Arctic Development

A Study Of The Table Egg Market In The Nwt And The Impact Of Participation In The National Supply Management Regine

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EXECUTIVE SUMMARY

National supply management agencies have been formed to regulate the production and marketing of a limited number of agricultural commodities in Canada. Eggs is in this group of commodities, with production and marketing regulated by the Canadian Egg Marketing Agency (CEMA) and its provincial counterparts under the national supply management system.

This supply management system has, as its foundation, the allocation of production quotas on a national and provincial basis. Regulated imports are an integral part of the system to support supply control.

When the national system was developed, the Northwest Territories was not included in the allocation of quotas and is now actively seeking production quota for eggs. The NWT has made a request to the CEMA for 100,OOO layers or approximately 2.15 million dozen.[1]

The Government of the Northwest Territories contracted Deloitte & Touche in association with Hinchey, Williams, Avery, Cooper & Co. to undertake a study to determine the impact that the requests for quota would have on the producing provinces currently supplying the Northwest Territories. The following discussion summarizes the findings of the consultant team with respect to the objectives of the study as they relate to eggs.

Objectives

The overall objective of the study was to provide information required to support requests for quota by the GNWT. The study provides a clear understanding of the demand for

[1] All discussion of NWT quota requests and national marketing agency responses has been sourced from the detailed Request for Proposal for this study.

table eggs[2] in the NWT, analyzes impacts of the proposed quota requests; and develops conclusions which will form quota requests.

Specific items addressed, as outlined in the Terms of Reference, included:

- *Determine the current market for eggs (dozen) in the NWT;*
- *Determine the current consumption of eggs (dozen) in the NWT;*
- *Evaluate the future market growth for eggs in the NW;*
- *Determine from which provinces demand is currently supplied and in what volume from each province in the measures indicated;*
- *Identify the seasonal variances which may occur which influence the consumption of eggs;*
- *Determine the impact that a requested quote would have on the provinces which currently supply NWT demand;*
- *Perform a comparative analysis of the quantity of quota which the NWT has requested and how it relates to past requests by the supplying provinces for adjusted quota or additional quota to meet demand; and*
- *Based on the above, recommend quota allocations for eggs which the NWT* should *seek. An increment/ schedule should be identified showing projected increases as suggested.*

Scope

The study involved estimation of the current market, current consumption and estimated future demand for a four year timeframe for eggs in the NWT. Provinces currently supplying this demand were identified and impacts of an NWT quota request were assessed. Study conclusions were based on the expected NWT demand for table eggs

[2] Throughout the report, eggs refers to table eggs unless otherwise specified.

during the period 1990-1994. Considerations such as economic ability of the NWT to produce at that level and viability of production were outside the scope of this research.

Methodology

In conducting the study, data were collected from published sources, including Statistics Canada, Agriculture Canada, NWT Bureau of Statistics, and the GNWT Department of Economic Development and Tourism. Interviews were held with wholesalers and retailers of eggs in the NWT; and wholesalers and processors in supplying provinces. Interviews were also conducted with representatives of the federal agency and provincial marketing boards.

Assumptions

In developing the current consumption and projected demand figures for this report, the consultant team made a number of fundamental assumptions about population composition and growth and rate of change in per capita consumption. These assumptions are outlined below.

- the potential demand for eggs in the NWT is composed of residents, tourists and a static number of camp workers; and
- tourist growth was assumed to be 3.4% annually (national figure).

Conclusions

The scope of the research conducted for this study was limited to the key questions outlined in the introduction of this Executive Summary. The assessment and analyses have focused on establishing estimates of current consumption and potential demand for eggs in the Northwest Territories, and the impact that a GNWT quota request would have on provinces currently supplying the Northwest Territories.

Other related issues were noted by the consultants during this study, but were not within the terms of reference. These issues may require further study and include:

- the ability to secure local market share and consumer response to price and quality factors;
- legal and political ramifications of production;
- possible retaliatory actions by current suppliers;
- operational feasibility and required scale for production;
- the implicit costs of creating and operating a supply management board (and an industry), as mandated by national supply management legislation, in the Northwest Territories.

The **first objective of this** study was to:

- *Determine the current market and level of consumption for eggs (dozen) in the NW.*

The analysis of study findings and results developed from interviews with wholesalers, distributors, retailers and food service outlets in the Northwest Territories resulted in the following quantitative estimates of current consumption.

Table I
Estimated NWT Consumption -1990
(dozen)

	Total Estimated Consumption	Per Capita Consumption
Eggs	1,127,800	20

The **second objective** was to:

- *Evaluate the future market growth for eggs in the NWT.*

Results developed from our interviews indicate that few wholesalers, distributors or retail grocers anticipate significant growth in the per capita consumption of eggs in the Northwest Territories. They believe that any growth in the market for this product is expected to result from **increased population in** the Territories.

Based on population increase alone, it is estimated that, over the four year period until 1994, consumption of eggs could increase by up to 7% over 1990 levels to 1,208,700 dozen eggs (see Table II). This could be largely offset, however, by a projected decrease in per capita consumption. Estimates have also been made assuming territorial per capita consumption decreasing at the same rate projected for Canada. Table II documents the "Base" projections (population growth only), with the second line illustrating a case combining increased population and decreased per capita consumption (at the rate of 1.6% decline per annum projected by Agriculture Canada[3]). This implies no growth in total egg output requirements. Thus the market is likely to be near 1990 levels for the next four years.

Table II
Projected Market Growth in the NWT
(dozen)

		1990	1991	1992	1993	1994
Eggs	**(base)**	**1,127,800**	1,148,000	1,168,500	1,188,500	1,208,700
	(-1.6%)	-	1,129,600	1,131,500	1,132,400	1,133,200

The **third objective was** to:

- *Determine from which provinces demand is currently supplied and in what volume from each province in the measures indicated.*

[3] Consumer Trends for **the 1990's, Agriculture Canada.**

In general terms, we have determined that the Northwest Territories can be sub-divided into three regions - western, central and eastern. The western region is supplied principally by Alberta. The central region is supplied principally by Manitoba and occasionally by Ontario. The eastern region is supplied by Ontario and Quebec.

The estimated volume of eggs supplied by each province is outlined in Table III.

Table III
Provinces Supplying the NWT

	Eggs (dozen)
Alberta	424,700
Manitoba	202,900
Ontario and Quebec	158,800
Estimated Egg Imports to the NVVT	786,400

Product is generally moved by truck from Alberta, and by air from Manitoba, Ontario and Quebec. Shipments are usually received one to two times per week,

The fourth objective was to:

- *Identify the seasonal variances which may occur which influence the consumption of the commodities.*

Interview results indicated that all territorial retailers contacted experienced seasonal variations in egg sales. Retailers in Yellowknife stated that their sales rose in the summer months. Anecdotal explanations for this variation included the influence of tourism, generally increased activity during the summer, and the fact that people tend to make larger than normal grocery purchases in the summer.

Conversely, retailers in other locations across the Territories stated that their sales were higher in the winter when community residents were "in town". Store owners believed that sales decreased in the summer as non-native residents left for vacations in the south and native residents left the communities for their summer camps.

Having established the basic size and scope of the market for eggs in the Northwest Territories and using this information to develop consumption projections, the study proceeded to address the final three objectives.

The **fifth objective was to:**

- *Perform a* comparative *analysis of* the quantity of quota *which* the *NWT* has *requested and how it relates to past requests by the supplying provinces for adjusted quota or additional quota to meet demand.*

Although quota allocations are partially based on changes in consumer demand, there is no record relating quota requests to the NWT market. Due to the many interrelated factors influencing consumption and quota allocations it was therefore not possible to conduct this analysis.

There have, however, been no additional quota allocations for eggs recorded, and in fact consumption of eggs has been decreasing.

The sixth objective was:

- *Based on the above, recommend quota allocations for eggs which the NWT should seek. An incremental schedule should be identified showing projected increases as suggested.*

Based purely on the survey findings, the quota required is 1,127,800 dozen for 1990 (20 dozen per capita).

On the basis of these quota recommendations, the **final objective** of this study was to:

- *Determine the impact that a requested quota would have on the provinces which current/y SUpply NWT demand.*

Table IV estimates the volume of eggs that the supplying provinces currently ship to the territories and the revenue from table egg sales that would be forgone if this market was no longer available. If these volumes are displaced, it means about $828,200 of foregone revenues.

Table IV
Impact on Supplying Provinces
(1989 $)

	Eggs	
Province	Volume (doz)	Revenue ($)
Alberta	424,700	$453,200
Manitoba	202,900	205,700
Ontario and Quebec	158,800	169,300
Total	786,400	$828,200

Discussions with marketing board representatives indicated it is likely that the impacts of production in the NWT would be borne by all provinces, rather than primarily Alberta, which currently supplies the largest portion of NWT consumption.

The interviews conducted with board and agency representatives yielded generally favorable responses to enable the NWT to produce supply regulated products at the level of its own consumption, although regional self-sufficiency is not a formal objective of these agencies. Quota requests exceeding justifiable consumption levels in the NWT were said to be difficult to secure.

1.0 INTRODUCTION

1.1 Background

National supply management agencies have been formed to regulate the production and marketing of a limited number of agricultural commodities in Canada. Eggs is one such commodity, with production and **marketing regulated** by the Canadian Egg Marketing Agency (CEMA), and its provincial counterparts under the national supply management system.

This supply management system has, as its foundation, the allocation of production quotas on a national and provincial basis. Regulated imports are an integral part of the system to support supply control.

When the national plans were developed, the Northwest Territories was not included in the allocation of quotas and is now actively seeking production quota for eggs.

Allocated egg quotas in Canada total 393 million dozen. Major egg producers in Canada are Ontario, Quebec, Manitoba and British Columbia.

The NWT has made several requests for quota from the CEMA in the past, although, to date, it has not been successful. The NWT's most recent request to the CEMA for egg quota was for 100,000 layers (equivalent **to 2.15 million** dozen production).

The Government of the Northwest Territories (GNWT) contracted Deloitte & Touche in association with Hinchey, Williams, Avery, Cooper& Co., to conduct a study to determine the impact that the requests for quota would have on the producing provinces currently supplying the Northwest Territories.

1.2 Objectives and Scope

Objectives

The overall objective of the study was to provide information required to support requests for quota by the GNWT. The study was to provide a clear understanding of the demand for table eggs,[4] analyze impacts of the proposed quota requests; and make recommendations for quota requests. **Specific items to be addressed** as outlined in the Terms of Reference included:

- *Determine the current market for eggs (dozen) in the NW;*
- *Determine the current consumption of eggs (dozen) in the NW;*
- *Evaluate the future market growth for eggs in the NW;*
- *Determine from which provinces demand is currently supplied and in what volume from each province in the measures indicated;*
- *Identify the seasonal variances which may occur which influence the consumption of eggs;*
- *Determine the impact that a requested quota would have on the provinces which currently supply NWT demand;*
- *Perform a comparative analysis of the quantity of quota which the NWT has requested and how it relates to past requests by the supplying provinces for* adjusted *quota or additional quota to meet demand; and*
- *Based on the above, recommend quota allocations for eggs which the NWT should seek. An incremental schedule should be identified showing projected increases as suggested.*

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[4] **Throughout the repot-t, eggs refers to table eggs unless otherwise specified.**

Scope

The work conducted involved estimation of the current market, current consumption and estimated future demand for a four year timeframe for eggs in the NWT. Provinces currently supplying this demand were identified and impacts of the NWT quota request were assessed. Quota recommendations were based on the expected demands within the NWT to 1994. Considerations such as economic ability of the NWT to produce at that level and viability of production were outside the scope of this research.

1.3 Methodology

In conducting the study, data were collected from published sources, including Statistics Canada, Agriculture Canada, NWT Bureau of Statistics, and the GNWT Department of Economic Development and Tourism. Interviews were held with wholesalers and retailers of eggs in the NWT; **and** wholesalers and processors in supplying provinces. Interviews were also conducted with representatives of federal agencies and provincial marketing boards. Over thirty *(3o)* interviews were conducted. Information was cross-referenced as far as possible during the course of the study to ensure the reliability of the results.

Methods to Estimate Market Size

There are several methods available to estimate the size of the market for eggs in the Northwest Territories. The first method **is to multiply national** per capita consumption figures by the current population of the territories.

The second method is to conduct a consumer survey. The widespread locations of communities in the Northwest Territories and the difficulties inherent in administering the survey diminish the applicability of this approach.

The third method is to estimate sales of eggs at the local retail level through a survey of major territorial retailers, wholesalers and distributors. While this method is more complex, it has the advantage of revealing differences between consumption patterns in the Northwest Territories and Canada as a whole. This was the method used.

Interviews were conducted with retailers, wholesalers and distributors in six major centres in the Northwest Territories including Yellowknife, Hay River, Fort Smith, Inuvik, Rankin Inlet and Iqaluit. Contact was made with major retailers, wholesalers and distributors in these centres, including some cooperatives (see Appendix I for list of interviews). A standard interview guide was used to ensure collection of consistent information (see Appendices II, III and IV).

Wholesalers and distributors who were interviewed indicated that they supply the hotel and restaurant and institutional markets, and a cross-check with some of these establishments indicated that the majority of product was purchased through outlets included in the survey.

We received very good cooperation on the survey, and it is thought that the information obtained provides a reliable basis for estimation of total consumption in the NWT.

The following chapters assess the current consumption of eggs, the influence of seasonality factors on current consumption and, finally, the current and projected growth in demand for this commodity.

The chapters document information obtained through our survey of wholesale, distribution and retail operations, and, supplemented by information available from other sources, deveiop estimates for consumption and demand for eggs in the Northwest Territories. Estimates based on national per capita consumption figures have aiso been provided for comparison purposes against the NWT per capita estimates from the wholesaler/retailer survey.

2.0 CANADIAN SUPPLY MANAGEMENT SYSTEM BACKGROUND

The agricultural marketing board system in Canada has been evolving over the last fifty years through the process of balancing federal and provincial interests in an ever changing environment. The system is the product of both federal and provincial legislation.

Farm Products Marketing Agencies Act: The *Farm Products Marketing Agencies Act* **provides** for establishment of national agencies with powers relating to any farm product other than wheat and dairy products, where the majority of producers of the product in Canada are in favour of such an agency. It also establishes the National Farm Products Marketing Council which reports to the Minister of Agriculture and monitors and Supewises the agencies to assure that they achieve their objectives of more effectively marketing farm products in intraprovincial and export trade.

In addition, the *Act* states that the proclamation of the Governor in Council establishing the agencies shall set out the terms of any marketing plan that the agency is empowered to implement. The objects and powers of the agencies are also set forth in the *Act,* which include the power to set interprovincial and export quotas for any egg or poultry product, to purchase the regulated product, and make such orders and regulations necessary to the implementation of the plan. Section 24 of the *Act* states that any production or marketing quota allocated shall be on the basis of production in the area over a period of five years immediately preceding the effective date of the marketing plan.

Penalties for non-compliance with the *Act* or any marketing plans are set forth in Section 38, which establishes a maximum fine of $5,000.

Three agencies have been established under the *Act*: Canadian Egg Marketing Agency (CEMA, 1972), Canadian Turkey Marketing Agency (CTMA, 1974) and the Canadian Chicken Marketing Agency (CCMA, 1978).

<u>The Canadian Egg Marketing Agency</u>: The CEMA is a producer controlled and operated national marketing plan with powers derived from the *Act* and the federal-provincial agreements. The agreements are signed by the federal Minister of Agriculture, the responsible provincial ministers, the supervisory boards of each member province, the local marketing board for the regulated commodity and the National Farm Products Marketing Council. The key element of the national scheme as set forth in the *Act* and the marketing plan is that they mesh the federal powers over interprovincial and export trade with the provincial powers over intraprovincial production and marketing.

Under the agreement, the agency, provincial marketing boards and provincial supervisory boards are authorized and directed to delegate to or accept from each other, any authority necessary to implement the marketing plans. **As well,** the marketing boards and provincial supervisory boards agree not to restrict free interprovincial trade in the regulated commodities in any manner inconsistent with the marketing plans and to establish prices by methods set out in the plans. A provincial allocation of quota is also agreed upon, as well as criteria to amend the basic allocation (a highly controversial area).

Without going into detail with regard to the regulations passed by the agency, there is an anti-dumping regulation, licensing regulation, quota regulation and regulations establishing levies. CEMA, unlike the other agencies, has a surplus removal program and levy, and sets the price of “A” Grade large eggs.

3.0 NWT POPULATION

3.1 Population Estimates

The Northwest Territories has the fastest growing population in Canada, with a rate of natural increase 50% higher than the national average. Combined with this is a trend to increased urbanization. Almost half of the population live in the territories' five largest centres - Yellowknife, Hay River, Fort Smith, Rankin Inlet and Iqaluit.

The population of the Northwest Territories is also comparatively young by national standards. Only 3% of the population is over the age of 65, whereas approximately 70% is between the ages of 15 and 65.[5] This is contrary to national trends where the general population is aging and the number of young people is decreasing.

Table 3.1 outlines the population projections for the Northwest Territories, indicating the three major regions used for the analysis from 1990 to 1994, using population projections developed by the NWT Bureau of Statistics.

The consumption figures have been calculated on the basis of per capita estimates of consumption for the population of the Northwest Territories, including presence of the yearly tourist population and those individuals employed in temporary settlements connected to activity such as mining exploration, oil and gas activity and other remote occupations. Consumption by tourists and visitors was calculated based on the number of visitors and average length of stay information available from GNWT, Department of Economic Development and Tourism, and accounts for consumption equivalent to about 2,197 persons. For camps, total consumption rather than per capita consumption was used since accurate numbers of camp residents were not available.

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5 Building on Strengths: A Community-Based Approach. Department of Economic Development & Tourism. 1989. pp. 10-11.

Table 3.1

NWT Population Projections[6]

Region or Community	1990	1991	1992	1993	1994
Western NWT	35,001	35,485	35,974	36,453	36,935
Central Arctic	10,147	10,418	10,699	10,977	11,262
Eastern Arctic	11,342	11,630	11,922	12,220	12,518
Northwest Territories[1]	56,488	57,534	58,594	59,651	60,715

[1] Totals may not add **due to rounding.**

3.2 Assumptions

In developing the current consumption and projected demand figures for this report, a number of fundamental assumptions about population composition and growth were made. These assumptions are outlined below:

- the potential demand for eggs in the NWT is composed of residents, tourists and a number of camp workers; and
- tourist growth was assumed to be 3.4% annually (national figure).

[6] NWT Community Population **Projections, (Interim Figures)** NWT **Bureau of Statistics, February 21, 1990. Also includes tourist visitors.**

4.0 CONSUMPTION AND DEMAND ESTIMATES

This chapter assesses the current consumption of table eggs in the NWT, the influence of seasonality factors on current consumption and finally the current and projected growth in demand for table eggs.

The chapter documents information obtained through our survey of wholesale, distribution and retail operations, **and information available from other** sources, and develops estimates for consumption and demand for eggs in the Northwest Territories. Estimates based on national per capita consumption figures have also been provided for comparison purposes.

4.1 Current Consumption of Eggs

Agriculture Canada data indicate that national per capita consumption of eggs was 17.35 dozen in 1988 (see Appendix V).

Survey results are considered to be reliable estimates of per capita consumption since information was collected from major wholesalers and retailers in the survey communities, and have therefore been relied upon in estimating consumption. Consumption of eggs in the Eastern Arctic is estimated to be 158,800 dozen eggs for 1990, and for the Central Arctic, 202,900 dozen eggs. Consumption of eggs in the Western NWT is about 766,100 dozen for 1990.

Some egg production occurs in the NWT at Hay River. Mr. Frank Richardson, owner of Northern Poultry in Hay River, would not provide egg production information for this study. Mr. Gene Hachey of the GNWT indicates that Northern Poultry has barns with a capacity of 46,000 birds and is producing at **about** this level now. This could not be confirmed although calls were made to the Alberta Marketing Council, Alberta Egg and Fowi Marketing Board, Agriculture Canada Food inspection Branch (Edmonton) and CEMA (economist).

Table **4. I shows estimated total current egg consumption by** region based on the wholesale/retail **survey** results. For comparison purposes, **an** estimate based on national **per** capita **consumption figures (17.35 dozen) is also included in the table.**

Table 4.1

Estimated Current Egg Consumption

(1990 - Dozen)

Region	Based on National Consumption (17.35 dozen)	**Deloitte** & **Touche** Estimate Survey (20.0 dozen)
Western NWT	**679,700**	**766,100**
Central Arctic	176,100	202,900
Eastern Arctic	196,800	158,800
Total NWT	1,052,600	1,127,800

Total current egg consumption in the NWT is therefore estimated at 1,127,800 dozen, equivalent to an average per capita territorial consumption of 20.0 dozen. The analysis indicates that the NWT per capita consumption of eggs is approximately 15% higher than the national per capita estimate.

4.2 **Demand**

In all cases, retailers **interviewed indicated** that the current supply of eggs available is adequate to meet demand for the product. Most retailers receive products once or twice a week and indicated this was frequent enough to meet demand. Less frequent delivery, however, would not adequately meet demand.

4.3 **Seasonal** Variations in Demand

Our interview findings indicate that most retailers experienced seasonal variations in demand for eggs, **and they provided information** for high and low demand periods. However, the timing of the fluctuations appears to differ depending on the location of the wholesaler/distributor or retailer.

Interviews completed in Yellowknife indicated that store owners perceived egg demand to be higher in the summer than in the winter months. Anecdotal explanations for this variation mentioned the influence of tourism in the summer, the generally increased activity of Yellowknife residents during the summer months and the fact that people preparing for camping vacations generally made larger than normal grocery purchases.

Conversely, findings developed from interviews with retailers in western, central and eastern Arctic communities underlined the store owners' perception that their sales of eggs was higher in the winter when community residents were "in-town". Store owners believed that during the summer months their sales decreased as non-native residents left for vacations in southern Canada and the Dene and Inuit residents left the communities for their summer camps.

Overall, the demand for eggs in the Territories as a whole is considered to be generally stable throughout the year.

Egg sales to remote camps were not perceived by the majority of the interviewees to be significant in overall sales volumes. Only two grocery operations were found to have significant sales to camps. Weaver& Devore, a grocery distributor located in Yellowknife, stated that approximately 80'% of its sales were camp related, but its stated sales volumes were relatively small in relation to other Yellowknife grocery distributors and retailers. Burns Meats Ltd. also stated that it had some camp sales during the summer months, but could not provide figures which separated camp sales from sales to the hotel and restaurant sector in Yellowknife. Only Stanton Distributing Ltd., located in Inuvik, stated that it was significantly involved in sales of eggs to camps. The firm's manager indicated that approximately one-third of its business was camp-related.

4.4 Additional Factors Influencing Demand

The ethnic composition of the population of the Northwest Territories also plays a role in shaping the annual gross and per capita consumption figures for eggs. The Northwest Territories is unique among jurisdictions in Canada in that its native population is a majority of the total Territorial population. In percentage terms, the people of the Northwest Territories are 38% Inuit or Inuvialuit, 17% Dene, 7% Metis and 38% non-native.[7]

Interviews with Regional Nutritionists in Inuvik, Sachs Harbour, Ft. McPherson and Iqaluit indicate that country foods (locally produced items such as caribou or muskox) continue to play a significant role in the diets of aboriginal people. This is likely a matter of traditional preference which will become less and less important as the trend to urbanization and less traditional lifestyles continues. Similarly, as other affordable and acceptable forms of food become available, the volume obtained through traditional means may also decline. This could result in increased per capita consumption of eggs in the NWT, but based on the information available, no definitive conclusion can be made.

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[7] Population By Ethnicity, Region and Community, NWT Bureau of Statistics, May, 1990.

5.0 PRODUCT SOURCES AND TRANSPORTATION PAlTERNS

5.1 Current Product Sources and Transportation Patterns

Based on the results obtained from the survey of major territorial retail food outlets, wholesalers and distributors, we believe that the market for eggs in the Northwest Territories can be segmented into western, central and eastern regions. The western region would include the major centres of Fort Smith, Hay River, Yellowknife and Inuvik. The central region includes Rankin Inlet. The eastern region would include Iqaluit. Together these major centres account for approximately 50% of the territorial population.[8] The discussion below deals with each region separately, identifying product sources and method of shipment.

Western NWT

Choice of sources of supply for eggs appears to be driven by considerations of distance and consequently transportation. Retailers in the Yellowknife-Hay River-Ft. Smith area appear to obtain their eggs either directly from Northern Poultry located in Hay River or indirectly through ILE Holdings located in Hay River as well. Retailers located further north such as Inuvik obtain their eggs directly from MacDonald's Consolidated or Lilydale Cooperatives located in Edmonton, Alberta.

Eggs are transported by Northern poultry themselves or by ILE Holdings which conducts a limited amount of contract hauling for Northern Poultry. ILE holdings is largely responsible for distributing eggs to the NorthWest Company and smaller retail outlets in the Ft. Smith-Hay River area, while Northern Poultry continues to deal directly with larger retailers in the Yellowknife region.

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[8] Population figures are based on Community Population - 1988 Estimates contained in Northwest Territories - 1989: By the Numbers. Bureau of Statistics. Government of the Northwest Territories. August, 1989.

Central Arctic

Eggs **are available to retailers** in the central Arctic from two sources both located in Winnipeg. The North West Company outlets obtain their eggs from Winnipeg Egg Candling and the Kissarvik Cooperative in Rankin Inlet obtains its eggs from Sundale Eggs. Eggs are delivered direct from Winnipeg by NWT Air jet service.

Eastern Arctic

Most eggs are delivered to retailers in the eastern arctic by First Air jet service from McCartney located in Ottawa.

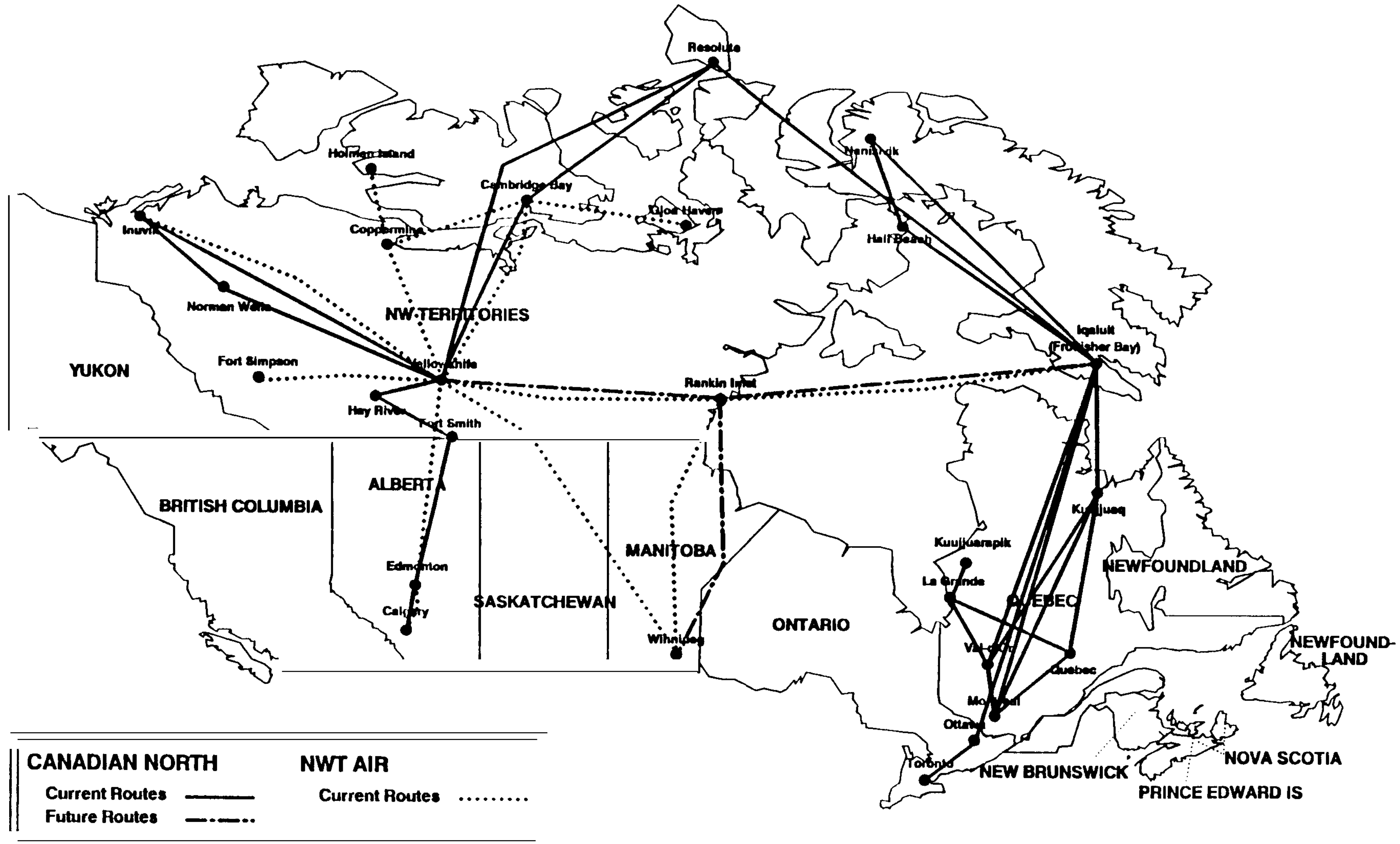
5.2 Possible Distribution Routes

Figure 5.1 on the following page illustrates the current and future air service routes of Canadian North (a connector airline of Canadian Airlines International) and NWT Air (a connector airline for Air Canada). Yellowknife serves as the air transportation hub in the western NWT and Iqaluit services a similar role in the eastern Arctic.

NWT Air's activities are currently limited to the western NWT with the exception of a cross-territorial flight joining Yellowknife, Rankin Inlet and Iqaluit. Canadian North is active throughout the Northwest Territories and has the only frequent air service between central Canada and the eastern Arctic communities such as Iqaluit. Canadian North currently lacks a Yellowknife-Rankin Inlet-Iqaluit route but does fly Iqaluit-Resolute-Yellowknife.

As indicated previously, several communities in the central and eastern Arctic receive their eggs by air from central Canada. An assessment of the air routes currently available or planned indicates that air transport of eggs from a location in the Yellowknife-Hay River region is technically feasible.

FIGURE 5.
NORTHWEST TERRITORIES - MAJOR SCHEDULED FLIGHTS



Eggs produced in Hay River are also distributed by truck to communities in the Yellowknife-Hay River-Fort Smith region. The distribution of eggs directly from this region would reduce delivery time to all communities in the western NWT. Unfortunately, the threat of mechanical failure has been indicated to mean that eggs could not be delivered by truck to communities such as Inuvik.[9]

[9] This discussion should only be regarded as an examination of technical feasibility as the consultant team was not retained to examine the cost of production of eggs in general or the economic feasibility of ground or air distribution.

6.0 COMPARATIVE ANALYSIS

One of the objectives of the study was to:

- *Perform a comparative analysis of the quantity of quota which the NWT has requested and how it relates to past requests by the supplying provinces for adjusted quota or additional quota to meet demand.*

Under the national scheme, initial allocations of quota when the plan was established were based upon the previous five year egg production in the province irrespective of where the product was sold. There was no initial estimate made of a proportion of any province's production which was sold to the NWT.

Subsequent quota allocations were made on the basis of five criteria:

- any significant change in consumer demands;
- ability of any province to meet its allocated production;.
- total market requirement within each market area;
- the proportion of market demand in a province that is met by production in that province; and
- the comparative advantage of production and marketing of eggs.

Although changes in consumer demands are one criteria for allocation of additional quota, apparently no explanation of the source of the change in demand is required. Therefore, quota requests by supplying provinces have not been tied to NWT demand and conducting a comparative analysis, as described, is not feasible.

In fact consumption of eggs has been declining, and total quota issued has not been altered since the initial allocations which makes such a study unreasonable.

7.0 CONSUMPTION PROJECTIONS

Estimates of future demand for eggs in the Northwest Territories have been based on the perceptions of wholesale/distribution and retail store owners about the market for eggs in the **period 1991-1994 and the consultant team's analysis of projections for** per capita consumption and growth in the population **of the** Northwest Territories.

It has been suggested that the **local supply of eggs** in the Territories, and resulting changes in availability **of supply, and quality and product** price, has led to increased consumption of eggs in the Territories. Mr. Frank Richardson of Northern Poultry indicated he believes that **consumption of eggs has increased** since he started producing locally, but said that at this time he **was** unwilling to provide any quantitative data.

7.1 Projected Growth in Egg Consumption

Wholesale/distribution operators and store owners interviewed by the consultant team did not foresee any extraordinary **growth** in the consumption of eggs in their respective market places.

Based on per capita consumption figures developed from the market research and population projections as outlined in Section 3.0, we have estimated the consumption of eggs for the period 1990-1994. Consumption projections are documented in Table 7.1. These estimated increases are based solely upon population expansion.

Table 7.1

Egg Consumption Projections

(dozen)

	1990	1991	1992	1993	1994
Western Region	766,100	776,800	787,700	797,900	808,300
Central Region	202,900	208,400	214,000	219,600	225,300
Eastern Region	158,800	162,800	166,800	171,000	175,100
Total NWT	1,127,800	1,148,000	1,168,500	1,188,500	1,208,700

Note: Based **on fixed 1990 NWT per capita consumption from survey estimates and GNWT population projections.**

Various market conditions can contribute to changes in consumption patterns, including **supplier/retailer efforts to merchandise a product,** prices, and changing tastes and preferences of **the aboriginal** population. Investigation of such factors was outside the scope of this study. Since **no** published data are available to document the effects of such factors **on consumption in the** NWT, **projections have** been made based on projected national per capita decreases in egg consumption. For the 1990 to 1995 period, Agriculture Canada projects that per **capita consumption of eggs will decrease** 1.6% per annum.[10] Table 7.2 and Figure 7.1 illustrate estimates including both population growth, as outlined previously, and decreased per capita consumption, based on the Agriculture Canada projections. **The** overall increase is estimated at 0.5% over 1990, or 1,133,200 dozen by 1994.

[10] **Consumer Trends for the** 1990's, Agriculture Canada.

Table 7.2

NWT Demand Projections Under Alternative Assumptions

(dozen)

	1990	1991	1992	1993	1994
Eggs (Base)[1]	**1,127,800**	**1,148,000**	**1,168,500**	**1,188,500**	**1,208,700**
Low (-1 .6)[2]		**1,129,600**	**1,131,500**	**1,132,400**	**1,133,200**

Note: [1] Assumes stable **per capita consumption and GNWT population projections.**
[2] Assumes **decreased per capita consumption and GNWT population projections.**

Figure 7.1

NWT EGG DEMAND PROJECTIONS

(dozen)

Source: Table 7.2

8.0 IMPACT ON SUPPLYING PROVINCES

From the wholesale/retail survey, the research indicates that the total consumption of eggs in the NWT is currently about 1,127,800 dozen table eggs annually.[11] Total table egg production in Canada under the national plan in 1988 was 339,229,710 dozen.[12] The NWT therefore comprises approximately 0.33% of the Canadian market share.

From our survey of wholesale sources of eggs used in the NWT, the total imports are about 786,400 dozen (Table 8.1).

Table 8.1

Suppliers of Eggs to the NWT

	Dozen
Alberta[1]	424,700
Manitoba[2]	202,900
Ontario and Quebec[2]	158,800
Estimated Egg Imports to the NWT	786,400

[1] Source: CEMA
[2] Source: Survey Findings.

From Agriculture Canada data, total shell egg imports to the NWT are about 28,313 boxes of 15 dozen in 1989 or 424,700 dozen (Table 8.2). This seems to be low relative to the survey findings and does not indicate Eastern and Central Arctic requirements.

We have therefore relied on the CEMA data as an estimate of Alberta shipments since there is some additional local production in the Western NWT; survey results have been relied on for the other supplying provinces for subsequent impact measures (Table 8.1).

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[11] Deloitte & Touche estimate.

12 CEMA Annual Report, 1988.

Table 8.2

Report of Interprovincial Movement of Shell Eggs - Graded'

to the NWT

(Boxes of 15 Dozen)

Supplying Province	1984	1985	1986	1987	1988	1989
Alberta	26,008	25,911	23,227	16,692	15,666	28,313
Manitoba	3,452	4,116	5,258	3,293	3,141	
Ontario	46	-	-	-	-	
Total	29,506	30,027	28,485	20,185	18,807	28,313

[1] **Includes interprovincial movement of shell eggs from and to federally registered grading** stations, **together with movement of CEMA** surplus and CEMA dyed.

Source: Agriculture Canada, Poultry **Market Review.**

Costs to Other Provinces

The GNWT has requested 10(),000 hens or 2.15 million dozen eggs (using national rate of lay of **21.5 dozen/hen). This volume of production** would affect the current level of imports of eggs to the NWT.

It was indicated by a representative of CEMA that the eggs produced in Alberta previously going to the NWT would likely be sold in Alberta, since this province had been in a deficit situation. This supply would **replace eggs previously brought into Alberta from Manitoba. Excess table eggs in Manitoba, however,** apparently find a ready market as breaker eggs, mainly in the Ontario market. Sale of breaker eggs is assisted by the levy applied to all eggs produced under the quota system. It is expected that if sufficient quota were made available to the NWT to eliminate current estimated imports, available markets for the supplying provinces for table eggs would be reduced by about 786,400 dozen.[13] This volume is equivalent to about 0.2 percent of total table egg gradings in Canada and only about 1.2 percent of eggs broken in registered egg product plants for 1989.[14]

The value of the potential foregone annual sales from other provinces to the NWT at current levels (1989 table egg prices) is outlined in Table 8.3. The total value of the potential lost sales to supplying provinces is estimated to be $828,200.

Table 8.3
Annual Value of Displaced Product Sales to NWT
(1989 $)

Province	Supply to NWT (dozen)	Producer Price’ (C/dozen)	Value of Displaced Product ($)
Alberta	424,700	106.7	$453,200
Manitoba	202,900	101.4	205,700
Ontario and Quebec	158,800	106.6	169,300
Total	786,400		$ 8 8

‘ Weighted average price to producer for all grades for 1989.

Source: Table 8.1 and Agriculture Canada.

GNWT Costs

There would be a cost to the NWT producers to join the CEMA plan. Current NWT production does not fall under the CEMA system, and is therefore not subject to the $0.16/dozen surplus removal levy. If the NWT were to receive a quota allocation to meet current self-sufficiency needs (1 ,127,800 dozen), this production would be subject to the $0.16/dozen levy, for a total cost of $180,400 annually.[15]

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[13] No NWT exports of table eggs are assumed in this analysis.

[14] Agriculture Canada, Poultry Market Review, 1989.

[15] If the NWT were to receive the 2.15 million dozen requested, the total surplus removal levy would be about $344,000 annually.

Quota Implications

Distribution of quota between the provinces has remained unchanged since the original distribution. Recently, demand for table eggs has been declining, and provincial quotas have been reduced. Total national quotas have been reduced by six percent in the last year and a half. Provincial quotas were reduced accordingly on a pro-rated basis.[16]

If the NWT were to receive a production quota, there likely would be a reduction in the quota allocation among the provincial quotas. There are no over-base allocations of quota for egg production at the current time in Canada since the market for eggs has been declining over the last several years. Additional information on the aspects of re-allocation, and cost competitiveness and markets would be necessary in order to know how this re-allocation would be effected, which provinces would be impacted, and by how much.

The CEMA's position suggests that they will not oppose non-quota production of eggs in the NWT for consumption in the NWT. The CEMA, however, opposes sales of non-quota eggs produced in the NWT to quota producing provinces. This is one of their mandates.

An additional consideration is that if the NWT receives a quota, production in the Territories would be limited to the quota allocation, and NWT producers there would be subject to any future quota reductions which might be applied, should egg consumption in Canada continue to decrease.

[16] Interview with CEMA representative.

9.0 CONCLUSIONS

The scope of the research conducted for this study was limited to the key questions outlined in Section 1.0- Introduction of this report. Our assessment and analyses focused on establishing **estimates** of current consumption and potential demand for eggs in the **Northwest Territories and the impact that the GNWT quota request** would have on provinces currently supplying the Northwest Territories.

Other related issues **were noted by the** consultants during this study, but were not within the terms of reference. **These issues may require further study:**

- **the ability to secure local market share and consumer response to** price and quality factors;
- legal and political ramifications of production;
- possible retaliatory actions by current suppliers;
- operational feasibility and required scale for production; and
- the implicit costs of creating and operating a supply management board (and an industry), as mandated by national supply management legislation, in the Northwest Territories.

The **first objective** of this study was to:

- *Determine the current market and level of consumption for eggs (dozen) in the NWT.*

Our analysis of study findings and results developed from our interviews with wholesalers, distributors, retailers and food service outlets in the Northwest Territories resulted in estimates of current consumption of eggs as outlined in Table 9.1.

Table 9.1

Estimated NWT Consumption

(dozen)

	Total Estimated Consumption	Per Capita Consumption
Eggs	1,127,800	20.0

Source: Table 4.I.

The **second objective was to:**

- *Evaluate the future market growth for eggs in the NWT.*

Results developed from our interviews indicate that few wholesalers, distributors or retail grocers anticipate growth in *the* per capita consumption of eggs in the Northwest Territories. Based on population increase alone, it is estimated that, over the four year period until 1994, consumption of eggs could increase by up to 7% to 1,208,700 dozen eggs (over 1990 levels). **This could, however, be largely offset by the projected decline** in per capita consumption. overall, the demand for table eggs is likely to be near 1990 levels through 1994.

The third objective was to:

- *Determine from which provinces demand is currently supplied and in what volume from each province in the measures indicated.*

In general terms, we have determined that the Northwest Territories can be sub-divided into three regions - western, central and eastern. The western region is supplied principally by Alberta. The central region is supplied principally by Manitoba and occasionally by Ontario. **The eastern** region is supplied by Ontario and Quebec.

The estimated volumes of eggs that the provinces supply is outlined in Table 9.2.

Table 9.2

Supplying **Provinces**

	Eggs (dozen)
Alberta	424,700
Manitoba	202,900
Ontario and **Quebec**	158,800
Estimated Egg Imports to the NWT	786,400

Source: Table 8.1.

Product is generally moved by truck from Alberta, and by air from Manitoba, Ontario and Quebec. Shipments are usually received one to two times per week.

The **fourth objective** was to:

- *Identify the seasonal* variances *which may occur which influence the consumption of eggs.*

Interview results indicated that all territorial retailers contacted experienced seasonal variations in their sales of eggs. Retailers in Yellowknife stated that their sales rose in the summer months. Anecdotal explanations for this variation included the influence of tourism, generally increased activity during the summer and the fact that people tend to make larger than normal grocery purchases in the summer.

Conversely, retailers in other locations across the Territories stated that their sales were higher in the winter when community residents were “in town”. Store owners believed that sales decreased in the summer as non-native residents left for vacations in the south and native residents left the communities for their summer camps.

Having established the basic size and scope of the market for eggs in the Northwest Territories and using this information to develop consumption projections, the study proceeded to address the final three objectives.

The fifth objective was to:

- *Perform a comparative analysis of the quantity of quota which the NWT has requested and how it relates to past requests by the supplying provinces for adjusted quota or additional quota to meet demand.*

Although quota allocations are partially based on changes in consumer demand, there is no record relating quota requests to the NWT **market.** Due to the many interrelated factors influencing consumption and quota allocations it was therefore not reasonable to conduct this analysis.

The sixth objective was:

- *Based on the above, recommend quota allocations for eggs which the NWT should seek. An incremental schedule should be identified showing projected increases as suggested.*

Based on the survey findings, the quota required for self-sufficiency is 1,127,800 dozen *(20.0* dozen per capita). No substantial increase in quota would be required for the period to 1994.

On the basis of these quota recommendations, the **final objective** of this study was to:

- *Determine the impact that a requested quota would have on the provinces which currently supply NWT demand.*

Current imports of eggs are estimated to be about 786,400 dozen from four provinces (survey findings). The value of displaced product sales would be about $828,200

($ 1989). It is believed that the impacts of production in the NWT would likely be borne by all provinces, rather than primarily Alberta, which currently supplies the largest portion of NWT consumption.

The interviews conducted with board and agency representatives yielded generally favorable responses to the NWT enabling the NWT to produce supply regulated products at the level of its own consumption although regional self-sufficiency is not a formal agency objective.

APPENDICES

Appendix I	- Wholesaler and Retailer Interviews
Appendix II	- NWT Commodities Study Interview Guide (Store Owners and NWT Wholesalers)
Appendix Iii	- NWT Commodities Study Interview Guide (Poultry and Egg Processors)
Appendix IV	- NWT Commodities Study Interview Guide (Expert Interviewees)
Appendix V	- National Per Capita Disposition of Eggs
Appendix VI	- NWT Egg Consumption Estimate

WHOLESALER AND RETAILER INTERVIEWS

Arctic Cooperatives, Winnipeg
Arctic Rim Distributors, Inuvik
Burns Meats, Winnipeg and Yellowknife
Canada Packers, Winnipeg, Edmonton
Edgson's Product Ltd., Yellowknife
Explorer Hotel, Yellowknife
Export Packers, Winnipeg
Flamingo, Montreal
Godwin's Stores, Hay River
IGA, Yellowknife
J. M. Schneider, Saskatoon and Edmonton
Kaeser's Stores, Ft. Smith
Kentucky Fried Chicken, Yellowknife
Kissarvik (Rankin inlet) Coop.
Lilydale Poultry Co-operative Limited, Edmonton
McCartney, Ottawa
Northern Fancy Meats, Yellowknife

The North West Company in:

- Fort Smith
- Inuvik
- Rankin Inlet
- Iqaluit

Stanton Distributors, Inuvik
Stanton Hospital, Yellowknife
Super A Food Stores Yellowknife
Weaver & Devore, Yellowknife
Winnipeg Egg Candling, Winnipeg
Yellowknife Correctional Centre, Yellowknife
Yellowknife Direct Charge Cooperative, Yellowknife
Yellowknife Inn, Yellowknife
Yellowknife Wholesale, Yellowknife

NWT Commodities Study Interview Guide

(To be delivered to store owners and NWT wholesalers)

General

What products do you carry in your store? Probe re:

- chicken;
- turkey;
- eggs.

What form does the poultry come to your store as? Probe re:

- fresh;
- fresh/frozen;
- frozen;
- whole and/or pieces;

Supply

From what company do you obtain your poultry and egg products?

Where does that company ship the poultry and eggs from? Probe re:

- Edmonton;
- Winnipeg;
- Toronto;
- Ottawa;
- Montreal;
- Other: ____________________

How are the poultry and eggs transported to you (eg: road, air, rail)?

What company is responsible for the shipment of the poultry and eggs?

How often do you receive a shipment of poultry and/or eggs?

Would you like to receive deliveries more often?

Could you meet demand effectively if deliveries were received less often?

Sales

How many kilograms of poultry does your store sell in a week?

Chicken: ____________________

Turkey: ____________________

How many dozen eggs does your store sell in a week?

Do you sell any of the poultry or eggs you receive at wholesale prices to other communities or cooperatives?

If so, please answer the following questions:

How often do you do this?

What portion of your sales are made in this manner?

How many kilograms of poultry or dozen eggs do you sell in this manner?

How do you transport the poultry or eggs to these buyers?

Have your store's sales of poultry and eggs changed in the last year?

How large, in geographic terms, is your market'? That is, what is the furthest point from your store that you sell poultry or eggs to on a monthly basis?

Does your store meet the current demand for poultry and eggs in **this market area?**

Do you anticipate any changes in demand for poultry and eggs in the next three years? If so, why?

Demand Variations

Are there seasonal variations in your sales of poultry or eggs? **Probe:**

- Spring break-up;
- Fall freeze -up;
- Special hunting seasons;

If so, what are some of the reasons for these variations? Probe re:

- Construction, oil well, mining camps;
- Hunting, fishing, camping lodges;

What impact do these variations in demand have on your sales of poultry or eggs?

Enquire re: price/kg of chicken/turkey
(retail) price/dozen eggs

NWT Commodities Study Interview Guide

(To be delivered to Poultry and Egg Processors)

Questions for Poultry and Egg Processors

- Does your firm supply poultry or eggs to the NWT?
- If so, where are the poultry or eggs sold? Probe re:
  - Western Arctic; Communities ____________________
  - Eastern Arctic; Communities ____________________
- On an annual basis, how many kilograms of chicken does your firm sell to the NWT?
- On an annual basis, how many kilograms of turkey does your firm sell to the NWT?
- What form is the poultry shipped in? Probe re:
  - fresh;
  - fresh/frozen;
  - frozen;
  - whole and/or pieces;
- On an annual basis, how many dozen eggs does your firm sell to the NWT?
- How are the poultry and eggs transported? Probe re:
  - air;
  - road;
  - rail;
  - need detailed information on departure points and destinations, frequency, and costs if possible;
- How has this trade with the NWT been changing over the past five years?
- If the NWT became self sufficient in the production of poultry and eggs, what impact would this have on your firm? Probe re:
  - Percentage of sales potentially lost;
  - Dollar value of potential lost sales;
- What impact would this have on the revenue of wholesalers and distributors trading with the NWT?

Appendix IV

NWT Commodities Study Interview Guide

(To be delivered to expert interviewees)

Questions for Marketina Boards

- How much, if any, of your production quota for poultry and eggs is based on your province's trade with the NWT?

- Has your board's trade with the NWT influenced your past quota requests?

- If so, in what way? Probe:

  - o adjusted quota;
  - O increased quota;

- What impact would a quota request by the NWT have on producers in your province? Probe re:

  - O potential changes in producer facility utilization capacity;

  - • potential changes in cost of production;

  - O potential changes in producer income;

  - 0 potential alterations (increase or decrease) in inter-provincial trade in poultry and eggs;

Quota revision: national or individual provinces

- Would a quota request from the NWT result in pressure for a redistribution of the national quota?

- What would be the impact of this revision?

- Which producing provinces would gain quota? Which would lose?

- Would a quota request from the NWT result only in the revision of several individual provincial quotas?

- What producing provinces might be faced with quota revision?

- What would the impact of this provincial revision be? Probe re:

  - * Factors other than changes in the volume of poultry or eggs such as:

    - changes in number of producers;
    - changes in producer income;

National Per Capita Disposition of Eggs

(kg)

Year	Eggs*
1960	15.63
1961	15.38
1962	15.27
1963	14.58
1964	14.53
1965	14.40
1966	13.93
1967	14.18
1968	14.31
1969	14.55
1970	14.73
1971	14.52
1972	14.04
1973	13.42
1974	13.28
1975	13.20
1976	13.01
1977	12.67
1978	12.47
1979	12.98
1980	12.86
1981	12.73R
1982	12.75
1983	12.56
1984	12.15
1985	11.96
1986	11 .77R
1987	11.50
1988	11.63

Note: R = revised.

Source: Handbook of Food Expenditures, Prices and Consumption, Agriculture Canada, October, 1988

* 1 kg of eggs = 1.47 dozen

NWT Egg Consumption Estimate
Based on Survey
(1990)

	Population	National Consumption Estimated Consumption	D&T Survey Estimate Estimated Consumption
Western NWT			
Yellowknife	13,648	236,793	177,424
Tourists	1,463	25,383	19,019
Other Centres	19,690	345,092	497,250
Camps		72,410	72,410
		679,678	766,103
		(Rounded to) 679,700	(Rounded to) 766,100
Central Arctic	9,760	169,663	195,600
Tourists	367	6,367	7,340
		176,050	202,940
		(Rounded to) 176,100	(Rounded to) 202,900
Eastern Arctic	10,975	190,416	153,650
Tourists	367	6,367	5,138
		196,763	158,768
		(Rounded to) 196,600	(Rounded to) 158,600
Total NWT[1]	54,291 +	Per Capita 1,052,511	Per Capita 1,127,631
Tourists	2,197	Consumption (Rounded to)	Consumption (Rounded to)
	56,488	17.35 1,052,600	20.0 1,127,800

[1] Totals may not add due to rounding.

Source: D&T estimates from survey.