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COMPETITIVENESS OF BROILER PRODUCTION IN CENTRAL IRAQ 2008



Inma
AGRIBUSINESS PROGRAM

August 2008

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Competitiveness of Broiler Production in Central Iraq
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Summary

This update of the previous paper “*Central Iraq Poultry (Broiler) Production, Problems and Prospects*” issued by Inma in June 2008, is done to take into account more recent information on costs and prices affecting the broiler industry and its main competitor. Conclusions in that study were based in great part on prior broiler farm surveys conducted in 2005 and 2006. Those surveys highlighted a virtual collapse of the Iraqi broiler industry due to competition from Brazilian frozen imported at prices well below Iraqi production costs. Iraqi growers face shortages and high prices for feed, chicks, electricity, and marketing services.

The overall conclusion from this updated analysis confirms that costs of production of broilers in Iraq are high and cannot compete with imported frozen broiler meat. However, Iraqi growers can produce birds competitively for the live bird market where consumers are willing to pay higher prices. However, the live-bird market is a small segment of the total market with limited prospects for growth.

Market Prices

Wholesale and Retail Prices for Broilers in Iraq July 2008

| Prices | Frozen Brazil Imported 2005 | Frozen Brazil Imported July 2008 | Iraq Live 2005 | Iraq Live July 2008 |
|-------------------------|-----------------------------|----------------------------------|----------------|---------------------|
| Retail Price/kg meat | \$2.60 | \$3.80 | \$3.60 | \$5.60 |
| Wholesale Price/kg meat | \$2.20 | \$3.20 | \$2.90 | \$4.20 |

Source: Anka, monthly average prices, July 2008

Notes

1. Price gap at retail prices between Iraqi live chicken (meat equivalent at 80% carcass) and Brazilian frozen imported has widened significantly from \$1.00 in 2005 to \$1.80 in 2008.
2. Poultry export from Brazil to GCC countries grew 73% in the first semester of 2008 vs. 2007, reaching 543,000 tons (\$945 million). (Source Secex)

Production Costs

Worldwide, the poultry industry has suffered from steep cost rises in main feed ingredients (corn and soybeans). Nevertheless countries like Brazil, an efficient producer of corn and soybeans, have experienced only a minor impact on feeding rations:

Cost Trend for Corn and Soybeans 2002, 2007, 2008. (US\$/ton)

| Price \$/ton | 2002 | 2007 | 2008 |
|--------------|--------|--------|--------|
| Corn | \$ 87 | \$ 140 | \$ 300 |
| Soybean | \$ 279 | \$ 537 | \$ 543 |

Source: Economist, Commodity Index

Current estimated production¹ cost in Iraq is \$2.15/kg live or \$2.68/kg meat, while variable Brazilian production cost (export standard) is \$0.75/kg (Source Embrapa). Iraqi production variable costs have been calculated assuming: (a) 6%-8% mortality; (b) 2.5 feed conversion ratio; (c) 50 days growing cycle; (d) only 3 batches/year (no production in the hottest month); and (e) 1.8 kg live weight of birds at slaughter time.

Average CIF frozen Brazilian chicken placed in Iraq is \$2.0/kg. Current Iraqi variable production cost (meat equivalent at 80 % carcass) is \$2.68/kg, assuming mortality at 6%-8%.

Key Production Costs Indicators Brazil and Iraq 2005 and 2008

| Poultry Production Indicators | Brazil 2005 | Brazil 2008 | Iraq 2005 | Iraq 2008 |
|---|-------------|-------------|-----------|------------------|
| Cost of Ration (\$/ton) | 200 | 320 | 330 | 600 |
| Feed Conversion ratio | 2.0 | 1.8 | 3.0 | 2.5 ² |
| Feeding Costs (\$/kg) | 0.40 | 0.57 | 0.83 | 1.5 |
| Variable Production Cost (\$/kg live) | 0.52 | 0.747 | 1.35 | 2.15 |
| Variable Production Cost(\$/kg meat equiv.) | 0.65 | 0.94 | 1.68 | 2.68 |
| CIF GCC Brazilian Whole Frozen/kg | 1.17 | 1.65 | | |

¹ Inma estimate in July 2008, based on market prices and assumptions detailed in table below.

² Based on Inma field staff indications in July 2008, in the absence of a 2005 MOA survey update.

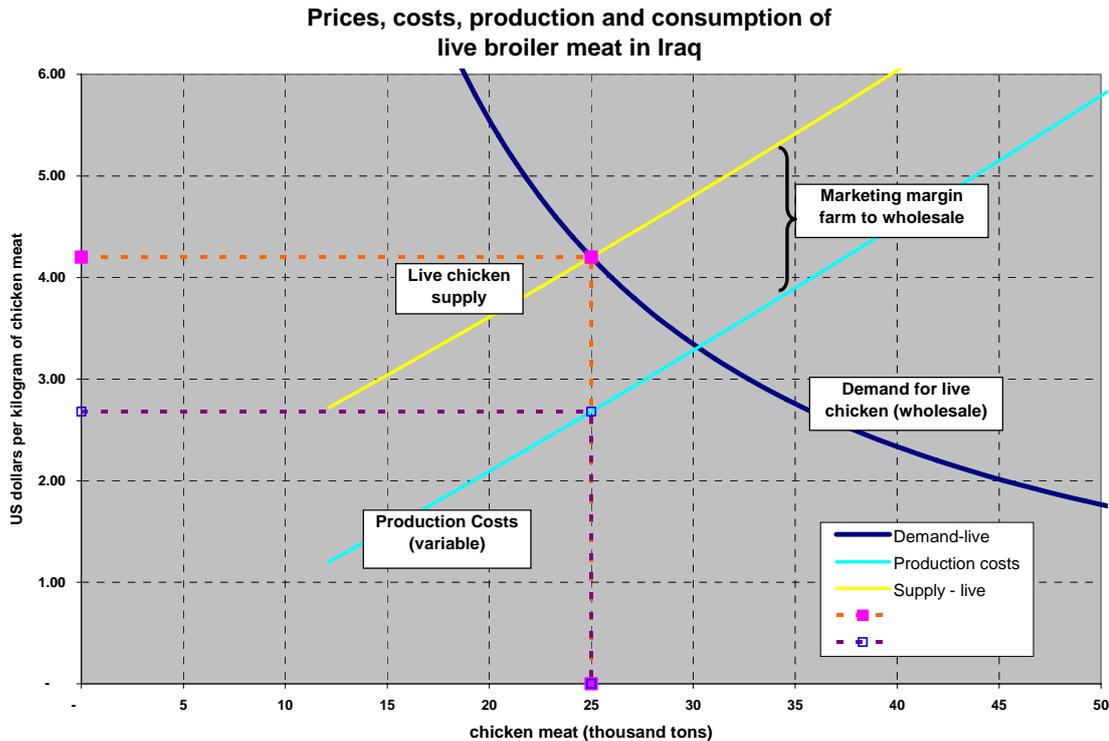
Cost Estimation Details

| POULTRY COST PRODUCTION (Updated) | | | | | | | |
|--|--------------------------------------|--------|--------|---------------|--------|--------|-------|
| Chicken House Costs | Brazil | | | Iraq | | | |
| | USD / Chicken | USD/kg | % CT | USD / Chicken | USD/kg | % CT | |
| FULL COST | 1. VARIABLES COSTS (A) | | | | | | |
| | 1.1 - Chicks | 0.42 | | 20.2% | 0.700 | 17.4% | |
| | 1.2 - Feed Costs | 1.3 | | 62.6% | 2.800 | 69.5% | |
| | 1.3 - Litter | 0.024 | | 1.2% | 0.030 | 0.7% | |
| | 1.4 - Heating | 0.023 | | 1.1% | 0.030 | 0.7% | |
| | 1.5 - Energy | 0.012 | | 0.6% | 0.150 | 3.7% | |
| | 1.6 - Water | 0.003 | | 0.1% | 0.030 | 0.7% | |
| | 1.7 - Labor Cost | 0.035 | | 1.7% | 0.050 | 1.2% | |
| | 1.9 - Maintenance | 0.016 | | 0.8% | 0.012 | 0.3% | |
| | 2.0 - Veterinary Costs | 0.010 | | 0.5% | 0.030 | 0.7% | |
| | 2.2- Others | 0.100 | | 4.8% | 0.050 | 1.2% | |
| | Total Variable Costs | 1.943 | 0.747 | 93.5% | 3.882 | 2.15 | 96.4% |
| | Weight per Bird | 2.6kg | | | 1.8kg | | |
| | 2. FIXED COSTS (B) ³ | | | | | | |
| | 2.1 - Depreciations Chicken House | 0.024 | | 1.2% | 0.024 | | 0.6% |
| | 2.2 - Depreciation Equipment | 0.070 | | 3.4% | 0.070 | | 1.7% |
| | 2.3 - Remuneration on Capital | 0.040 | | 1.9% | 0.050 | | 1.2% |
| 2.4 - Remuneration on working Capital | 0.001 | | 0.0% | 0.001 | | 0.0% | |
| Total Fixed Cost | 0.135 | | 6.5% | 0.145 | | 3.6% | |
| Total Costs (A + B) | 2.078 | | 100.0% | 4.027 | | 100.0% | |

³ Cost analysis in this study is based only on variable costs due to the difficulty to calculate fixed costs in Iraq, which are largely dependent on number of batches and birds per year.

Broiler Market Segmentation

The following chart helps visualize the relationships between estimated costs of production and observed wholesale market prices for live broiler meat in Iraq.

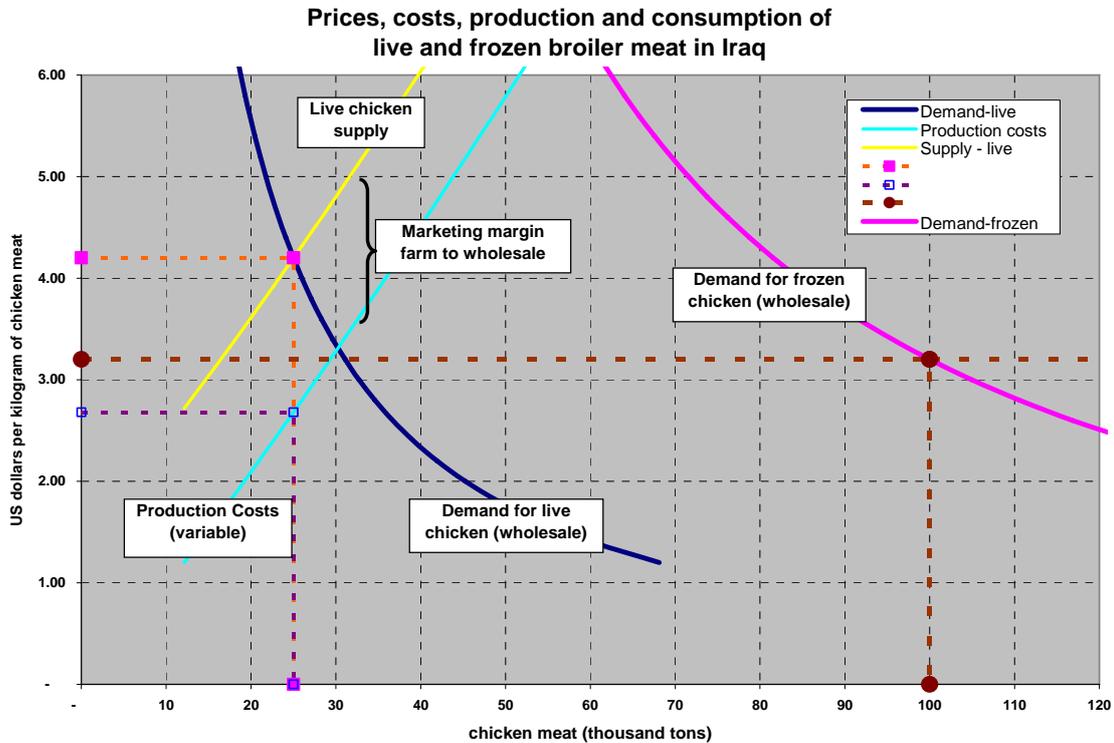


A total estimated consumption of about 125,000 tons of broiler meat are consumed in Iraq, of which 25,000 come from live chicken and 100,000 from imported frozen meat. This level of consumption corresponds to 5 kg per capita or broiler meat per year, 1 from live birds and 4 from frozen chicken. The current price of live chickens is about 3,900 dinars per kilogram of live weight, which translates into \$4.2 per kilogram of meat equivalent (compared with only about \$3.20 per kg of frozen chicken meat). Variable costs of production of live chicken are estimated at \$2.15 per kilogram live, equivalent to \$2.68 per kilogram of meat.

The difference between variable costs of production (\$2.68) and wholesale price (\$4.20) is the marketing margin (\$1.52) between the farm and the buyer at the wholesale market. That marketing margin must cover fixed costs at the farm, profit for the grower, transport to the market, mortality in transit, water and feed for birds in transit, transaction expenses, sales commissions, and other marketing costs. A demand or consumption line is drawn to reflect the fact that as the price of chicken meat from live birds decreases more meat is consumed, and vice versa, when prices increase less live birds will be consumed. For example, a 16 percent increase in live birds production (from 25,000 to 29,000 tons) would likely induce a 20 percent price reduction (from

\$4.20 to \$3.36 per kg). [Assuming a high price elasticity of 0.80]. The growth potential of the live bird market segment is therefore limited.

The second chart below reproduces the chart above but adds the demand line for frozen chicken meat.



The current average wholesale price for imported frozen broiler meat (whole bird) according to Anka price reports is \$3.20 per kilogram. This market point is shown by the dotted lines from the point in the frozen demand line. Note that the margin between the current variable production costs for meat from live chickens (\$2.68/kg) and the wholesale market price for frozen meat (\$3.20) is only \$ 0.52, clearly insufficient for chicken growers of sell their birds at the frozen market, when they can sell them in the live chicken market at \$4.20/kg.

The fresh chicken meat market would be an even small segment of the chicken market, a fraction of the size of the live chicken market. It is not depicted here because we have no data on the size of that market and the costs of production, processing, and marketing involved.

Conclusions

- Broiler production costs in the Iraqi poultry sector have increased since 2005 mainly because of rising feeding costs. Current Iraqi variable production cost (meat equivalent at 80% carcass) is \$2.68/kg, well above average the CIF frozen Brazilian meat price placed in Iraq (\$2.0/kg).
- The more efficient Iraqi broiler growers can remain profitable in the live chicken market segment where high prices paid by consumer cover the high logistic costs caused by small batches, extra cycle days, higher mortality, etc.
- The live bird market segment has become a premium price segment paying \$4.2/kg wholesale and \$5.6/kg at consumer price (meat equivalent).
- The price gap between frozen imports and live broiler meat has widened in absolute terms from \$1.0 per kg in 2005 to the current \$1.8 per kg. This represents a constraint on the entry of Iraqi growers in the frozen meat market while enhancing the attractiveness of the live chicken segment of the market.
- The live chicken market segment however offers limited growth potential in the future because increases in production will reduce market prices significantly. Future growth will be mainly determined by increased household income.