

2004 international egg costs: constant fluctuation

Profitability in the international egg business fluctuates with changing egg and feed prices. This was especially true in 2004, not least because outbreaks of Avian Influenza in the Netherlands and Southeast Asia continued to have an impact on production.

By Geoff Fairhurst and Peter Hunton,
Poultry Consultants

According to our July 1st 2004 data, average profitability was not much different from July 1st 2003. However, the two sets of data collected between these dates, in November 2003 and March 2004, showed extreme variations. As illustrated in *Table 1*, data for November 2003 showed a rise in egg price of 11.8 cents/kg from July, and only a small rise in feed price. "Profit" jumped by 198 cents/hen. (See box for definitions of terms and description of data). In the March 2004 data, egg prices fell by about 3 cents/kg and feed prices increased almost 2 cents/kg, resulting in a dramatic fall in "profit". Chick prices seem to be increasing. Of course, these averages may

be misleading because they are not weighted by industry size.

Nevertheless, it is likely that at least some of the variation can be traced to the disruptions in the egg industry caused by outbreaks of Avian Influenza (AI) in The Netherlands and Southeast Asia during the past twelve months.

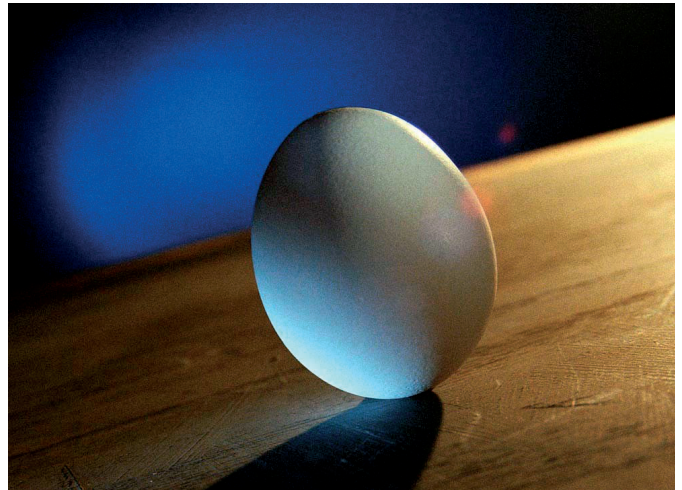
Enormous variations

Looking at the data for individual countries (*Table 2*) shows the familiar enormous variation between them. Canada and Serbia had profitability of about \$12.60/hen, while The Netherlands, Morocco, Poland and Taiwan all had losses over \$3.00/hen. Canada has a supply management program in place, with production controlled to equal expected demand, and prices tied to a cost-of-production formula. Serbia had the highest egg price of any country (\$1.51/kg) and a feed price only slightly above average. The loss in the Netherlands seems to have been due to an extremely low egg price, even in the context of other EU countries, and a comparatively high feed price.

In the case of countries relying on significant egg exports to maintain prices, the incidence of AI will certainly cause distortion in the market place because of other countries prohibiting imports as a precaution.

Major producing countries

In previous articles in this series, we have identified China, India, the US, Brazil and France as the major egg producing countries. France is included as representative of the EU. On this occa-



Source: worldprints.com

sion China did not report a 16-week pullet price, and so it was not possible to calculate a "profit" figure. However, if we use some previous data, and assume a 16 week pullet value of \$1.80, we arrive at a profit figure of +\$0.66, and, using this value, the data for the five countries are presented in *Table 3*.

It's interesting that most of these significant industries had egg prices well below the "world average" of 45 countries, but two of the five had feed prices close to the average. India, the US and Brazil, however, had low feed prices. The chick price varied widely but especially in China, and to some extent in India and Brazil, where chick price was well below average. Profits for all of these large industries were well below world average, and indeed India showed a small loss, largely because of the exceptionally low egg price.

Most profitable countries

As seen in *Table 2*, there's enormous variability between countries in "profitability". *Table 4* shows the top five countries' profit, egg and feed price. Profits in these

Terms and definitions

- Data are collected on March 1, July 1 and November 1 from each of 45-49 countries.
- Costs and prices are reported in local currency and converted to US\$ based on the published exchange rate on the specific date.
- Egg price is the farm-gate price of 1 kg of eggs. If eggs are priced by the dozen, this is converted to a price/kg, based on the size categories for which prices are published.
- Feed price is the price for 1 kg of 17% protein layer mash, delivered.
- Chick price is the price of a one day-old chick, vaccinated and delivered.
- 16-week pullet price is the price of a 16-week pullet, vaccinated, beak-trimmed and delivered.
- "Profit" is the value of 18 kg of eggs, minus the cost of a 16-week-old pullet, minus the cost of 39.6 kg of feed. This assumes a first cycle production of 18 kg of egg mass, at a feed conversion of 2.2 kg feed/1.0 kg of egg mass. No allowance is made for variations in production, feed efficiency, or the overhead costs of labour, utilities, taxes, interest or depreciation.

Table 1 - Egg, feed and chick prices and "profits", averages for 2003-2004

Date	Eggs/kg	Feed/kg	Chick	"Profit"
2003 July	86.4	21.9	66.3	364
2003 Nov	98.2	22.4	65.2	562
2004 Mar	95.3	24.2	72.0	399
2004 July	90.7	23.7	71.3	372

Table 2 - Egg costs and profit data for 45 countries reported on July 1st, 2004 (Using US ¢)

Country	Curr	Exch	1 Kg egg	1 Kg feed	D/O chick	16 wk female	16 wk - d/o	Kg egg buys kg feed	D/O buys kg feed	16 wk buys kg feed	16 wk-D/O buys kg feed	"Profit" Eggs - pul + feed
Argentina	Peso	2,948	58,34	14,25	50,88	240,84	189,96	4,094	3,571	16,901	13,331	244,98
Australia	Au \$	1,420	112,50	24,65	176,06	457,75	281,69	4,564	7,142	18,570	11,428	591,11
Bangladesh	Taka	59,440	100,96	20,19	50,47	311,24	260,77	5,000	2,500	15,416	12,916	706,52
Bolivia	Bol	7,933	60,01	15,50	65,00	200,00	135,00	3,872	4,194	12,903	8,71	266,38
Brazil	Real	3,078	50,55	14,62	37,36	211,18	173,82	3,458	2,555	14,444	11,889	119,77
Canada	Cnd \$	1,333	129,20	18,60	77,27	330,08	252,81	6,946	4,154	17,746	13,592	1258,96
China	Yuan	8,277	62,82	22,35	19,93	NA	NA	2,811	0,892	NA	NA	
Czech	Kc	26,190	95,48	24,05	61,09	324,55	263,46	3,970	2,540	13,495	10,955	441,71
Denmark	D. Kr.	6,115	114,50	22,73	149,14	452,49	303,35	5,037	6,561	19,907	13,346	708,40
Ecuador	Sucre	1,00	91,69	28,00	65,00	550,22	485,22	3,275	2,321	19,651	17,329	-8,60
Egypt	£ E	6,215	71,53	25,74	38,62	228,48	189,86	2,779	1,500	8,876	7,376	39,76
Estonia	E. Kr	12,872	97,13	24,86	81,57	427,28	345,71	3,489	3,281	17,187	13,906	336,60
Finland	Euro	0,823	75,33	24,30	97,21	400,97	303,76	3,100	4,000	16,501	12,500	-7,31
France	Euro	0,823	78,99	23,69	81,41	388,82	307,41	3,334	3,437	16,413	12,976	94,88
Germany	Euro	0,823	64,40	24,30	63,18	243,01	179,83	2,650	2,600	10,000	7,400	-46,09
Hungary	For.	206,40	104,99	27,13	75,09	421,51	346,42	3,872	2,768	15,537	12,769	393,96
India	Rup	45,885	38,88	14,17	36,18	174,35	138,17	2,744	2,553	12,304	9,751	-35,64
Indonesia	Rupiah	9295,00	76,39	21,52	43,03	258,24	215,21	3,550	2,000	12,000	10,000	264,59
Japan	Yen	108,130	129,47	32,37	129,47	647,37	517,90	4,000	4,000	19,999	15,999	401,24
Malaysia	M. Rin	3,800	87,74	24,47	50,00	260,50	210,50	3,586	2,043	10,646	8,602	349,81
Morocco	Dirham	9,029	77,54	33,23	69,22	387,64	318,42	2,333	2,161	11,665	9,582	-307,83
Myanmar	Kyat	800,00	66,68	15,63	41,25	312,50	271,25	4,266	2,639	19,994	17,354	268,79
Netherlands	Euro	0,823	52,69	27,04	68,04	359,66	291,62	1,949	2,516	13,301	10,785	-482,02
New Zealand	NZ \$	1,561	163,75	32,03	168,48	576,55	408,07	5,112	5,260	18,000	12,740	1102,56
Nigeria	Naira	132,50	134,20	30,19	120,75	420,19	299,44	4,445	4,000	13,918	9,919	799,89
Norway	N. Kr	6,968	150,69	38,46	111,94	480,77	368,83	3,918	2,911	12,500	9,590	708,63
Pakistan	Rupee	58,370	81,31	17,82	20,56	171,32	150,76	4,563	1,154	9,614	8,460	586,59
Peru	Sol	3,470	95,100	22,19	93,08	243,62	150,54	4,286	4,195	10,979	6,787	589,46
Philippines	Peso	56,025	92,24	25,88	44,62	249,89	205,27	3,564	1,724	9,656	7,932	385,58
Poland	Zloty	3,711	67,38	30,87	54,57	350,31	295,74	2,183	1,768	11,348	9,580	-359,92
Russia	Rbl	29,03	82,12	23,36	135,38	529,45	394,07	3,515	5,795	22,665	16,869	23,65
S. Africa	Rand	6,218	84,90	24,12	64,33	321,65	257,32	3,520	2,667	13,335	10,668	251,40
Serbia	N Din	59,724	150,72	26,80	50,23	385,10	334,87	5,624	1,874	14,369	12,495	1266,58
Slovakia	Sk	32,745	91,64	25,96	62,60	357,31	294,71	3,530	2,411	13,764	11,352	264,19
Spain	Euro	0,823	135,03	26,75	55,89	291,62	235,73	5,048	2,089	10,902	8,812	1079,62
Sri Lanka	Rupee	102,325	87,97	20,52	39,09	244,32	205,23	4,287	1,905	11,906	10,001	526,55
Sweden	S. Kr	7,540	112,73	24,93	112,73	437,67	324,94	4,522	4,522	17,556	13,034	604,24
Taiwan	Nt \$	33,697	64,31	29,08	89,03	343,40	254,37	2,211	3,062	11,809	8,747	-337,39
Thailand	Baht	40,775	102,21	24,53	66,22	367,87	301,65	4,167	2,700	14,997	12,297	500,52
Tunisia	Dinar	1,261	115,01	30,13	57,89	413,50	355,61	3,817	1,921	13,724	11,803	463,53
UK	£	0,551	126,06	23,59	81,85	406,54	324,69	5,344	3,470	17,234	13,764	928,38
USA	U.S \$	1,00	54,18	14,50	51,00	180,00	129,00	3,737	3,517	12,414	8,897	221,04
Ukraine	Hryvna	5,315	69,00	20,70	43,27	298,15	254,88	3,333	2,090	14,403	12,313	124,13
Uruguay	Peso	29,630	72,69	17,72	57,37	286,87	229,50	4,102	3,238	16,189	12,951	319,84
Vietnam	Dhong	15678,00	126,53	23,34	89,30	331,67	242,37	5,421	3,826	14,210	10,384	1021,61
MEAN			91,68	23,87	72,35	343,18	269,22	3,840	3,030	14,354	11,233	371,83

countries were almost three times the average for the 46 countries sampled. It is obvious that most of the difference arose as a result of high egg prices in these countries, although New Zealand also had a relatively high feed price. High egg prices may result from lack of competition from imports. With the prevalence of Avian Influenza in some parts of the world, imports are often prohibited, which may elevate domestic prices. In Canada, imports above the Tariff Rate Quotas established under NAFTA attract prohibitive duties. New Zealand has a *cor-don sanitaire*, besides being an isolated and small market. It is not clear to us how Spain could support egg prices so much higher than the rest of the EC, but

that explains its inclusion in this group of countries.

Least profitable countries

At the other end of the scale are those countries that showed losses, or very small profits. These are shown in *Table 5*. All these countries had egg prices considerably below average. In addition, all except Germany had feed prices well above average. In our calculations, each one cent added to feed price adds 39.6 cents to the cost side of the "profit" equation. Each cent below the average egg price accounts for a loss of 18 cents from the revenue. It is of interest that three of the five least profitable countries in this study are EU

members. Germany's industry is under pressure from welfare activity from its government and elsewhere, while The Netherlands may have been re-adjusting its industry following the 2003 outbreak of Avian Influenza. Note that while these three countries had among the lowest profit, another EU country, Spain, was among the top five. It is surprising that with an officially open border egg prices can be so different in different part of the EU. *Table 6* shows egg price/kg in all EU countries surveyed.

The average of the 13 countries surveyed was only 1.9 cents/kg above the overall average, but variation within the EU was about the same as among the other 33 countries.

Table 3 - Cost and profit data for major egg producing countries

Country	Cents/kg egg	Cents/kg feed	Cents/d.o. chick	\$/16 week pullet	"Profit"/hen (\$)
China	62.8	22.4	19.9	1.80*	0.66
India	38.9	14.2	36.2	1.74	-0.36
US	54.2	14.5	51.0	1.80	2.21
Brazil	50.6	14.6	37.4	2.11	1.20
France	79.0	23.7	81.4	3.89	0.95
Ave. 45 countries	90.7	23.7	71.3	2.69	3.72

* Estimated value - see text.

Table 4 - Top five countries in terms of profitability (all data are US cents)

	"Profit"	Eggs/kg	Feed/kg
Serbia	1,266	151	26.8
Canada	1,259	129	18.6
New Zealand	1,102	164	32.0
Spain	1,079	135	26.8
Vietnam	1,021	126	23.3
Ave. of 46 countries	372	92	23.9

Table 5 - Least profitable countries (all data are US cents)

	"Profit"	Eggs/kg	Feed/kg
The Netherlands	-482	52.7	27.0
Poland	-360	67.3	30.9
Taiwan	-337	64.3	29.1
Morocco	-308	77.5	33.2
Germany	-46	64.4	24.3
Ave. 46 countries	372	91.7	23.9

Table 7 - International Competitiveness Rankings (ICR) for 46 Countries

	Cost rank	Margin rank	Egg pr rank	Sum ranks	ICR
India	1	4	2	7	1
Argentina	2	27	1	30	2
Myanmar	5	22	11	38	3
USA	4	32	5	41	4
Brazil	3	36	3	42	=5
Pakistan	7	15	20	42	=5
Bolivia	6	30	7	43	7
Uruguay	8	23	15	46	8
Bangladesh	10	9	31	50	9
Canada	9	2	40	51	10
Sri Lanka	11	17	24	52	11
Mexico	13	39	6	58	12
Ukraine	12	34	13	59	13
Indonesia	14	29	17	60	14
China	15	38	8	61	15
Vietnam	17	5	39	61	16
Peru	16	18	28	62	17
UK	19	6	38	63	18
Czech	18	20	29	67	19
Denmark	24	8	36	68	20
Malaysia	22	25	23	70	21
S. Africa	21	28	22	71	=22
Thailand	25	14	32	71	=22
France	20	35	19	74	24
Germany	23	42	10	75	25
Sweden	32	11	35	78	26
Serbia	33	1	45	79	27
Estonia	29	21	30	80	=28
Finland	27	37	16	80	=28
Russia	26	33	21	80	=28
Australia	35	12	34	81	=31
Philippines	30	24	27	81	=31
Spain	34	4	43	81	=31
Egypt	28	40	14	82	=34
Slovakia	31	26	25	82	=34
The Netherlands	36	46	4	86	36
Hungary	37	19	33	89	37
Nigeria	42	7	42	91	38
Taiwan	39	45	9	93	=39
Tunisia	40	16	37	93	=39
New Zealand	45	3	46	94	41
Ecuador	38	31	26	95	42
Poland	41	44	12	97	43
Japan	44	13	41	98	44
Norway	46	10	44	100	45
Morocco	43	43	18	104	46

Table 6 - Egg prices (US cents/kg) in EU countries

Czech Republic	95.5	Hungary	105.0
Denmark	114.5	Poland	67.4
Estonia	97.1	Slovakia	91.7
Finland	75.3	Spain	135.0
France	79.0	Sweden	112.7
Germany	64.4	UK	126.1
The Netherlands	52.7	Ave. 13 EU countries	93.6

International competitiveness

We have developed an arbitrary method to indicate international competitiveness, based on combined rankings for low cost of production, high margin and low domestic egg price. This ranking is shown for the July 2004 data, in *Table 7*.

According to data tabulated in *World Poultry* (Volume 20, Number 10, 2004) the largest net exporters in this list are, in order or ranking, The Netherlands, Malaysia, China, Spain, US and France. IC Rankings for these countries are, respectively, 36, 21, 15, =31, 4 and 24. Only China and the US, as large exporters, rank in the top one-third, while the largest, The Netherlands, ranks 36th. Of course, some of the data may be temporary in nature; egg prices are known to fluctuate rapidly, while export markets take a long time to develop, and have to be served continuously even while occasionally unprofitable.

Several top-ranking countries in this list, including India, Argentina and Brazil are developing export markets and, based on these data, are extremely competitive provided they maintain the type of cost structure seen here. The US and China, already in the top one-third, have established export markets and seem likely to retain and/or expand them.

While Mexico is competitive, phytosanitary restrictions currently limit exports,

although it hopes to commence trade in powdered egg with neighbouring countries shortly.

The "wild card" in all considerations of world trade in eggs is, of course, the emergence of diseases such as Avian

Influenza. Even the most competitive countries' "no imports" list the moment such an outbreak occurs. The current situation in Asia places countries in that continent in an extremely vulnerable position. ■