Turkey production in Chile: Past, Present and Future

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Chile is a country located in the south west end of South America with a continental surface of 750.000 km2 and 15.5 million inhabitants. The country has a privileged geography which at the same time isolates and supplies an excellent sanitary protection. In the north the world's driest desert (Atacama Desert), in the east the Andes mountains and in the west the Pacific Ocean; all these natural barriers prevent against exotic diseases which is the basis towards an area or country free of the different poultry diseases.

CHILE in 2004

Population	15,5 million
Government System	Democratic Republic
GDP p/c US$	5.500
GDP % 2004	6,1 %
GDP Growth % 94-04	7,4 %
Inflation %	2,4 %
Exports (US$ mm)	32
Imports (US$ mm)	23

Despite of the low per capita income, comparing with other countries, Chile is within the twenty more reliable economies.

The turkey production in Chile is fairly new; until the beginnings of 80's there were only small farms which had a very seasonal and restricted supply; the main reasons being it was difficult to find, expensive and, only the whole bird was sold. A small percent of turkeys were produced in rural areas through rustic methods.

The Local (Chilean) Market had limited demand for turkey meat and these small businesses disappeared quickly. In 1982, Sopraval S.A., an important broiler chicken company, that was under the effects of the global financial crisis which was affecting all the poultry companies, decides to restructure its business and starts to develop the turkey industry by following the production model utilized in the United states and/or in Europe. During the first period the turkey production was mainly for Christmas and New Year's celebrations. Later on, the idea was to increase the turkey production to all year round with fresh, whole turkeys or with a variety of cuts to promote and meet the needs of the consumer who until then had considered buying turkey: "an expensive and difficult to cook product".

During those years the turkey consumption was as low as 60 gr. *per capita*/year. Slowly, the production increased, with more fresh, frozen and processed products and, at the same time, an important marketing strategy was developed to promote the regular consumption of turkey meat emphasizing safety, health and, nutritional benefits when compared with other meats.

Ten years later, other companies like Ariztía, entered to the market and contributed to the strengthening of the turkey business.

After all these years, an explosive turkey meat intake increase was achieved reaching today 4 kg. *per capita* as seen in the next chart:

TURKEY CONSUMPTION IN CHILE

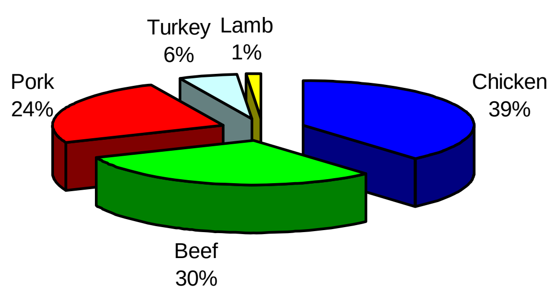
	1982	1984	1986	1988	1990	1992
Consumption in tonnes	**650**	**1020**	**1540**	**2503**	**4175**	**7398**
Kg. Per capita	**0.06**	**0.09**	**0.12**	**0.20**	**0.32**	**0.68**

	1994	1996	1998	2000	2002	2004
Consumption in tonnes	**18737**	**28109**	**32509**	**44664**	**53201**	**61401**
Kg. Per capita	**1.20**	**2**	**2.3**	**3.1**	**3.5**	**4.0**

As you can see, Chilean meat intake is 70 kg *per capita*, of which only the 6% is turkey. This consumption is lower than in the industrialized countries, but considering the Chilean *per capita* income, it is an interesting figure.

MEAT AND POULTRY CONSUMPTION 2004

Chicken	26,8 Kg.
Beef	20,9 Kg.
Pork	17,0 Kg.
Turkey	4,0 Kg.
Lamb	0,9 Kg.



Initially, the production was directed to satisfy and stimulate the local demand with fresh products; however, in the last ten years the export market has developed, participating successfully in diverse and demanding markets. This has been possible due to: a) the quality level reached by the Chilean turkey, b) the products complied with the requirements and legislation of the present markets and, c) the support of several Trade Agreements that Chile has signed in the last years with commercial partners like the European Union, Mexico, Canada and the United States. In 2004, out of the total tons produced, 22 thousand tons were exported, which represents a 27% of the production.

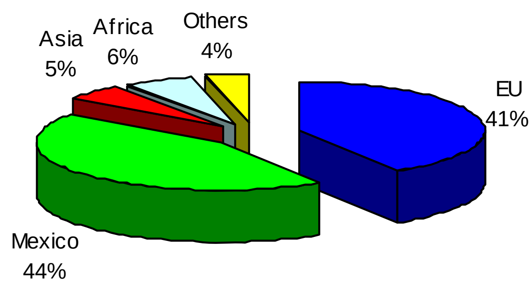
TURKEY PRODUCTION

	1998	1999	2000	2001	2002	2003	2004
Thousands of units	**3624**	**4090**	**5352**	**6982**	**6883**	**7056**	**7960**
Total tonnes	**37776**	**41842**	**53593**	**70162**	**66674**	**69783**	**82284**

TURKEY EXPORTS

	1998	1999	2000	2001	2002	2003	2004
Exported tonnes	**5356**	**6882**	**8928**	**16215**	**13479**	**15218**	**22206**

EXPORTS DESTINATION IN 2004



At present, only three companies are operating in the Chilean Market, Sopraval S.A. owns 62% of the market share, Ariztía 35% and Propavo with 3%. All the facilities are located in central region of the country, but with the proper isolation to enhance the biosecurity conditions.

An important characteristic of the production of turkeys in Chile is that, like the rest of the poultry industry, the companies are completely vertically integrated, handling all the stages of the production, from the breeding to the marketing of the products. All the farms, hatchery plants, feed mills and processing plants are owned by the company. This allows the development of integrated processes from the breeding to the final consumer with a direct commitment with the animal health and product safety, ensuring the production quality.

In Chile are raised heavy lines mainly, which are imported periodically from Genetic companies. By governmental requirements all the imported birds must have a quarantine period to guarantee that are free from declared diseases.

The majority of the breeding and grow-out houses are open side, with lateral curtains and natural light and ventilation. In some cases this is reinforced with fans, sprinklers and artificial light.

The breeding is done in two or three stages, using always blackout houses previous to light stimulation before production. Depending on the season of the year, a 24 week production is gotten, with an average of 100 settable eggs per hen housed with a hatch of 83%.

The commercial turkeys are raised in one or two stages; in the later case, the poults are housed in brooding farms up to six weeks and then are transferred to grow out farms of tom and hens.

The poults are brooded with gas heaters in brooding rings over a wood shaving litter. The houses are cleaned and disinfected in every cycle and during this period the mortality does not pass 3%. Being the first week mortality the most important.
During the grow-out period, the birds have much more floor surface and suitable equipment to reach higher market weights. The usual is to raise toms to 18 to 20 weeks of age and hens to 14 to 15 weeks; there are also a percentage of younger hens intended to be sold as whole bird.
In the feeding area, grains are used, mainly corn, proteins from soy (soy beans or soy meal), fats, wheat bran and some additives.
Since a few years ago, because of the markets trends, vegetable diets are been used and antibiotic growth promoters have been replaced by natural products. These changes have had a variable impact on the performance and sanitary status and constitute a big challenge for the industry.

The majority, 75%, of the turkey products in Chile are commercialized as cutup products, mainly fresh; about 15% of further processing products, understanding for that, as cooked products and finally only a 10% or less as whole turkey.

If we review the performance results of 2004 for a sample of 60% of Chilean production we see the following:

PERFORMANCE RESULTS

	Age	Mortality	Weight	Conversion	Daily Gain	Caloric Conversion
HENS	**96**	**3,3**	**7,840**	**2,37**	**81,7**	**7.275**
TOMS	**130**	**8,3**	**16,958**	**2,61**	**130**	**8.059**

In the sanitary aspects, as it was mentioned before, Chile has outstanding animal sanitary conditions being free from avian influenza, velogenic Newcastle, foot and mouth disease and others.
In commercial turkeys a very low number of vaccines are applied: Newcastle, hemorrhagic enteritis and in some cases *Pasteurella multocida*. Today, the sanitary challenge for turkeys is low due to effective biosecurity and preventative measures.

The requirements and controls performed by the sanitary authority, this is, the Agricultural and Livestock Service (SAG) with its technical staff and the Private Accredited Veterinarians of the companies, guarantee the sanitary status through prevention of diseases into the country. The SAG also is the entity who inspects and certifies the meat production according to the final market requirements.

The Industry and the SAG work in different programs as:

- PABCO, Official program for export certification
- Epidemiologic Surveillance Program
- Residues Control Plan
- Program to can control and to diminish some specific pathogens
- Traceability Program

Lately, besides Good Production Practices Programs and systems of quality management like HACCP, the companies have implemented and requested certification for Integrated Management Systems based in ISO 9001 and ISO 14001.

Our goal is to increase the number of flocks, build new and better facilities and expand our investments toward new technologies focused in food safety, animal health, traceability, animal welfare and environmental sustainability.

At the domestic level there are still possibilities of growth. The perspectives are more advantageous in the international scene, and there is our challenge to reach new markets. Our level of production and organizational structure represent a big strength. This will allow us to be more flexible and adapt to future requirements in the different markets that we would like to reach.

Recently, the exports to Canada have been initiated and the industry and Government are working with the United States of America Sanitary Authorities to homologate both sanitary inspection systems. We expect this process to be finalized in time to send turkey products to the American market next year.

Finally the big challenge for the Chilean turkey industry is to open new markets for their present products, and to develop turkey products with greater added value adapting the production processes to the consumer’s demands focused in satisfying the requirements and needs of each of those markets.