

Agriculture et Agroalimentaire Canada

Market and Industry Services Branch Direction générale des services à l'industrie et aux marchés



Snapshot of the



Agricultural Industry Services Directorate Animal Industry Division Poultry Section Direction des services à l'industrie agricole Division de l'industrie animale Section de la volaille



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Table of Contents

Foreword

Introduction

- 1. Industry Structure
 - 1.1 Breeders
 - 1.2 Hatcheries
 - 1.3 Started Pullet Producers
 - 1.4 Producers
 - 1.5 Graders
 - 1.6 Processors
 - 1.7 Further Processors
- 2. Size and Value of the Industry
- 3. Industry Organization
 - 3.1 Supply Management
 - 3.2 Federal/Provincial Agreement
 - 3.2.1 Quota
 - 3.2.2 Pricing copf
 - 3.2.3 Industrial Product
 - 3.2.4 Imports
- 4. Non-Government Organisations and their roles
 - 4.1 Canadian Egg Marketing Agency
 - 4.2 Provincial Egg Marketing Boards
 - 4.3 Canadian Poultry and Egg Processors Council
- 5. Government Organisations and their roles
 - 5.1 Role of National Farm Products Council
 - 5.2 Role of Provincial Supervisory Boards and Commissions
 - 5.3 Role of Department of Foreign Affairs and International Trade
 - 5.4 Canadian Food Inspection Agency
 - 5.5 Markets and Industry Services Branch
 - 5.6 Revenue Canada
 - 5.7 Statistics Canada
- 6. Canadian Industry vis à vis other countries

Bibliography

Tables

Updated: November 1999 Page 3

Foreward

The egg industry in Canada has evolved during the last 100 years from backyard flocks and erratic marketing to today's specialised, automated, highly regulated industry.

Events which shaped the industry include the US Tariff Act in 1890 which inhibited imports into the US and propelled egg and poultry producers to improve quality, develop grades and undertake cooperative marketing to supply alternative export markets. Equipment and information brochures for innovative candling techniques were supplied by the Dominion Department of Agriculture, which also appointed egg inspectors to educate producers in candling and promote cooperative marketing. In 1915, tentative egg standards were adopted by the Canadian Produce Association. After consultation with the government, 'Regulations respecting the grading and marketing of eggs" were promulgated in 1918 under the recently passed Livestock and Livestock Products Act. These applied to eggs which were exported or moved interprovincially, and they were the first set of national regulations established in any country in the world.

Concurrent with these events were developments in poultry health and management, technical improvements such as housing, lighting and ventilation controls and packaging, the growth of the breeding industry, and the Record of Performance programs which gave rise to today's quality breeding stock. Canada was the first country in the world to establish a government supervised poultry improvement plan. It was also at the forefront of markets information and intelligence with the establishment in 1915, by the Dominion Department of Agriculture, of a program to provide markets intelligence relative to eggs and poultry.

In the years which followed 1918, the Regulations were adapted as circumstances of growth, interpretation and improved technology demanded. Milestones were the Regulations' application to processed eggs, to domestic sales in 1923, and to grading stations in 1940. Also provided for in the 1940 amendment, was the detention of substandard product. By this time the 2nd World War was escalating, production had been increased, and Canada was shipping shell and processed eggs to the United Kingdom. This peaked in 1947 when 58 million dozen shell eggs and 5.8 million kgs of dried egg were exported.

As production in the United Kingdom returned to normal, exports from Canada were discontinued and the fifties saw the start of the 'boom and bust' cycles which gave rise to support and stabilisation programs, the establishment of provincial marketing boards to control production, and finally to the national supply management system in place today.

Many forces have impacted the development of the egg industry in Canada, not the least of which is the innovation and investments of entrepreneurial producers and processors. In the first half of this century it was regulatory programs which played a prominent role in developing the egg industry. In the second half of the century it has been the economic programs which have stabilised the industry. In the 21st century it will be health control programs addressing human health, and their application throughout the production and marketing chain which will dominate the egg industry in Canada.

Introduction

Eggs have been called 'nature's perfect food'. This is because they are one of the few 'complete protein foods', i.e. they contain all the nine essential amino acids which cannot be manufactured from the body but must be obtained from foods. The contents of a shell egg provide all these essential amino acids as well as a significant number of vitamins and minerals. These contents are perfectly and naturally packaged in an egg shell.

A large egg provides 6.3 grams of protein, 75 kilocalories of energy, 25% of a human's daily requirements of vitamin B12, 13% of vitamin D and 9.5% of vitamin A. It also provides iodine, phosphorous, magnesium, iron and zinc. More details are given in Table I.

Protein is essential for building and repairing tissues in the human body and for proper growth and development. Muscles, organs, skin, hair, as well as antibodies, enzymes and hormones are all made from protein.

Vitamins and minerals are used in a number of complex ways to enable the body to function effectively.

This is the egg - the basic unit of the multi million dollar industry whose structure and management in Canada is described in the following pages.

Table I Composition of an Egg (excluding the shell) - based on a 59 gram shell egg

NUTRIENT	QUANTITY
Water	37.66 grams
Food Energy	75 kilocalories
Protein	6.25 grams
Total Lipid	5.01 grams
Total Carbohydrate	0.61 grams
Ash	0.47 grams
Amino Acids	
9 essential amino acids - valine, leucine, isoleucine, threonine, histidine, tryptophan, phenylalanine, methionine, lysine	2.756 grams
non-essential amino acids - alanine, arginine, aspartic acid, cystine, glutamic acid, glycine, proline, serine, tyrosine	3.491grams
Vitamins	
Vitamin A	317 IU
Vitamin D	24.5 IU
Vitamin E	0.70 mcg
Vitamin B-12	0.50 mcg
Biotin and Folic Acid	32.98 mcg
Choline, Inositol, Niacin, Pantothenic Acid (B-3), Pyroxidine (B-6), Riboflavin (B-2), Thiamine (B-1)	221.802 mg

Lipids					
Polyunsaturated Fats - linoleic, linolenic, arachidonic, eicosapentaeonic, docohexaenoic	0.682grams				
Monounsaturated Fats - myristoleic, palmitoleic, oleic, eicosenoic, erucic	1.905grams				
Saturated Fats - caprylic, capric, lauric, myristic, palmitic, stearic, arachidic	1.550grams				
Cholesterol	213 mg				
Lecithin	1.15 grams				
Cephalin	0.23 grams				
Minerals					
Calcium and Phosphorous	114 mg				
Magnesium and Iron	5.72 mg				
lodine, Potassium, Chlorine, Copper, Manganese, Sodium, Sulfur, Zinc	235.663 mg				

Source: 1989 Supplement - Agriculture Handbook No. 8, Human Nutrition Information Service, USDA; 1979 Poultry Science 58:131-134

1. Industry Structure

For the purposes of this profile, the whole spectrum of the egg industry will be examined from egg type hatching eggs and chicks through to table eggs and processed eggs. Each sector has a distinct function and is an industry in itself, and yet related and dependent upon all other sectors.

Table II illustrates the relationship between the sectors.

Other industries which are essential to the egg industry include the feed, transportation, construction, avian equipment, packaging, grading, processing and retail industries.

Table II The Egg Family

Pure Blood Line Breeding Stock (great great grandparents) - hatching eggs and chicks

1st generation



Expanded Blood Lines (great-grandparents) - hatching eggs and chicks 2nd generation



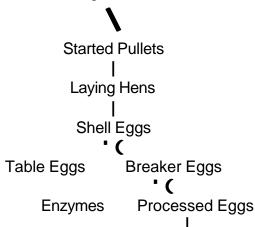
Crosses (grandparents) - hatching eggs and chicks
3rd generation



Multiplier Flocks (Hatchery Supply Flocks) - hatching eggs and chicks 4th generation



Commercial hatching eggs ± chicks
5th generation



Further Processed Products

1.1 Breeders www.agr.ca/misb/aisd/poultry/breedcom.htm#egg

There is only one company in Canada which produces the first three generations of hatching eggs and chicken for commercial layer flocks. That is Shaver Poultry Breeding Farms Ltd. - http://www.shaverpoultry.com/ a subsidiary of the Institut de selection animale (ISA) which is itself owned by Merial Institute a company formed from Rhône Poulenc and Merck Inc. ISA also owns Babcock Poultry Farms Inc. in the USA

- http://www.isababcock.com/, and Merck Inc owns Hubbard Farms
- http://www.hubbard-isa.com. There are less than 10 companies in the world which

are primary breeders i.e. producing the first three generations of egg type chicken, and Merial controls more than 50% of the genetic pool of egg layer strains in the world.

Commercial layer strains used in Canada include strains from all the major primary breeders e.g. ISA Brown, Shaver Starcross #288, Shaver White, Babcock B300/ISA White (Merial); Hy-Line W-77, H&N Nick Chick, Hy-Line Brown (Lohmann)

- http://www.ltz.de/; Dekalb XL, Dekalb Delta White (Toshoku); Hisex White (Euribrid)
- http://www.euribrid.com/; Bovans Brown, Bovans White (Hendrix)
- http://www.bovans.com/. Most of these are supplied from about seventy 4th generation or hatchery supply flocks in Canada. The birds in these flocks producing hatching eggs from which commercial layer chicks are hatched. Some strains are imported as commercial hatching eggs or chicks. Other egg layer strains are used, but these are all small or dual purpose flocks. They include Shaver Starcross 579, Araucana, Barred Rocks, Rhode Island Reds, Columbia Rocks, Dark Cornish, New Hampshire, Columbia Rocks and Buff Orpingtons.

1.2 Hatcheries

In Canada, all hatcheries with an incubator capacity greater than 1,000 are federally registered. There are 47 hatcheries in Canada hatching egg type eggs (see Table III). Some 35 hatcheries have their own breeder supply flocks to supply the hatching eggs.

Table III Federally Registered Egg-type Hatcheries - 1998

Province	No. of Hatcheries	Chicks Hatched (000s head)	Average Weekly Throughput/Hatchery (000s head)	
B.C. & Yukon	2	3,621	35	
Alberta & N.W.T.	5	3,962	15	
Saskatchewan	2	202	2	
Manitoba	6	10,267	33	
Ontario	11	17,493	31	
Québec	7	6,610	18	
Maritimes	4	3,831	18	
Canada	37	45,986	24	

Source: AAFC

1.3 Started Pullet Producers

Started pullet producers raise chicks from 1 day to about 17 weeks just prior to the chicken coming into lay. Started pullets ranging in age from 2 or 3 days to 17 weeks are also imported. Started pullets are raised in barns either on the floor or in cages, depending on the facilities available and on the egg producers' preferences. Currently, 80% are raised in cages and about 20% of started pullets are raised on the floor.

1.4 Producers

Egg laying chickens (layers) are raised by egg producers in every province across Canada and in the Yukon and the North West Territories. In 1998 there were 1,236 commercial egg registered producers (Table VII) who were allocated quota by the provincial boards. The average flock size is about 14,000 layers. There are also small flock producers or unregistered producers. In most provinces producers who have less than 100 laying hens do not have to be registered.

All commercial flocks are kept in environmentally controlled barns, the majority in cages, although there are a few aviary systems where the hens are allowed full use of the barn floor or pens within. Barns hold about 2,000 cages in tiers 2 to 8 cages high. Birds are housed 2 to 6 to a cage depending on body weight feeder space and water availability. The Canadian 'Recommended Code of Practice for the Care and Handling of Poultry from Hatchery to Processing Plant - http://www.agr.ca/misb/aisd/poultry/pub1757e.pdf recommends 410-450 sq cms/bird (depending on body weight) for 3 or more adults housed in multiple bird cages. The Canadian Egg Marketing Agency also provides guidelines to producers on good production and management practices in their 'Start Clean-Stay Clean' program.

95% of commercial egg production is white and 5% brown. Brown eggs are popular in NS, Ontario and BC. One or two producers in all regions are raising birds on special feed to produce 'low cholesterol' eggs.

On most farms eggs are collected twice daily and stored in a cooler to maintain their quality.

There is some consumer demand for 'free range' and 'organic' eggs but the cost of producing these is considerably higher than regular eggs and this is reflected in high retail costs. This is a speciality market, but producers are still part of the supply management system and need to obtain quota.

1.5 Graders

In 1998, 87.4% of egg production was sold for consumption. 0.4% was consumed on the farm or sold at the farm gate, 10.3% was sold for hatching, and the remaining 1.9% was leakers and rejects not fit for human consumption. Some producers grade their own eggs, and some grading stations are also breakers, but the majority of eggs are washed, graded and packaged in designated grading stations, and sold as table eggs for consumption. There are 355 grading stations in Canada (Table IV)

- http://www.agr.ca/misb/aisd/poultry/eggplant.htm with an average weekly throughput of 23,000 dozen. Nine grading stations grade over 20 million dozen eggs/year, representing 50% of total eggs graded.

Table IV Federally Registered Egg Grading Stations - 1998

Province	No. of Stations	Eggs Graded (Boxes of 15 dozen)	Average Weekly Throughput (dozen)
B.C.	32	3,466,008	31,244
Alberta	49	2,306,595	13,579
Saskatchewan	32	1,174,369	10,586
Manitoba	40	3,290,765	23,731
Ontario	101	11,427,756	32,638
Québec	51	5,280,133	29,865
N.B.	18	640,035	10,257
N.S.	15	1,100,685	21,167
P.E.I.	8	160,423	5,784
Newfoundland	9	475,134	15,229
Canada*	355	28,421,903	23,095

^{*}Including Yukon and the North West Territories Source: CEMA, AAFC

1.6 Processors

Approximately 18% of <u>domestically</u> produced eggs are broken for processing into liquid, frozen and dried egg and other egg products which are sold domestically to hotel,

restaurants, institutions and further processors, or exported. In 1998, another 13 million shell eggs were imported for breaking. A small percentage of whole eggs are pickled or boiled. In 1998 there were 16 federally registered processing establishments in Canada in 4 provinces - http://www.agr.ca/misb/aisd/poultry/egpplant.htm.

1.7 Further Processors

These are producers of bakery goods, pasta, mayonnaise, frozen meals etc. who use egg products. One of the more lucrative further processing activities is the extraction of proteins which possess unique functional properties such as antimicrobial, enzymatic and antienzymatic, cell growth stimulatory, metal binding, vitamin binding and immunological activities. Egg white proteins such as lysozyme, avidin, ovomucoid, ovalbumin and conalbumin are used in the pharmaceutical industry. This process leaves the egg composition virtually unchanged and it can still be sold as processed egg.

2. Size and value of the industry

It is estimated that the egg industry employs over 4,000 Canadian workers, and represents an investment in buildings and equipment of over \$500 million.

In 1998, 58.3 million egg-type hatching eggs were set in federally registered hatcheries. 8.1% of these were imported. From the eggs set, 46 million egg type chicks were hatched. These were supplemented by 1.4 million imported egg type chicks. All generations of hatching eggs and chicks are included in these numbers. 21.1 million commercial layer chicks were placed in production facilities, which together with imported started pullets produced over 5.9 billion eggs, of which 5.2 billion were sold for consumption.

The Canadian egg industry is valued at about \$995 million, excluding the value of biochemicals extracted from eggs for use in pharmaceuticals (Table V).

Table V - Estimated Value of the Egg Industry 000s \$ - 1998

Product	Imports	Domestic Sales	Exports
Hatching Eggs	4,557	9,874	1,249
Chicks	21,602	18,698	6,191
Started Pullets	3,051	51,974	n/a
Laying Hens	0.404		
Spent Hens	9,494	8,814	n/a
Chall Fare	40 544	Producer - 449,322	
Shell Eggs	16,541	Retail - 731,821	0
Processed Eggs	17,180	72,338	21,238
Total	63,988	893,519	28,678

Source: AAFC, Statistics Canada, TIERS, CEMA n/a - not available

3. Industry Organization

3.1 Supply Management

At the national level, the egg industry in Canada has been supply managed since 1972. Prior to this provincial marketing boards controlled price and production but could not control interprovincial movement and imports. With supply management, supply is adjusted to meet consumer demand. The national system was introduced in response to the 'boom and bust cycles' of the 50s, when a cycle of egg plenty and low prices forcing producers into bankruptcy would be followed by low egg supplies and high prices. Supply management is designed to control egg supply through a system of regulated domestic production and border controls, and provide producers with their costs of production, and consumers with consistent supplies at reasonable prices (see Table VI).

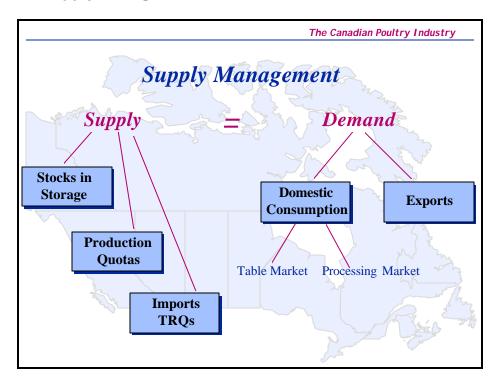


Table VI Supply Management

3.2 Federal/Provincial Agreement

The supply managed system was made possible by the passing of the Farm Products Marketing Agencies Act (revised 1993 to the Farm Products Agencies Act) and the signing of the Agreement by 35 signatories representing the Federal and Provincial Ministers of Agriculture, the provincial egg marketing boards and the provincial government appointed bodies overseeing them, the national egg producer agency, and the federal government appointed body - the National Farm Products Marketing Council (renamed the National Farm Products Council or NFPC in 1993) which oversees it. The Federal/Provincial Agreement for the Marketing of Eggs was signed in 1972 and revised in 1976. Further revisions are currently underway. The most recent initiative has been to include the North West Territories as a full signatory to the Agreement.

Elements of Agreement

The Federal Provincial Agreement is a contract which sets down provisions for the coordination of a national orderly marketing system through a system of national and provincial regulations and production quotas.

3.21 Quota

The base national supply level (quota) and provincial shares were calculated and agreed to in the original Agreement. The volume of total egg production needed to supply the

market is calculated annually by the Canadian Egg Marketing Agency (CEMA). This national quota or Quota Order, must be approved by the NFPC before being accepted by the Governor in Council. The numbers of eggs are translated into layer hens, and CEMA allocates quota in the form of numbers of layers to the provinces. The formula used to translate eggs to hens is based on the rate of lay numbers calculated by Statistics Canada.

The provincial marketing boards allocate their provincial quota to individual producers. All provinces have exemptions from board regulations for small flocks. In most provinces flocks of less than 100 birds are exempt. Over these numbers the producer must be registered with the Board and pay the required levies.

CEMA has inspectors in each province who carry out inspections of individual farms to ensure that producers are within their quota. Provinces which have more hens in their barns than have been allocated are fined by CEMA. This fine can be passed on to the producer by the provincial board.

Table VII Provincial Quota

Province	No. of Registered Producers (1998)	Quota allocated December 27, 1998 (layers)*	Quota allocated January 1, 1999 (dozens)*	1998 % Market Share (layers)	1997 % Market Share (layers)
British Columbia	136	2,323,293	59,497,832	11.8	12.6
Alberta	171	1,512,475	41,523,648	7.7	8.1
Saskatchewan	74	821,676	22,880,514	4.2	4.3
Manitoba	194	2,920,605	71,656,141	14.8	11.7
Ontario	446	7,327,319	189,977,253	37.1	37.7
Québec	117	3,209,145	82,738,545	16.3	16.8
New Brunswick	18	401,029	10,024,816	2.0	2.2
Nova Scotia	25	746,357	18,648,422	3.8	4.1
Prince Edward Island	18	124,938	3,117,039	0.6	0.7
Newfoundland	17	336,977	8,039,958	1.7	1.8
Canada	1,216	19,723,814	508,104,168	100.0	100.0

Source: CEMA

^{*} includes 'opportunity' layers (overbase), 'Grow For' programs, and Special Export allocation.

The North West Territories joined CEMA at the end of 1998 with a base quota of 115,000 layers. They have not been included in the above table as negotiations regarding regulations and pricing are still underway.

3.22 Pricing

Provincial marketing boards set provincial producer prices for eggs based on provincial costs, and prices in neighbouring provinces. These are the minimum prices which grading stations must pay producers, and are generally adhered to, although premiums are paid for specialty eggs e.g. brown, 'low fat', free range etc.

Using a cost of production formula which includes factors such as feed and pullet costs, labour, overhead, depreciation etc, CEMA calculates monthly prices for grade A large eggs which are used by the provincial boards to apply prices for other grades.

3.23 Industrial Product

It can be seen from the last few lines in Table II, that shell eggs are utilised in two distinct industries - the table egg industry i.e. eggs which are purchased for sale at retail or by the Hotel, Restaurant and Institution trade, and eggs which are directed to the processing industry to be used in the preparation of whole boiled or pickled eggs or processed eggs (liquid, frozen or dried), or for enzyme extraction. These eggs are referred to as 'industrial product' or 'breaker' eggs'.

Processed eggs comprise a whole range of products e.g. liquid, frozen or dried whole eggs; liquid, frozen or dried albumin; liquid, frozen or dried yolk; dried egg speciality mixes which are used for a variety of baking, emulsifying and other food products; liquid and frozen products with salt and/or sugar added which can be used to extend shelf life; whey protein concentrates; liquid, frozen or dried eggs with added vitamins or nutrients; frozen egg omelette; whole pickled eggs; reduced cholesterol and fat egg mix; scrambled, diced and peeled eggs; egg rolls etc. The industry is constantly seeking to expand its product lines with new products and packaging.

When national supply management was first introduced in the early seventies, the industrial product market was a by-product of the table egg market. In order to maintain consistent supplies year round for the table egg market, eggs surplus to this market were purchased from the Grading Stations by the Canadian Egg Marketing Agency and sold to breakers for processing at prices below the purchase price. This system was initiated to enable processors to produce ingredients which could be used in the preparation of further processed products such as cake mixes and mayonnaise which themselves would be competitive with imported finished products.

As the industry developed, industrial product or surplus product as it was called, became - not just a market to dispose of surplus eggs - but an industry in its own right which markets its products in separate markets and which needs consistent year round supplies. In 1998 over 6 million boxes of shell eggs were broken, of which about 0.9 million boxes were imported shell eggs. Also imported for the industrial egg product market was almost 7 million kgs of liquid and frozen egg for processing.

For most provinces, CEMA has retained the option of purchasing eggs surplus to the table market. In Ontario and Québec the provincial boards have opted to operate their own industrial product programs. Purchase prices are CEMA's cop prices plus 2-3 cents - the actual amount being negotiated between CEMA and graders. The selling price by CEMA to breakers is based on a negotiated formula.

Some provincial boards are exploring options for producing shell eggs specifically for the processing market.

3.24 Imports

Supply is made up of domestic production and imports. In order to be able to tailor supply to meet demand, not only is domestic production controlled by quotas, but imports are controlled also. Under the General Agreement on Tariffs and Trade (GATT), Article XI, with a supply management in place for eggs, Canada was allowed to limit imports. With the signing of the World Trade Organization's (WTO) Agreement on Agriculture concluded in December 1993, Canada converted its existing agricultural quantitative import controls to a system of tariff rate quotas (TRQs) which came into effect in 1995. Product up to a certain volume is imported at one tariff rate. Over this permitted level the tariff rate escalates. Under the Canada-US Free Trade Agreement (FTA) the negotiated level for imports was 2.988% of the previous year's domestic production at tariffs decreasing over a 10 year period and reaching zero in the year 2000. In 1999 this is 13,318.7 thousands of dozen. Under the WTO import volumes were established up to the year 2000. For 1999 this is 17,950.8 thousands of dozen. These are higher than the FTA levels, and are the ones that prevail. The difference of 4,632.1 thousands of dozen is imported as nest run shell eggs or processed egg destined for the processing industry.

1999 Tariffs and Import Quotas are found in Table VIII, and 1997 imports of eggs in Table IX

Table VIII Canadian Tariff Rate Quotas, January 1, 1999

PRODUCT	MFN TARIFF	APPLICABLE PREFERENTIAL TARIFF*		WTO QUOTA	FTA QUOTA
		within access	over access		
Chicks	free	free	e	na	na
Started Pullets	3.09 c/kg	fre	е	na	na
Spent Fowl	3.09 c/kg	free	e	na	na
Hatching Eggs	1.84c/doz	free	~	na	na
Table Eggs	1.84c/doz.	US, CCC, C: free	168% but not less than 82.3 c/doz.	17,950.8 thousands of dozen for all table and processed eggs	1.647% of 1998 domestic production = 7,341.3 thousands of dozen
Egg Yolks - Dried	10%	US, CCC, C: free	\$6.30/kg		all dried - 0.627% of 1998 domestic production = 2,794.8 thousands dozen (422,011 kgs)
Egg Yolks - Liquid/Frozen	8.1c/kg	US, CCC, C: free	\$1.571/kg		all frozen, liquid and egg preparations - 0.714% of 1998 domestic production = 3,182.6 thousands dozen (1,828,978 kgs)
Processed Eggs (other than yolk or albumen) - Dried	10%	US, CCC, C:free	\$6.30/kg		see above for dried
Processed Eggs (other than yolk or albumen) - Liquid/Frozen	8.1c/kg	US, CCC, C: free	\$1.57/kg		see above
Egg Albumen - Dried	10%	US, CCC, C: free	\$6.30/kg		see above for dried
Egg Albumen - Liquid/Frozen	8.1c/kg	US, CCC, C: free	\$1.57/kg		see above
Egg Preparations	9.56c/kg	US, CCC, C: free	\$1.53/kg		see above
Pasta Products containing eggs	7%or 8% or 17.1 c/kg plus 9%	US, M: free, varies for other countries by commodity		na	na
Feed preparations	13%	US, CCC, C: free	na	na	na

^{*} US=United States; CCC=Commonwealth Caribbean Countries; C=Chile; M=Mexico

[~] Permits Issued

[%] values are 'ad valorem' figures i.e. tariffs charged are a percent of the \$ value of the shipment

Table IX Egg Import Permits Issued versus Eggs Imported - 1998

	DFAIT Import Permits Issued				Statistics Canada Actual Imports*			
Product	Monitored	Global	Supps.	For Re- Export	Total	Within Access	Over Access	Total
Shell (000s doz)		7,147	831	51	8,029	18,834	47	18,881
Dried (MT)		403	89		492	2,033	23	2,056
Liquid (MT)		1,393	2,139	5,591	9,123	7,338	19	7,357
Egg Product (MT)		2			2	637	14	651
Inedible Egg~ (MT)	1,584				1,584			
Nest Run- WTO ^		4,866	1,462	1,531	7,859			
Total (000s doz. shell eggs equiv.)					45,520	49,279	319	49,598

^{*} might include shell and processed product from eggs other than Gallus domesticus;

4. Non-Government Organisations and their roles

4.1 Canadian Egg Marketing Agency (CEMA) http://www.canadaegg.ca/

CEMA's role is to manage the orderly marketing of table eggs. It does this by determining and allocating provincial quota and monitoring individual producers, licensing persons engaged in the interprovincial or export marketing of eggs, operating an industrial product program (including surplus removal), and establishing pricing according to costs of production. It also engages in promotion and market research, initiates producer health and quality programs, finances research which in the past has covered production practices, new uses for eggs, egg quality, use of fowl meat etc., and disseminates market information. CEMA is financed by levies imposed on producers and marketers.

[~] not differentiated by Statistics Canada HS Codes, but mostly dried product

[^] these eggs are imported under the WTO Agreement and destined for the processing industry Conversion Factors: 0.575 kgs liquid=1 dozen shell eggs - 0.151 kgs dried=1 dozen shell

CEMA is operated by a Board of Directors which is composed of one representative from each provincial marketing board, three Canadian Poultry and Egg Processors Council members representing the hatchery, grading and further processing sectors and a consumer representative appointed by the Consumers' Association of Canada.

4.2 Provincial Egg Marketing Boards http://www.canadaegg.ca/english/links/links2.html

The role of the provincial egg marketing boards parallels that of CEMA. They manage the orderly marketing of eggs within their province by allocating quota to individual producers, and ensuring its compliance, establishing minimum producer prices, collecting levies to finance their operations, conducting advertising and promotion programs, collecting markets information, operating a surplus removal or industrial product program (Ontario and Québec only), conducting food safety programs, and, for some provinces financing research. The marketing boards also appoint a representative to CEMA who is instructed to support a variety of Agency policies necessary for the effective operation of the national orderly marketing program.

Provincial marketing boards are operated by a Board of Directors elected or appointed by the province's producers.

4.3 Canadian Poultry and Egg Processors' Council (CPEPC) http://www.cfta.ca/cpepc/cpepc.html

The CPEPC is a national association of Canadian chicken and turkey processors, egg graders and breakers and hatcheries, designed to serve their members' best interests in the maintenance and development of the industries, both in ongoing and new activities and in negotiating with other stakeholders and government.

5 Government Organisations and their roles

5.1 National Farm Products Council (NFPC) http://www.nfpc-cnpa.gc.ca/english/mainnfpc.html

The NFPC is the overseeing body for the 4 supply managed agencies including CEMA. Council's duties in relation to the national agency and as laid down in the Farm Products Agencies Act (FPAA) are 3 fold: to advise the Minister of Agriculture on all matters relating to the establishment and operations of the Agencies under the FPAA; to monitor the operations of the Agency and ensure that these are carried out in accordance with the

FPAA; and to work with the Agencies and provincial governments to promote more effective marketing of eggs in interprovincial and export trade.

Council approves CEMA orders, and regulations, before they are submitted to the Governor in Council for approval. Council cannot, however, amend or modify orders or regulations, although it can refuse to approve regulations relating to quota and levies. Council can also mediate at disputes between provincial signatories and the CEMA, and industry sectors which are affected by CEMA pricing or quota policies.

Council's membership consists of no less than 3 and no more than 9 members, at least 50% of whom are primary producers. These are all appointed by the Governor in Council.

5.2 Provincial Supervisory Boards, Commissions or Councils

The Supervisory authorities are the overseeing bodies of the provincial commodity marketing boards and their roles parallel that of the NFPC. Their primary responsibilities are to ensure that the commodity boards make the necessary orders and regulations so as to comply with the coordination of the national and provincial marketing plans. For most provinces they mediate disputes between parties affected by the marketing boards decisions, although Alberta, Ontario and PEI have separate appeal tribunals. Some provincial supervisory authorities have more powers than others with regards to revoking, amending or making orders or regulations.

Provincial supervisory authorities are appointed by the Lieutenant Governors in Council. Generally members number 3-8 and usually include substantial producer representation.

5.3 Department of Foreign Affairs and International Trade (DFAIT) http://www.dfait-maeci.gc.ca/~eicb/epd home.htm

The Minister of Foreign Affairs is responsible for the Export and Import Permits Act which authorizes the government to control and monitor the transborder flow of specified goods. This Act and its Regulations are administered by the Export and Import Controls Bureau (EICB) of DFAIT.

Allocation of import quotas is determined by the Minister for Foreign Affairs in collaboration with an industry advisory board. Issuance and control of import quota is administered by the EICB in collaboration with the Customs arm of Revenue Canada.

5.4 Canadian Food Inspection Agency (CFIA) http://www.cfia-acia.agr.ca/english/toc.html

The CFIA is not concerned with the operation of supply management as such. Its mandate is the safety, health and quality of animals and plants.

For eggs, this is done by administering and/or enforcing the following Acts through designated inspectors:

Canada Agricultural Products Act; Consumer Packaging and Labelling Act and the Health of Animals Act.

5.5 Market and Industry Services Branch (MISB) - AAFC http://aceis.agr.ca/misb.html

MISB's stated mandate is "to improve and secure market access to enable the agri-food sector to capture opportunities for trade in domestic and export markets, with a focus on higher value agri-food products.".

This is achieved through trade negotiations, identifying domestic and foreign market opportunities, establishing and maintaining markets information systems, facilitating access to domestic and foreign markets and working with the industry to explore other ways of improving marketing.

AIMS (Agri-food Industry Market Strategies - http://aceis.agr.ca/progser/aafaims.html is a service for developing market responsive strategies.

AFT 2000 (Agri-Food Trade 2000 - http://aceis.agr.ca/progser/aft2000.html is a cost-shared contribution program designed to support Canadian agri-food industry activities in areas of market readiness, market access and market development.

PEMD (Program for Export Market Development - the agri-food element

- http://aceis.agr.ca/progser/aafpemda.html provides financial assistance to agri-food associations to cost share the implementation of generic activities in acceptable long-term export market strategies.

ATS (The Agri-Food Trade Service - http://atn-riae.agr.ca/public/ats-e.htm provides access to international market information and intelligence, export trade counselling and export support activities.

The Poultry Section Home Page - http://aceis.agr.ca/misb/aisd/poultry/poulsece.htm contains information related to weekly and annual poultry and egg market information, historical trends, trade data and import permits, factsheets and publications, federally registered plants and stations, industry associations, links to numerous poultry and egg websites, as well as a search utility.

5.6 Revenue Canada (Canada Customs and Revenue Agency) http://www.rc.gc.ca/

This Department is responsible for the administration of the federal tax, tariff and trade laws. For the purposes of the egg industry Revenue Canada regulates and collects tariffs on imported eggs and egg products. These data are published by Statistics Canada.

5.7 Statistics Canada http://www.statcan.ca/

Statistics Canada is the country's national statistical agency which under the authority of the Statistics Act is required to collect, compile, analyse, abstract and publish statistical information on all aspects of the nations' society and economy.

Data compiled which are relevant to the egg industry include total egg production, rate of lay, egg sales, egg disposition, per capita consumption, stocks in storage and number of farms (Agricultural Census).

Data published by Statistics Canada are used in trade negotiations.

6.0 Canadian Industry vis à vis other countries

From 1989 to 1998, world egg production increased overall by 34% to 48 million tonnes in 1998. Increases took place in most regions of the world, with the exception of Europe, and Oceania. The largest increases were seen in Asia which more than doubled production. China, Iran, Jordan and the West Bank all doubled their production. China now accounts for 37% of the world's production. Canadian production during these years increased 6.6%. In 1998 Canada produced 342 thousand tonnes, or 0.7% of total world production. Canada ranks as the 24th egg producing country. The largest is China followed by the US, Japan, the Russian

Federation, India, Mexico, Brazil, 6 European countries, and Asian, and Middle East countries.

From 1985 to 1996, world egg consumption increased from 6.1 to 7.7 kgs/person/year. Egg consumption in many developed countries fell in the 80s and early 90s. This drop in consumption is attributed to consumer health concerns specifically cholesterol uptake, and the incidence of Salmonella. The egg industry responded to these concerns by tightening health security measures and publicising research questioning the effects of egg consumption on cholesterol levels. Egg consumption levels are now increasing again after two decades of reduced or level consumption patterns. Canada's annual egg consumption has been increasing since 1995 from 14.4 to 15.2 dozen eggs per capita - an increase of over 9 eggs per capita.

According to USDA egg consumption data, Canada's consumption is lower than the US (20.6 dozen eggs/capita), Mexico (25.8 dozen eggs/capita), most European countries and many countries of Asia, and East Europe. FAO egg consumption (supply) data shows that in 1996, some of the Caribbean countries and Brunei and Kuwait had the highest annual per capita consumption at over 60 kgs. US consumption is given at 45 kgs, and Canada's 30.7 kgs. However, data between countries is difficult to compare, as some countries estimate table egg consumption only and not total egg consumption.

World trade in eggs is small (between 1-2% of total production). In 1997, the US and the Netherlands exported almost 50% of total world exports. Other major exporting countries are China, France, Canada, and India. Major importers are Japan, Honk Kong and Canada. Canada imports table eggs from the US and exports processed eggs.

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Watt Poultry Statistical Yearbook

Tables

- I Composition of an Egg
- II The Egg Family
- III Federally Registered Egg-type Hatcheries 1996
- IV Federally Registered Egg Grading Stations 1996
- V Estimated Value of the Egg Industry 000s \$ 1997
- VI Supply Management
- VII Provincial Quota 1997
- VIII Canadian Tariff Rate Quotas January 1, 1998
- IX Egg Imports Issued versus Eggs Imported 1997