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Post: Cairo

Poultry Report

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Poultry and Products

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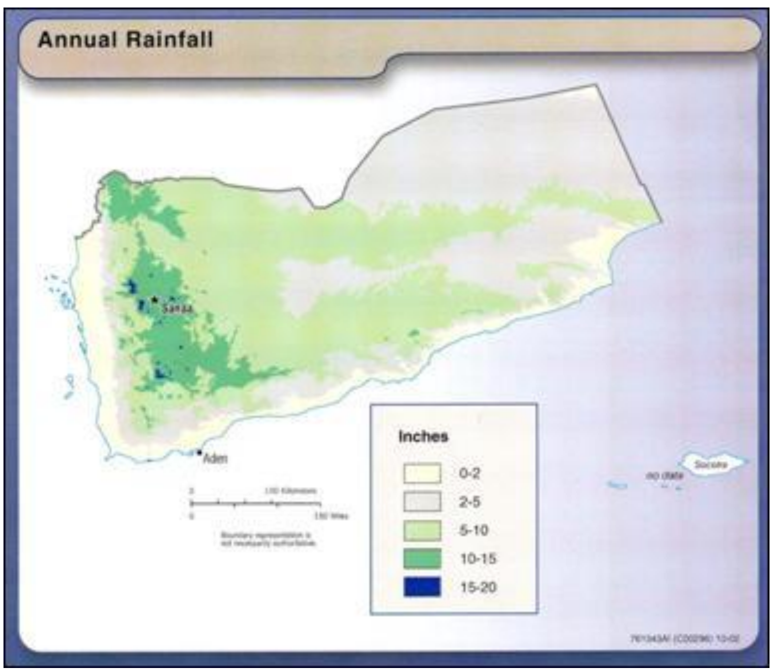
Report Highlights:
FAS Sana'a (Post) estimates Yemen's poultry production to slow in 2011 due to ongoing socio-political instability. Previous good growth in the local poultry sector is overshadowed by ongoing hostilities between the government and its opponents. Post estimates that the Yemeni poultry sector's 2011 growth will range between 1-2 percent. Demand for affordable animal protein is good; it could assist the sector's recovery in 2012 if hostilities cease.

Executive Summary:
Yemen’s demand for commercially raised poultry meat took off in the 1980s. The country counts with some 1,500 commercial poultry farms with nearly 3,300 sheds in operation. In 2010 there were an estimated 139 million broiler birds in production. Post estimates broiler production growing at a compound annual growth rate of over 5 percent in 2005-10. Production meets half of local demand. Political instability in 2011 is impacting domestic production.

General Information:
The Republic of Yemen (527,968 sq km) is situated on the southern end of the Arabian Peninsula. It borders the Arabian Sea, the Gulf of Aden, and the Red Sea. It is situated next to Oman and Saudi Arabia. The Central Intelligence Agency estimates Yemen’s population in 2011 at 24 million people. It has a population growth rate of 2.6 percent and a median age of 18.1 years. Yemen is divided into 21 governorates and the capital city of Sana’a (see, Annex 1).



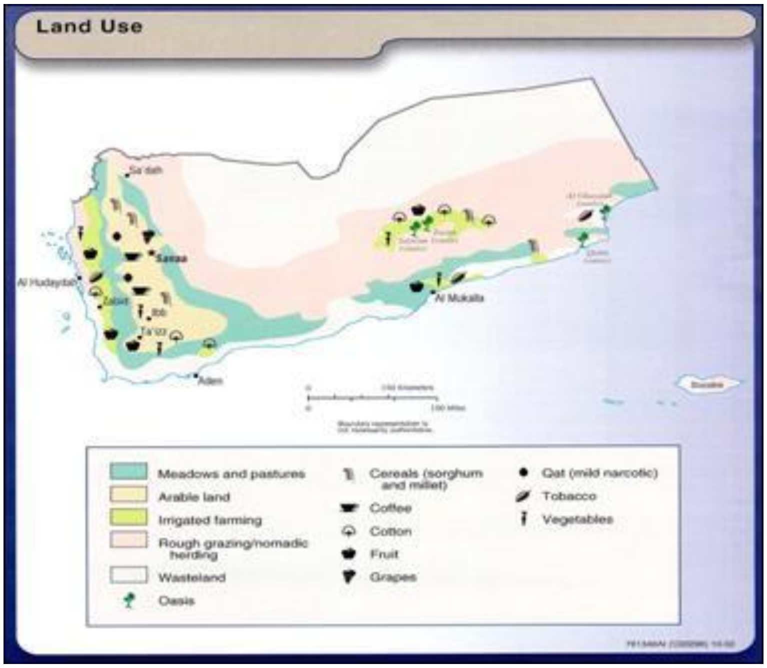
Yemen is slightly larger than twice the size of Wyoming. It is divided into five main agro-ecological zones where conditions vary widely. Rainfall ranges from a low of 50 mm in the coastal lowlands to about 1,200 mm in parts of the southern highlands. Agricultural production is significantly impacted by declining water resources. The five zones are broken down as follows:

- Central and northern highlands
- Coastal lowland (a 2,100 km long coastal strip)
- Eastern zone (dry desert area, includes the Empty Quarter)
- Southern highlands
- Islands (Socotra and some 200 other islands)

Impact of Political Instability on Yemen’s Economy
Political instability bordering on civil war is impacting the economy, including agricultural production and food distribution. Civil unrest and tribal insurrection against the Ali Abdullah Saleh administration is leading to severe fuel shortfalls and driving up food prices. Most fuel stations are closed. Black market fuel by some estimates sells at 160 percent above official prices (in some cases as high as 500 percent). Poor households’ purchasing power in the food insecure Raima, Amram, Hajjah, and Ibb governorates is worsening due to food price increases. Yemenis in order to cope are reducing the number of meals, their consumption of animal protein, and opting to fast more frequently. Transportation costs are reported to make food at least 7 percent more expensive in rural areas than in

urban locales.

Yemen's Agricultural Sector and Food Security
The agriculture sector accounts for over 8 percent, or $5 billion, of Yemen's 2010 GDP of $63.4 billion (purchasing power parity). Within the agricultural sector, livestock production represents roughly 23 percent, or about $1.1 billion, of the sector's total value. Poultry production itself accounts for over 8 percent or $93 million of Yemen's total yearly livestock production values.



Yemen is a low income economy dependent on declining petroleum resources. GDP per capita (purchasing power parity) in 2011 is estimated at $2,700. The agricultural sector is facing severe water challenges; these are stressed by population growth and increased Gat (narcotic) plant cultivation. About 71 percent of the population lives in rural areas (see, Annex 2). Roughly 79 percent of this population depends on the livestock sector for its livelihood. Women are primarily responsible for animal husbandry activities in 90 percent of the 1.5 million families dependent on livestock rearing.

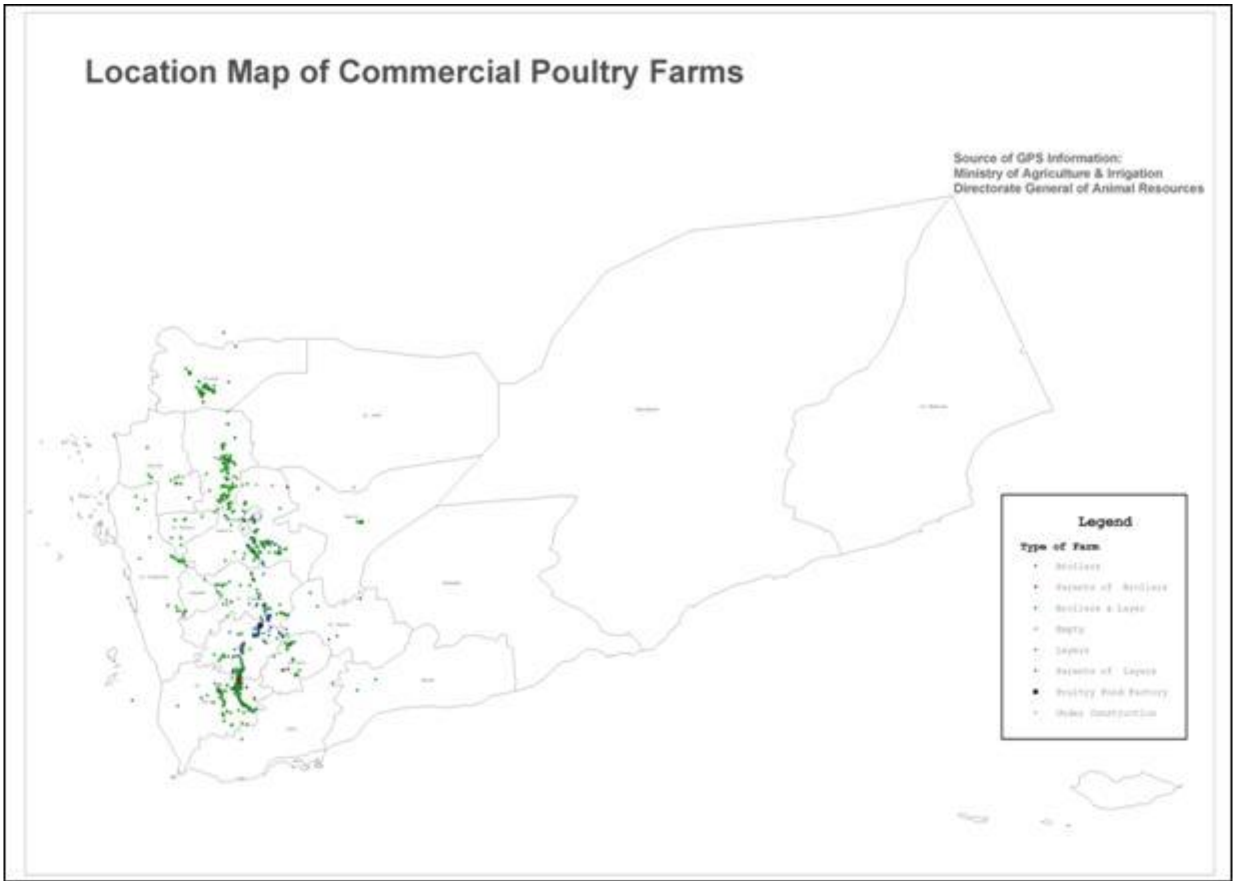
Yemen's food security has deteriorated over the past decade due to declining oil exports, mounting food import costs, and socio-political instability. Food security in Yemen is premised on the government's ability to finance food imports to compensate for production shortfalls. The government's food import budget depends on Yemen's balance of payments, exports, and hard currency reserves. The International Food Policy Research Institute indicates that Yemen is using a quarter of its total export revenues (or nearly $1.8 billion in 2010) to finance food imports – normally the international average is 9 percent. Most other countries in the Middle East and North Africa region on average allocate 11.5 percent of their export earnings toward financing food imports. International market price volatility is straining Yemen's resources.

Agricultural production is in decline due to water scarcity, as well as the government's difficulty in financing imports of agricultural inputs. Yemen's ability to feed itself through domestic production and imports is challenging. The deteriorating political situation is further exposing Yemenis to external shocks. A third of the population or 7.5 million people do not have enough to eat. Food insecurity is five times higher in rural areas, where it affects 6.4 million people.

Yemen's Poultry Sector
The first commercial poultry farms in Yemen were established in the 1970s. Initially farms were completely dependent on imported inputs (e.g., everything from day-old chicks to machinery to feeds). The government opted to strategically target the commercial poultry sector as an economic development priority. Foreign assistance in the 1980s facilitated training, field visits, and laboratory analysis, as well

as veterinary and extension services.

Yemen's government continues to promote local and foreign investment in the poultry sector. The government also intervened quickly when HPAI (avian influenza or bird flu) broke out in the country in 2003-04.



The poultry industry is a $2 billion sector. Broiler production during 2005-10 grew at a compound annual growth rate of over 5 percent. Post estimates that production will slow to 1-2 percent in 2011-12 due to political instability. Mounting diesel fuel costs and power outages of 8 to10 hours are disrupting production. Normally the return on investment on poultry production is high compared to mangoes, milk, potatoes, tomatoes, onions, wheat, and water melon.

Yemeni commercial poultry demand is driven by its more affordable price compared to red meat. Total meat consumption (both red and white) in 2009 averaged 371,500 metric tons (MT) per year; poultry meat accounted for about 252,000 MT. Local poultry meat production normally meets over 50 percent of demand. Estimates are that 3.5 percent of production occurs in backyard coops. The balance is met by frozen poultry imports from France, Brazil, and Saudi Arabia. Consumer demand for frozen poultry dropped 20 percent this June due to blackouts that make it difficult to maintain product quality at home; retail prices have now fallen by 25 percent. Otherwise demand for frozen poultry imports could potentially grow by 4 percent in 2011.

Yemen's 2006 Poultry Industry Survey

The 2006 poultry industry survey highlights that the poultry industry is concentrated in Yemen's more densely populated highland zone. However, the country's hatcheries are almost all located in the

Tihamah coastal lowlands. Table (1) highlights farm and shed numbers by governorate (see, Annex 3 for poultry production pictures).

Table (1) – Yemen's 2006 Poultry Industry Survey Findings

Governorate	Year 2006			Year 2007 (estimate)		
	Farms	Sheds	Percent*	Farms	Sheds	Percent*
Ibb	274	563	17	284	560	16
Taiz	267	507	15	278	530	15
Sana'a	209	463	14	214	481	14
Sadah	74	364	11	79	382	11
Dhamar	256	351	11	261	368	11
Amran	221	307	9	225	322	9
Al-Beida	85	196	6	89	206	6
Sana'a City	71	194	6	72	204	6
Hodeidah + Raimah	49	115	4	53	121	4
Al-Daleh	31	72	2	34	75	2
Lahj	11	71	2	34	75	2
Hadhramout	4	34	1	4	40	1
Al-Mahwit	7	24	0.7	7	27	0.8
Hajjah	6	14	0.4	6	9	0.3
Abyan	1	7	0.2	1	16	0.5
TOTAL	**1,566**	**3,282**	**------**	**1,618**	**3,445**	**------**

(*) Percentages have been rounded to the nearest whole number with the exception of rates below 1percent. Totals do not necessarily add up to 100 percent as a result.
Source: Commercial Poultry Farm Survey 2006 and the Food and Agricultural Organization.

Yemen's poultry sector is broken down into four main segments: 1) large producers; 2) mid-size producers; 3) small producers; and 4) backyard production.

At last count Yemen had seven large enterprises that own their own hatcheries and stock breeding farms, as well as feed blending facilities that supply the country's small and mid-size producers. According to the Food and Agriculture Organization (FAO) these companies supply 65 percent of Yemen's day-old chicks, 30 percent of the country's table eggs, and 10 percent of the broilers consumed. Outside of the large producers, Yemen counts with roughly 25 mid-size producers. Not all companies in the mid-size category own their own breeding stock. The large producers account for 35 percent of Yemen's day-old chicks, 50 percent of the country's table eggs, and 60 percent of the broilers consumed domestically.

Small producers do not normally own breeding stock. These producers are located in Tihamah and Hadhramout. Small producers according to the FAO account for 20 percent of the country's table eggs and 30 percent of its broilers. Backyard production is often limited to individual family needs; few produce sufficient number of birds for supplying urban demand. Power outages are affecting hatcheries' ability to maintain constant, warm temperatures.

Yemen's Poultry and Egg Production and Consumption

The commercial poultry industry is hard pressed to keep up with the demand for affordable animal protein. Post estimates that production and consumption under more normal circumstances could grow by 4-5 percent in 2011. Unless political instability abates quickly, 2011 production growth estimates will likely be closer to 1-2 percent.

Table (2) – Poultry, Meat, Broiler Production Supply and Demand – 2003 to 2011

Attribute*	2003	2004	2005	2006	2007	2008	2009	2010	2011* (4%)	2011** (2%)
Production	113	115	117	122	134	140	144	150	156	153
Total Imports	87	108	94	75	88	79	108	105	105	105
Total Supply	200	223	211	197	222	219	252	255	261	258
Total Domestic Consumption	200	223	211	197	222	219	252	255	261	258
Total Use	200	223	211	197	222	219	252	255	261	258
Total Distribution	200	223	211	197	222	219	252	255	261	258
Per Capita Consumption	10.5	11.3	10.4	9.4	10.3	9.9	11	10.9	10.8	10.7

(*) Foreign Agricultural Service, Official USDA estimates. (**) Post Estimates. Values for per capita consumption are in kilograms. All other values in Table (2) are in 1000 metric tons.
Source: Foreign Agricultural Service, Official USDA estimates and Post estimates.

According to the FAO over 400,000 people are employed by Yemen's commercial poultry sector and its related industries and service sectors. Some 1.2 million rural families also raise backyard poultry. The commercial sector counts with only one local manufacturer of veterinary drugs and disinfectants. At last count there were 62 industrial grade poultry feed grinding, preparing, and mixing machines in the country. The commercial poultry sector counts with 14 hatcheries, two modern (non-operational) poultry slaughterhouses, and 2,182 slaughter shops (see, Annex 4).

Table (3) – Poultry Population – 2003 to 2011

	2003	2004	2005	2006	2007	2008	2009	2010	2011* (4%)	2011* (2%)
Broilers	116.4	118.8	121.2	123.7	126.2	130.0	134.1	139.4	145.0	142.2
Broiler Breeders	1.128	1.187	1.250	1.375	1.500	1.500	1.350	1.408	1.465	1.436
Egg Layers	4.430	4.540	4.654	4.884	5.110	5.500	5.743	6.002	6.262	6.122
Egg Layer Breeders	.113	.115	.117	.124	.163	.172	.187	.203	.221	.207
Backyard Production	9.088	9.369	9.658	9.956	10.25	10.56	10.88	11.22	11.56	11.44
TOTAL	**131.1**	**134.0**	**136.8**	**140.0**	**143.2**	**147.7**	**152.2**	**158.2**	**164.5**	**161.4**

(*) Foreign Agricultural Service, Official USDA estimates. (**) Post Estimates. Figures are in millions.

Source: Commercial Poultry Farm Survey 2006, Food and Agricultural Organization, Yemen Directorate General of Animal Production, and Post estimates.

While Yemen's commercial poultry production normally meets 50 percent of domestic demand, with the balance of product being imported, the country's production of day-old chicks covers most of local industry's needs. Shortfalls are made up by imports of day-old chicks from Saudi Arabia. Yemeni demand for table eggs is met by domestic production.

Table (4) – Production of Table and Hatching Eggs – 2003 to 2012

Commodity	2003	2004	2005	2006	2007	2008	2009	2010*	2011*	2012*
Commercial Broiler Hatching Eggs	124	131	138	151	165	180	192	206	209	212
Commercial Egg Layer Hatching Eggs	9	9	9	10	11	13	15	16	16	16
Backyard Broiler and Egg Layer Hatching Eggs	55	57	85	60	62	64	67	69	70	71
Commercial Table Eggs	890	908	930	976	1,022	1,085	1,128	1,170	1,181	1,193
Backyard Table Eggs	27	28	29	30	31	33	35	36	37	38
TOTAL	**1,105.0**	**1,133.0**	**1,191.0**	**1,227.0**	**1,291.0**	**1,375.0**	**1,437.0**	**1,497.0**	**1,513.0**	**1,530.0**

(*) Post Estimates. Figures are in millions.
Source: Yemen Agricultural Statistical Year Book 2009, Yemen Directorate General of Animal Resources, the Food and Agricultural Organization, and Post estimates.

Production of table and hatching eggs will grow by 1-2 percent in 2011-12. Post estimates that the same will occur with imports of hatching eggs and day-old chicks. In the past whenever breeding stock production shortfalls (of both broilers and egg layers) occurred, these were compensated by hatching egg imports from Saudi Arabia, India, and Jordan. Shortfalls most often occur towards the end, as well as outside of production cycles.

Table (5) – Imports of Commercial Hatching Eggs and Chicks – 2003 to 2012

Commodity	2003	2004	2005	2006	2007	2008	2009	2010*	2011*	2012*
Broiler Hatching Eggs	2.294	.486	-----	2.954	-----	3.946	.873	0.900	1.000	1.100
Egg Layer Chicks	-----	.006	.112	.179	.629	.460	2.452	2.500	2.600	2.700

TOTAL	2.294	.492	.112	3.133	.629	4.406	3.325	3.400	3.600	3.800

(*) Post Estimates. Figures are in millions.
Source: Yemen Agricultural Statistical Year Book 2006, Yemen Directorate General of Animal Resources, the Food and Agriculture Organization, and Post estimates.

Poultry Processing, Marketing Channels and Pricing Constraints
Most Yemeni consumers are accustomed to purchasing live poultry at their local markets. Halal-slaughter occurs at the time of purchase. Frozen poultry is imported primarily from France and Brazil for the hotel and restaurant industry. Until recently the higher cost of domestic (live) poultry was providing an incentive for urban consumers to seek out more affordable imported frozen poultry.

Table (6) – Average Wholesale Poultry and Table Egg Prices (U.S. dollars)												
	Poultry Prices					**Table Egg Prices per Box***						
	2003	**2004**	**2005**	**2006**	**2007**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Jan	2.08	1.93	2.09	2.28	2.70	1.86	1.71	2.09	2.36	2.60	2.90	3.40
Feb	1.86	1.98	1.90	2.28	2.80	1.89	1.88	2.09	2.36	2.59	2.90	3.40
Mar	1.74	2.13	1.95	2.40	2.80	1.97	1.87	2.04	2.46	2.72	2.90	3.25
Apr	1.52	2.13	1.94	2.30	2.86	1.97	2.63	2.04	2.69	2.72	2.90	3.15
May	1.77	2.09	2.01	2.28	2.58	1.91	2.04	2.01	2.69	2.69	2.70	3.15
Jun	2.11	2.08	2.20	2.22	2.64	1.80	1.97	1.98	2.76	2.69	2.70	3.00
Jul	2.30	1.97	2.23	2.38	2.30	1.80	2.00	2.06	2.79	2.37	2.70	3.00
Aug	1.51	1.89	2.23	2.38	2.29	2.00	1.97	2.15	2.94	2.35	2.50	2.84
Sept	1.63	1.77	2.34	2.47	2.35	2.03	1.97	2.26	2.80	2.38	2.50	2.84
Oct	157	2.15	2.36	2.70	2.40	2.12	2.09	2.15	2.69	2.38	2.75	2.94
Nov	1.66	2.29	2.46	2.70	2.40	2.26	2.28	2.12	2.66	2.35	2.90	3.09
Dec	1.71	2.26	2.64	2.74	2.35	2.09	2.15	2.15	2.63	2.40	2.90	3.09
Ave. Price	**1.79**	**2.06**	**2.20**	**2.43**	**2.54**	**1.97**	**2.05**	**2.09**	**2.65**	**2.52**	**2.77**	**3.10**

(*) Box table eggs = 30 eggs. $1.00 = YER 213.00 (June 1, 2011).
Source: Yemen Agricultural Statistical Year Book 2009 and Marketing Report (monthly prices report).

The poultry market distribution chain normally commences with middlemen that purchase directly from local producers. Transport to wholesale markets occurs in woven or plastic crates. Eggs are carton packaged. Individual producers on occasion bypass middlemen and directly market broilers and eggs. Poultry halal-slaughter is decentralized, often unhygienic in live bird markets. Yemen does not count with operational modern poultry processing facilities. There are two non-operational modern processing plants (one private and one mixed entity) in the Dhamar governorate. These respectively have 5,000 and 7,000 head per hour processing capabilities.

Table (7) – Yemen's Average Retail Poultry and Table Egg Prices (U.S. dollars)												
	Poultry Prices					**Table Egg Prices per Box***						
	2003	**2004**	**2005**	**2006**	**2007**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Jan	2.25	2.07	2.20	2.39	2.80	2.06	1.96	2.31	2.52	2.80	3.00	3.50
Feb	2.03	2.10	2.00	2.39	2.91	2.03	2.07	2.26	2.52	2.80	3.00	3.50
Mar	1.89	2.24	2.06	2.49	2.91	2.15	2.07	2.20	2.65	2.86	3.00	3.25
Apr	1.69	2.24	2.05	2.41	2.97	2.15	2.24	2.20	2.91	2.91	3.00	3.25
May	1.92	2.20	2.12	2.38	2.69	2.09	2.20	2.20	2.91	2.88	2.75	3.25

Jun	1.96	2.16	2.12	2.34	2.74	2.03	2.16	2.20	2.91	2.91	2.75	3.00
Jul	1.84	2.05	2.34	2.51	2.40	2.03	2.16	2.31	3.02	2.55	3.50	3.00
Aug	1.63	2.00	2.34	2.52	2.40	2.20	2.16	2.37	3.08	2.50	2.50	2.94
Sept	1.77	1.89	2.75	2.58	2.45	2.26	2.16	2.48	2.97	2.53	2.50	2.94
Oct	1.71	2.26	2.48	2.80	2.50	2.32	2.31	2.31	2.86	2.55	2.50	3.19
Nov	1.77	2.42	2.59	2.80	2.50	2.44	2.48	2.31	2.80	2.50	3.00	3.19
Dec	1.85	2.37	2.75	2.86	2.45	2.32	2.31	2.37	2.80	2.58	3.00	3.19
Ave. Price	**1.86**	**2.17**	**2.32**	**2.54**	**2.64**	**2.17**	**2.19**	**2.29**	**2.83**	**2.70**	**2.92**	**3.18**

(*) Box table eggs = 30 eggs. $1.00 = YER 213.00 (June 1, 2011).
Source: Yemen Agricultural Statistical Year Book 2009 and Marketing Report (monthly prices report).

Costs to consumers are elevated. Retail poultry costs are driven up by the high price of poultry production inputs that are disproportionately borne by small to mid-size producers. Smaller producers are not only dependent on Yemen's larger commercial poultry producers for imported poultry inputs, but also depend on these for supplies of day-old chicks. Costs are also driven up by the lack of modern slaughter facilities, poor roads, and high animal losses during high production periods. The current political instability is exacerbating this situation.

Poultry Feed

The poultry industry demands significant amounts of non-wheat products and services. Corn is the main poultry feed ingredient. Major local traders import feed as cartels to resell to poultry producers. Traditionally feed shipments have been in the range of 27,000 MT. The normal composition of these shipments is 70 percent corn and 30 percent soybean meal. Often raw feeds are ground and mix locally with feed additives. Standard packaging is 50 kilogram bags.

Long-term prospects for the poultry industry in Yemen are good should political instability abate. This will have a positive spillover effect for U.S. corn and soybean exports to Yemen. The United States is generally one of the main soybean meal suppliers to Yemen. Shipping costs are one of the major trade constraints in U.S.-Yemen agricultural trade.

Table (8) – Yemen's Imported Poultry Feed – 2003 to 2012										
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010***	**2011***	**2012***
Corn	235	250	255	280	300	315	330	345	360	375
Soybean	65	70	75	90	100	105	110	115	120	125
Concentrate	36	38	40	42	45	50	50	55	60	65
Feed Additives	.900	1.00	1.00	1.30	1.50	2.00	2.10	2.20	2.40	2.60

(*) Post Estimates. Figures are in 1000 metric tons.
Source: Yemen Agricultural Statistical Year Book 2008, Yemen Directorate General of Animal Resources 2009, the Food and Agriculture Organization, and Post estimates.

Principal competitors for U.S. corn and soybean shipments to Yemen are Argentina and India. While the Netherlands, Jordan, and Denmark are the main suppliers of imported poultry feed concentrate. The Netherlands and Belgium are the main suppliers of poultry feed additives.

Animal Quarantine

Yemen's human health and veterinary legislation stipulates that imported livestock must undergo a quarantine inspection upon arrival. Enforcing this regulation has been difficult given the lack of adequate port-of-entry inspection facilities. Due to the high incidence of livestock smuggling (mainly from Somalia and Djibouti) there is an elevated foreign animal disease introduction risk.

The Ministry of Agriculture and Irrigation inspects live animals and animal products at a handful of export-import points (see, Annex 5). Quarantine facilities are located at: 1) the Al-Mocka quarantine station on the Red Sea (main entry point for livestock); 2) the Mukalla quarantine station on the Arabian Sea (second main entry point for livestock and small ruminants); 3) the two border crossings on the northwest border with Saudi Arabia (primarily animals, animal products, and day-old chicks); 4) the Alshihin border crossing with Oman; 5) Sana'a Airport (namely vaccines, drugs, and the like); and 6) Hodaidah and Aden Ports (mainly animal inputs and animal products). Not all quarantine stations are adequately manned by qualified staff members and or have fully functional facilities. Given its unique geographic position, Yemen is a crossroad for East Africa-Arabian Peninsula trade. The Al-Mocka quarantine station is being refurbished as part of the World Bank's "Rain-fed Agriculture and Livestock Project."

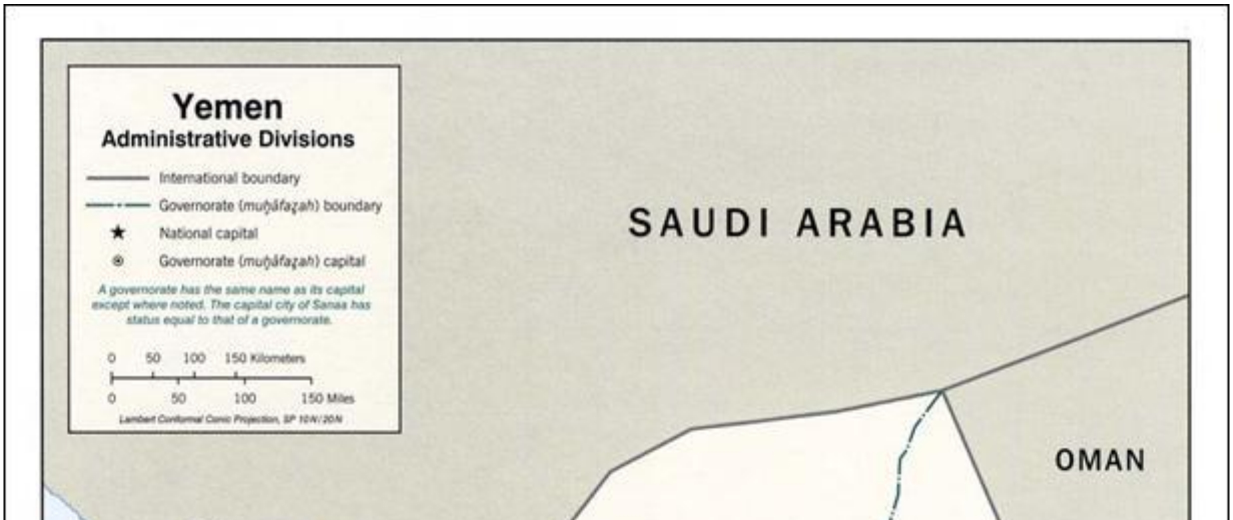
Quality Control Activities

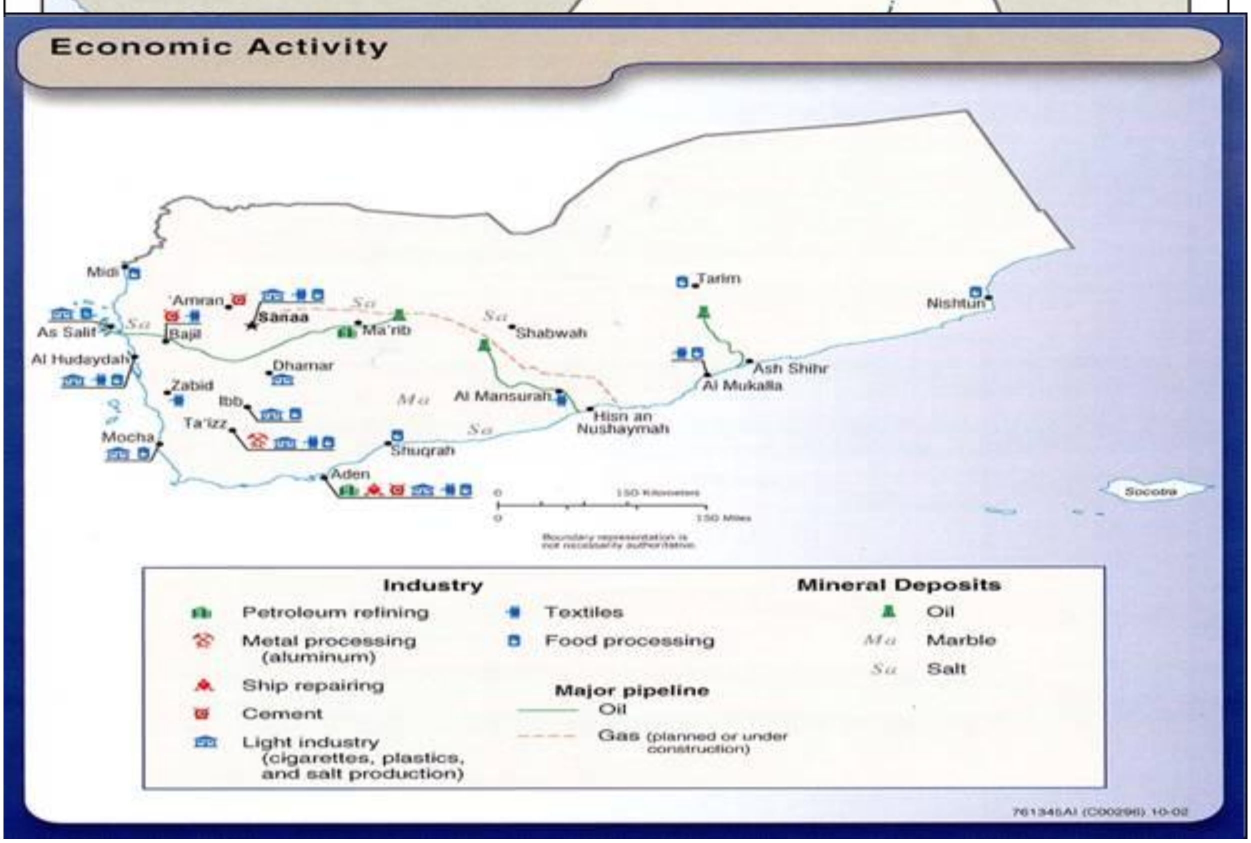
The Directorate General of Animal Resources (DGAR) lacks a functioning modern quality control system. The World Bank is working with the DGAR to establish a quality control system. Ultimately DGAR aims to implement quality control practices over its activities, those of its departments, veterinary services, and the private sector.

Annex (1)

Annex (2)

Annex (2)
Annex (3)





Picture of a Yemeni poultry farm

Picture of the inside of a Yemeni poultry/ egg laying operation

Picture of the inside of a Yemeni poultry/ broiler farm

Picture of a typical backyard, non-commercial poultry slaughter operation

Picture of a typical Yemeni poultry slaughter shop in operation

Picture of one of Yemen's modern, but non-operational poultry processing facilities

Annex (4)

Anne x (5)


Yemen
International boundary
National capital
Railroad
Road
Track
0 50 100 150 Kilometers
0 50 100 150 Miles
SAUDI ARABIA
OMAN
Arabian Sea
Red Sea
Gulf of Aden
SOMALIA
ETHIOPIA
DJIBOUTI
ERITREA
Sanaa
Aden
Djibouti
Socotra (YEMEN)
Al Mukallā
Al Ḩudaydah
Ta'izz
Boundary representation is not necessarily authoritative.
Base 802847AI (C00296) 2-02