Growth of the Intensive Livestock Industry in Asia – Implications for Australia

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Defining Asia

Ne
R of Urals

North East
China, Japan, Korea, Taiwan

C tr
Ka an,
U eki etc

W st
Ira Syria,
T ey

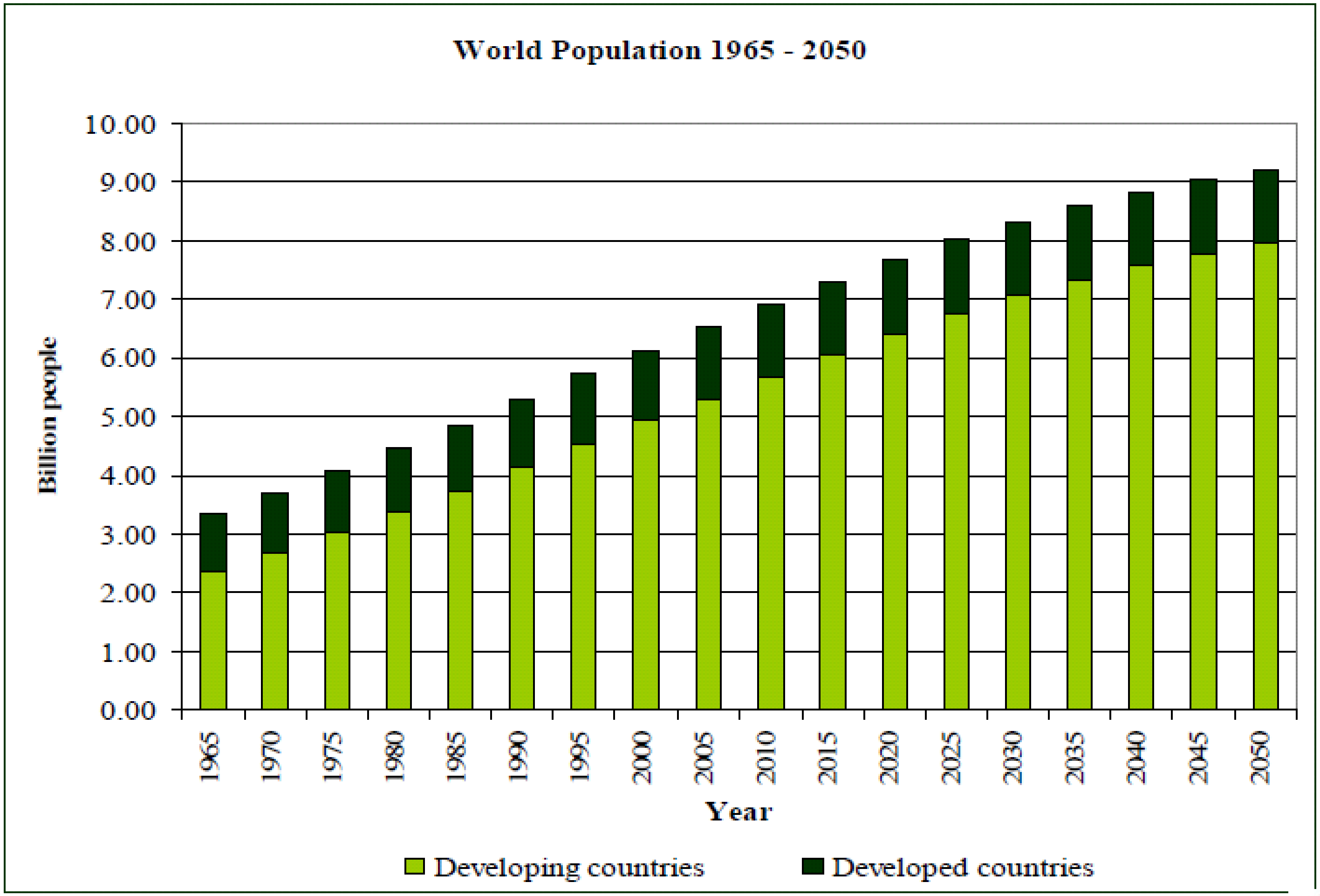
South East
Myanmar to PNG

South
India, Pakistan, Bangladesh, Sri Lanka

Asia

- Over half the worlds population lives in Asia
- Also contains 60% of the 925 million under or malnourished people
- Highly heterogeneous region with wide difference in culture, economic activity, resources, level of development, and technical/institutional capacity
- Hence difficult to address collectively
- Main influences are China, India, Indonesia and Thailand

World Population Growth



Human Population (millions)
Shift of demographics

		1990	2010	2050
Sth Asia	Total	1196	1704	2393
	Rural	879	1164	1064
	Urban	317	539	1329
East Asia	Total	1359	1574	1512
	Rural	923	785	386
	Urban	436	789	1126
S.E. Asia	Total	445	593	759
	Rural	305	344	259
	Urban	140	249	500
Aust/NZ	Total	20	26	37
	Rural	3	3	2.5
	Urban	17	23	34.5
World	Total	5296	6896	9306
	Rural	3045	3412	2907
	Urban	2251	3484	6399

(Source: FAOSTAT 2012)





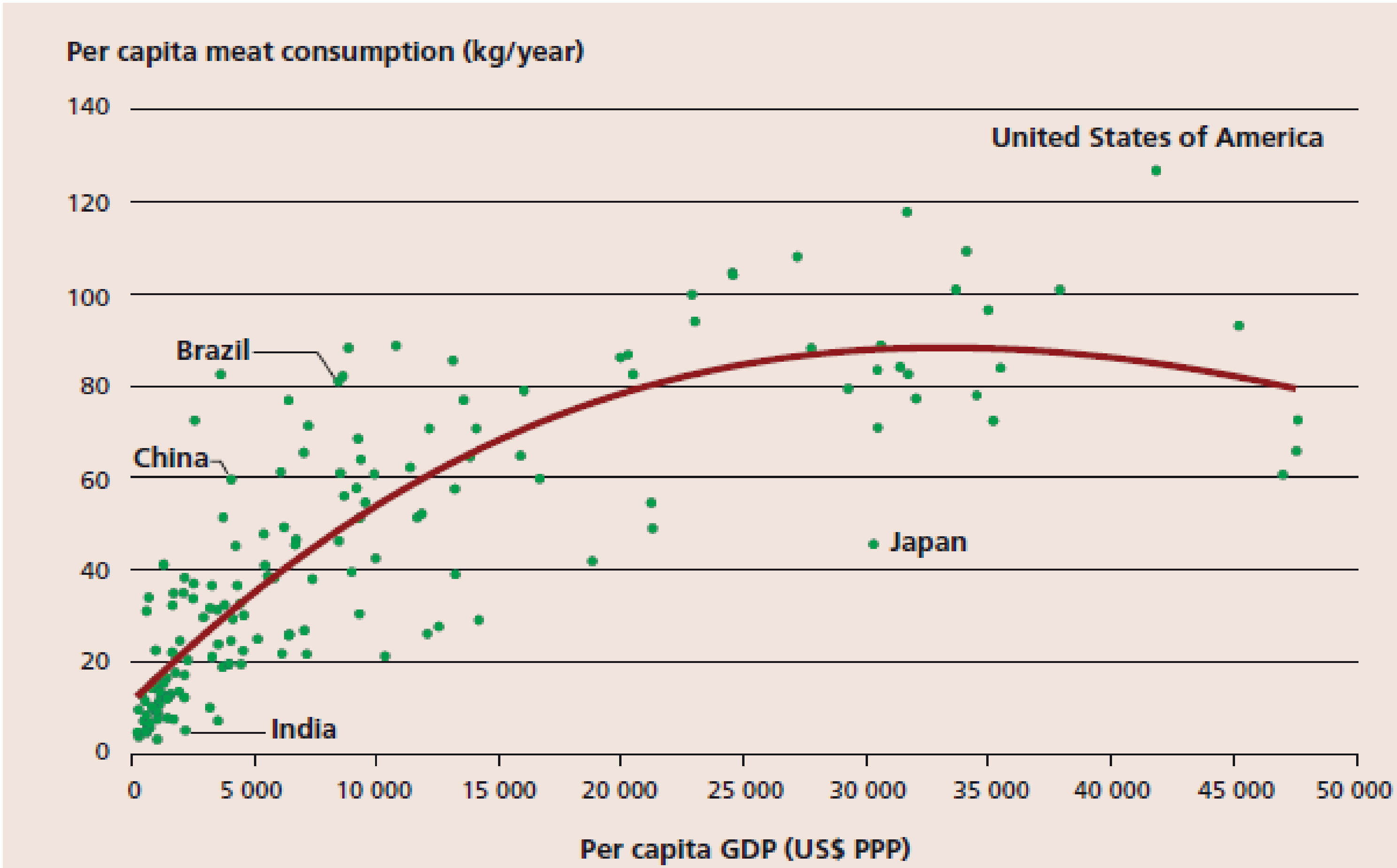


Asian Wealth (GDP/Capita, USD)

	2010	2030	2050
China	7518	21100	47800
India	3339	13200	41700
Indonesia	4394	13500	37400
South Korea	30200	60200	107600
Viet Nam	2793	11900	33800
Australia	56200	101000	145000
World	11900	19400	36600

(Source: IMF 2010)

Income versus meat consumption



(FAO, 2009)

Changing nature of global food demand

- Driving Factors

Population

Wealth

urbanisation

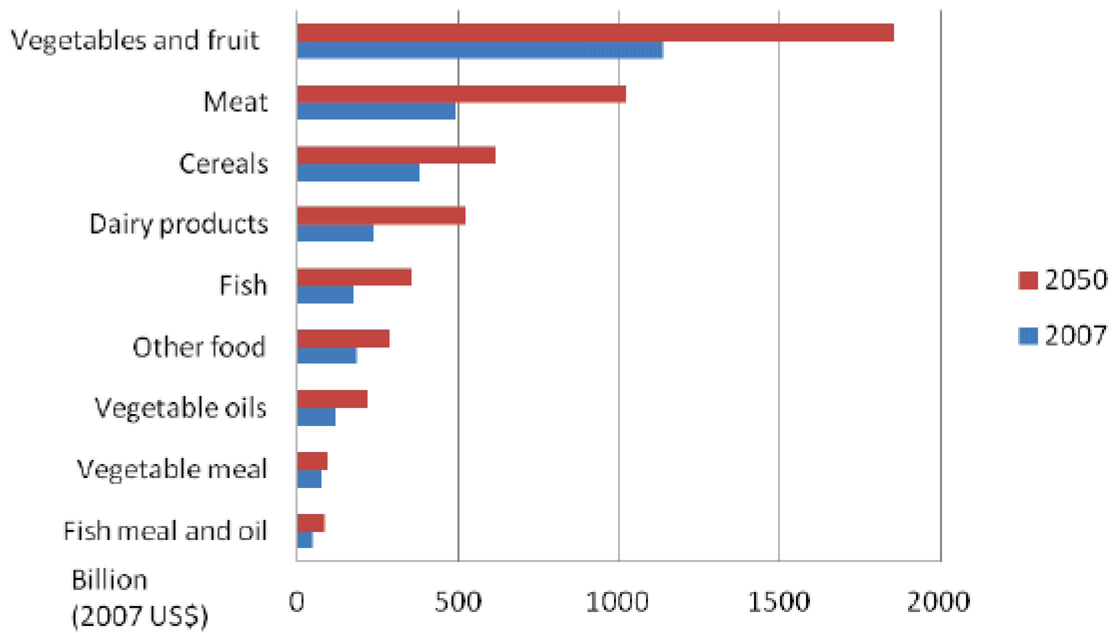
- Projected outcomes by 2050

Not only more food (70%)

But a different food profile

	2009	2050
Cereal Production	2.1 billion T	3.0 Billion T
Meat Production	270 Million T	470 Million T

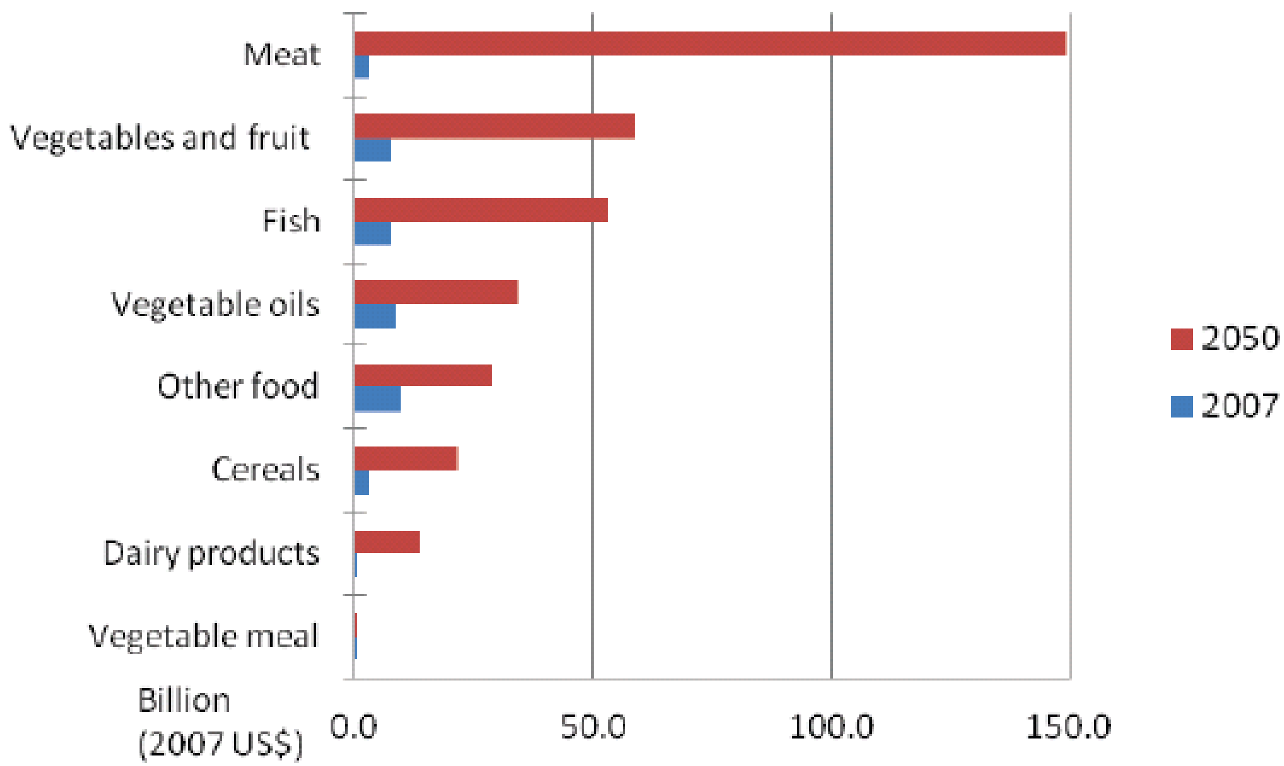
World Agrifood Demand



Data source: ABARES model output

China’s Imports

Figure 7 China’s imports by commodity grouping



Data source: ABARES model output

Net Movement of Chicken Meat 2012 (‘000 Tonnes)

		Production	Consumption	Import	Export	Balance = self sufficient
South Asia						
	India	2602	2590	-	12	Pakistan, Bangladesh, Sri Lanka
SE Asia						
	Thailand	1592	1088	-	504	Indonesia, Cambodia
	Malaysia	1620	1650	-	30	Laos, Singapore
	Philippines	851	971	120	-	
	Vietnam	676	1276	600	-	
North Asia						
	Japan	1470	2662	1192	-	
	South Korea	726	811	85	-	
	Taiwan	666	785	119	-	
	China	13708	14801	1093	-	
Other						
	Eu	12764	12764	-	-	
	USA	19465	15782	-	3683	

(GIRA 2013)

Poultry Meat Consumption

(kg/head/yr)

		2001	2012	% Increase
South Asia				
	India	0.92	2.12	130
	Pakistan	2.33	(4.38)	88
	Bangladesh	1.03	(1.37)	33
	Sri Lanka	4.37	(4.94)	13
SE Asia				
	Thailand	13.65	15.08	10
	Malaysia	32.58	56.84	74
	Philippines	7.9	9.93	26
	Indonesia	4.41	7.33	66
	Vietnam	4.9	14.12	188
	Cambodia	2.15	(1.97)	-
	Laos	2.47	(4.54)	84
	Singapore	24.19	(20.68)	-
North Asia				
	Japan	17.16	21.11	23
	South Korea	10.43	16.22	56
	Taiwan	31.76	33.52	6
	China	10.1	10.90	8
Others				
	EU	23.93	25.34	6
	USA	49.4	50.23	2

(Figures in brackets = 2011 data) (GIRA 2013)

Net Movement of Pig Meat 2012

('000 Tonnes)

		Production	Consumption	Import	Export
South Asia					
	India	366	366	-	-
SE Asia					
	Thailand	985	934	-	51
	Malaysia	(234)	(247)	13	-
	Philippines	1548	(1476)	-	72
	Indonesia	(205)	(205)	-	-
	Vietnam	3349	3337	-	12
	Cambodia	(98)	(98)	-	-
	Laos	(64)	(64)	-	-
	Singapore	(19)	(26)	7	
North Asia					
	Japan	1275	2569	1294	-
	South Korea	1067	1594	527	-
	Taiwan	885	944	59	-
	China	51400	51978	578	-
Other					
	EU	22646	20510	-	2136
	USA	10540	8290	-	2300

(Figures in brackets = 2011 data)

(GIRA 2013)

Pork Consumption

(kg/head/year)

		2001	2012	% Increase
South Asia				
	India	0.45	0.3	
SE Asia				
	Thailand	10.56	13.92	32
	Malaysia	7.75	(7.8)	1
	Philippines	13.45	(15.1)	12
	Indonesia	0.77	(0.85)	10
	Vietnam	18.46	37.21	102
	Cambodia	8.52	(6.82)	
	Laos	5.85	(10.22)	75
	Singapore	6.66	(4.96)	
North Asia				
	Japan	18.16	20.37	12
	South Korea	24.54	31.88	30
	Taiwan	43.5	40.3	
	China	31.38	38.47	23
Others				
	EU	43.74	40.72	
	USA	29.38	26.38	

(Figures in brackets = 2011 data) (GIRA 2013)

Feed milling in 2012

('000 Tonnes)

		Total	Pig	Ruminant	Poultry	Aqua
South Asia						
	India	26840	0	5864	17470	3500
	Pakistan	7410				
	Bangladesh	2730				
	Sri Lanka	615				
SE Asia						
	Thailand	15750	6000	800	7000	1600
	Malaysia	4400				
	Philippines	11917				
	Indonesia	13801	500	1100	11252	1300
	Vietnam	12000	6500	125	2455	2920
	Cambodia					
	Laos					
	Singapore	0				
	Myanmar	600				
North Asia						
	Japan	25220	6109	7947	10395	432
	South Korea	13515				
	Taiwan	7893				
	China	198340	58140	65500	60400	13300
Total Asia		356542				
Other						
	Europe	208400				
	USA	168460	23590	43020	86850	1000
	Australia	7500				

(Alltech Inc., 2013)

Asia is a major livestock producer

- The reality is that Asia accounts for
  - 70% of the worlds poultry
  - 44% of the worlds sheep & goats
  - 49% of the worlds cattle
  - 84% of the worlds pigs

Development & Demographic Change

- Rapid development of the pig & poultry industries has created a lot of structural change
- There is concern that many of the small holders will be marginalised resulting in rural hardship
- In China alone between 1985-2005, 70 million small poultry growers left the industry
- More than 50% of the broiler production now comes from large industrialised farms in China with a similar situation in Thailand and the Philippines
- In lower income countries the livestock revolution is just beginning

Consequences of Rapid Livestock Production Development

- Rapid expansion of livestock production has increased the risk to animals and human health from disease e.g. In 2007 ‘Blue ear disease’ (PRRS, PCV2, Swine fever) resulted in the loss of 50 million pigs in China (9% of their inventory)

- Uncontrolled use of antibiotics raises the risk of tissue residues and microbial resistance

- The emergence of H1N1 Swine flu, and H5N1 Avian flu (and their variants), plus SARS have damaged confidence in food safety

- Environmental pollution by uncontrolled manure disposal and dead stock have raised serious concerns.

Productivity Improvement

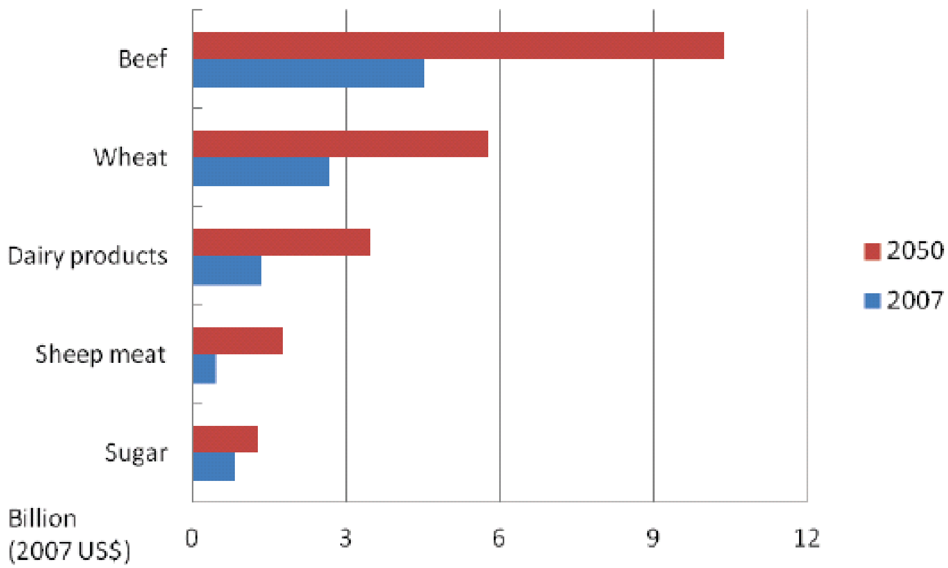
- The potential for livestock production improvement in Asia is high
  - E.g. China has more pigs than the rest of the world combined, but productivity is low.
  - E.g India producers more milk than the USA but achieves it by shear cow numbers as the average dairy yield per cow is only of the order of 4L/day

Implications for Australia

- Pig and poultry meat supply opportunities from Australia are limited
- Most of the increased meat demand will be as pork and chicken
- Australia is not well placed to compete for this supply
  - Constraints
    - Cost of production
      - Labour
      - Feed
      - Licences
      - Environmental compliance
      - Welfare restrictions
      - Water (supply + cost)
      - Freight (Internal & export)
    - Genetics
    - Small domestic market
    - AUD exposure
    - Exposure to world commodity market
    - Limited capital

Implications for Australia

- Australia is competitive in other commodities
- Export Projections.



Competitors

EU, Brazil, USA

EU, Ukraine, US

EU, East Europe, NZ

NZ

EU, Brazil, E. Europe, Thailand

Data source: ABARES model output

Australia does not need much of the pie to do well. We may not be able to compete with generic meat products but we may well be able to capture the high quality clean/green market niche at good margins

Implications for Australia

- Grain supply opportunities – feedgrains,legumes,oilseeds---- but strong competition

- Need to educate Asian feedmillers on the value of wheat relative to corn or DDGS and the value of animal proteins relative to soybeanmeal.

- I endorse the statement of Moir & Morris (ABARE 2011)

  ‘*Australia’s greatest contribution to global food security will be through provisions of technical cooperative assistance to food deficient countries.’*
- Avenues include
  - University Education
  - Trade training and experience
  - On-site consulting
  - Aid packages

This however may be transient. These countries way well over take us technically in due course.

Conclusions

- The intensive livestock industries in Asia have advanced rapidly in recent years to be collectively the dominant livestock producers and stockfeed millers in the world.
- The scale, nature and intensity of activities in each of the countries involved varies widely, due to cultural, economic and resource differences.
- Some are well advanced and maturing while others are just beginning their development.
- The combined effects of population, wealth and urbanisation will increase meat demand and result in further intensive livestock development, creating greater demand for feedgrains and proteinmeals.

Conclusions

- Australia is not well placed to provide generic meat supply from intensive livestock production (pork, chicken, fish) but does have the capacity to supply a number of agricultural commodities (beef, lamb, dairy products, cereal grains, legumes, protein meals, sugar etc) and participate in the region’s prosperity.

- However Australia’s biggest contribution to global food security will likely come in the form of education and technical support to the developing countries.