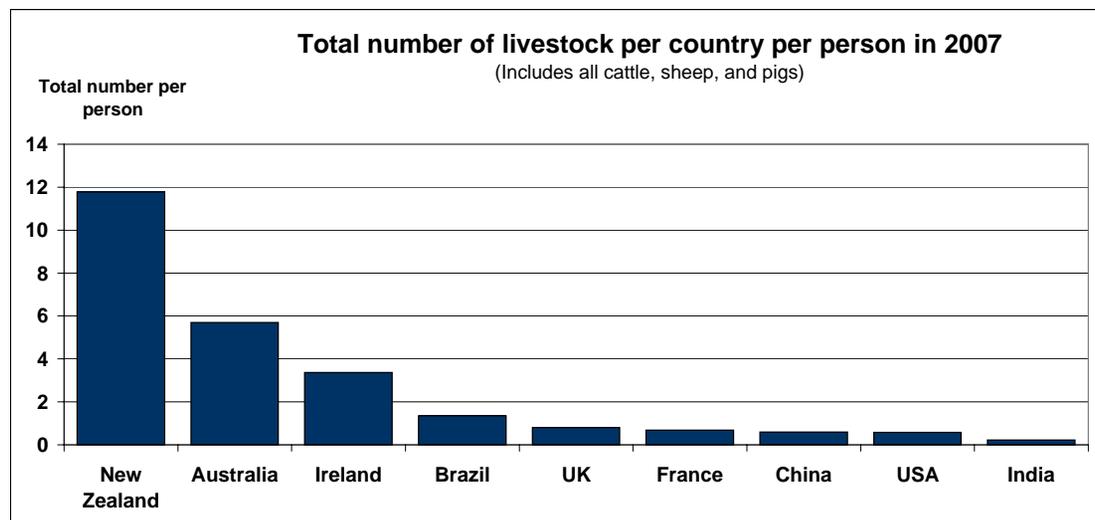
Think Piece 6: Workings for Figure 1

Adapted from: FAO, CIA, Statistics New Zealand, Dept. for Environment Food and Rural Affairs (UK) & Australian Bureau of Statistics

	New Zealand		Australia		Ireland		Brazil ⁽¹⁾		UK		France		China ⁽²⁾		USA		India ⁽¹⁾	
Population as at June 30 2007	4,115,771		20,434,176		4,109,086		190,010,647		60,776,238		63,713,926		1,321,851,888		301,139,947		1,129,866,154	
Livestock	Number	Per capita	Number	Per Capita	Number	Per Capita	Number	Per Capita	Number	Per Capita	Number	Per Capita	Number	Per Capita	Number	Per Capita	Number	Per Capita
	As at 30 June 2007		As at 30 June 2007		As at June 2007		As at 2007 ⁽⁵⁾		As at June 2007		As at 2007 ⁽⁵⁾							
Total cattle ⁽³⁾	9,654,467	2.34573	28,037,000	1.37206	6,704,000	1.63151	207,170,000	1.09031	10,304,000	0.16954	19,574,654	0.30723	116,861,393	0.08841	104,800,000	0.34801	177,840,000	0.15740
Total sheep ⁽⁴⁾	38,460,477	9.34466	85,711,000	4.19449	5,522,000	1.34385	15,600,000	0.08210	33,946,000	0.55854	8,643,677	0.13566	171,961,203	0.13009	6,165,000	0.02047	64,269,000	0.05688
Total pigs	366,671	0.08909	2,605,000	0.12748	1,588,000	0.38646	34,080,000	0.17936	4,834,000	0.07954	14,822,927	0.23265	501,582,621	0.37945	63,951,000	0.21236	14,000,000	0.01239
TOTAL LIVESTOCK	48,481,615	11.77947	116,353,000	5.69404	13,814,000	3.36182	256,850,000	1.35177	49,084,000	0.80762	43,041,258	0.67554	790,405,217	0.59795	174,916,000	0.58085	256,109,000	0.22667

- (1) FAO Data (estimates)
- (2) FAO Data (Official data)
- (3) Including beef, dairy cattle and calves
- (4) Including sheep, lamb and ewes
- (5) No precise date was available

	New Zealand	Australia	Ireland	Brazil	UK	France	China	USA	India
Livestock per person	11.77947	5.69404	3.36182	1.35177	0.80762	0.67554	0.59795	0.58085	0.22667



Sources:

NZ	Population at July 2007 estimated at 4,115,771	http://www.google.co.nz/search?hl=en&client=firefox-a&rls=org.mozilla%3Aen-GB%3Aofficial&hs=Tze&q=population+New+Zealand+july+2007&btnG=Search&meta=
Australia	Population at July 2007 estimated at 20,434,176	http://www.google.co.nz/search?hl=en&client=firefox-a&rls=org.mozilla%3Aen-GB%3Aofficial&hs=1ez&q=population+Australia+july+2007&btnG=Search&meta=
Ireland	Population at July 2007 estimated at 4,109,086	http://www.google.co.nz/search?q=ireland+population+july+2007&ie=utf-8&oe=utf-8&aq=&rls=org.mozilla:en-GB:official&client=firefox-a
Brazil	Population at July 2007 estimated at 190,010,647	http://indexmundi.com/brazil/population.html
UK	Population at July 2007 estimated at 60,776,238	http://www.google.co.nz/search?q=UK+population+in+june+2007&ie=utf-8&oe=utf-8&aq=&rls=org.mozilla:en-GB:official&client=firefox-a
France	Population at July 2007 estimated at 63,713,926	http://indexmundi.com/france/population.html
China	Population at July 2007 estimated at 1,321,851,888	http://www.google.co.nz/search?hl=en&client=firefox-a&rls=org.mozilla%3Aen-GB%3Aofficial&q=China+population+in+July+2007&btnG=Search&meta=
USA	Population at July 2007 estimated at 301,139,947	http://www.google.co.nz/search?hl=en&client=firefox-a&rls=org.mozilla%3Aen-GB%3Aofficial&hs=gtz&q=population+USA+july+2007&btnG=Search&meta=
India	Population at July 2007 estimated at 1,129,866,154	http://www.google.co.nz/search?hl=en&client=firefox-a&rls=org.mozilla%3Aen-GB%3Aofficial&q=India+population+in+July+2007&btnG=Search&meta=

Data Sources:

NZ	http://wdmzpub01.stats.govt.nz/wds/TableViewer/tableView.aspx?ReportId=2280
Australia	http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/7121.02006-07?OpenDocument
Ireland	http://www.cso.ie/statistics/livestockjune.htm
Brazil	http://faostat.fao.org/site/573/DesktopDefault.aspx?PageID=573#ancor
UK	http://statistics.defra.gov.uk/esg/publications/auk/2007/excel.asp
France	http://agreste.maapar.lbn.fr/ReportFolders/ReportFolders.aspx
China	http://faostat.fao.org/site/573/DesktopDefault.aspx?PageID=573#ancor
USA	http://www.nass.usda.gov/QuickStats/indexbysubject.jsp?Text1=&site=NASS_MAIN&select=Select+a+State&Pass_name=&Pass_group=Livestock+%26+Animals&Pass_subgroup=Livestock
India	http://faostat.fao.org/site/573/DesktopDefault.aspx?PageID=573#ancor

Key Assumptions

Figure 1 provides an overview that, in our opinion, invites further analysis and discussion. Below we highlight the key assumptions and make suggestions as to where we consider further research could provide additional clarity:

i. The figure assumes that all three livestock: cattle, sheep and pigs, are equal. That is clearly not the case, therefore we suggest more detailed analysis should be undertaken to make comparisons – this could include analysis of greenhouse gas emissions equivalents, weight equivalents, water use equivalents and grazing equivalents (such as the Livestock Unit). Please also note that chickens have been excluded from this analysis.

ii. The figures contained in the above table reflect, to the best of our knowledge, the total including all calves and lambs born alive and still on the farm at 30 June 2007. Other than New Zealand, we have not verified these figures with the respective international organisations, other than use the information contained on the respective websites identified below.

iii. We recognize that comparing livestock across the world at one point in time may not reflect the actual position over time. For example, spring for New Zealand and Australia occurs approximately three months after these figures were collated, whereas in Europe spring occurs approximately three months before these figures were collated. Consequently, the average life span of livestock from each country may vary and lead to some inability to compare these figures accurately. One solution would be to take into account the livestock slaughtering statistics. For those interested, Statistics New Zealand has the animal slaughtering numbers on-line (see Statistics New Zealand's website, by clicking on "Industry Sectors" and "Livestock Slaughtering" at <http://www.stats.govt.nz/InfoShare/database/snz/databaseTree.asp>). The statistics are available at regional and national levels for different livestock and different reference periods, e.g. monthly, quarterly and annual bases.

iv. Initially we intended to use FAO data for all countries; however we noted on their website they state:

'Generally speaking FAOSTAT data should never be given precedence over national official statistics. Every effort is made in FAOSTAT to publish the latest data on agriculture and prepared in a consistent way across countries for international comparison. For national studies it is recommended to use national statistical offices wherever possible, as the information collected is often more detailed and up-to-date. They are the "first port" of call for data.' See FAO link (question 4): <http://faostat.fao.org/site/565/default.aspx>

Consequently, we used where possible the official country websites as the 'first port' of call. The exceptions were Brazil, India and China, where we used the FAO website.

v. Interestingly, Statistics New Zealand have informed us that after reviewing the time-series back to 1935, the total sheep numbers in New Zealand were highest in 1982 (70,301,461) and 1983 (70,262,574). For other years, the national totals were under 70 million.

vi. We have only looked at the countries included in the chart, on the basis that we understand further research would be required to fully verify New Zealand having the most livestock per capita.