Report of
Fish Price-Setting
Strategic Review Team

October 31, 2023

October 31, 2023

The Honourable Bernard Davis
Minister of Environment and Climate Change
Minister Responsible for Labour
P.O. Box 8700
St. John's, NL
A1B 4J6

Dear Minister Davis:

Thank you for the opportunity to conduct the Strategic Review of Fish Price Setting in Newfoundland and Labrador. The attached report fulfills the Terms of Reference that we were given on September 6, 2023, and more importantly presents a unique means to Fish Price Setting, particularly focused on the snow crab industry. The formulative approach ensures a fair price that is directly associated with the market value. If implemented we feel this formula-based framework will lead to stability in regard to pricing of crab, it will also facilitate more disciplined scheduled landings through the harvest season. The framework developed can also be adapted and applied to other species that require the development of a reliable database to inform formula-based market pricing.

Given the very tight time constraints, this Report would not have been possible without the full cooperation of everyone involved, and we would like to thank the industry, the Panel, and others for their input. We would also like to thank officials in your Department and the Department of Fisheries, Forestry and Agriculture for their support and commitment.

We trust that the Provincial Government will work with industry to adapt and implement the findings of the Fish Price Setting Strategic Review Team and provide the leadership necessary to bring stability to an industry which is critical to the future success of Newfoundland and Labrador.

Sincerely,

Glenn Blackwood
(Chair)

Bill Broderick

Gabe Gregory

Table of Contents

Executive Summary

1. On September 6, 2023, The Honourable Bernard Davis – Minister responsible for Labour announced the establishment of the Fish Price Setting Strategic Review Team (Review Team) to assist with the development of a formula-based framework for fish price- setting, and other potential mechanisms, to address ongoing issues with the current price- setting process. The Strategic Review Team's mandate includes economic analysis, stakeholder consultations and review of current legislation, policy and regulations, with the objective of finding a solution that reflects the respective roles and values of the harvesting and processing sectors.

2. The Strategic Review Team has concluded that the current fish price setting process is flawed and in its current form requires that the Standing Fish Price-Setting Panel (Panel) establish fixed seasonal prices that account for a multitude of dynamic market factors that are beyond any reasonable measure to predict with accuracy. The Review Team has concluded it is an impossible task. Furthermore, the mechanisms of the law, regulation and arbitration processes are not working as intended in Newfoundland and Labrador.

3. The Review Team found that there is a willingness and need within the industry to adopt a new framework for formula driven market based price-setting. Formula based pricing requires certain key elements that are not present for most species harvested in Newfoundland and Labrador.

4. The Strategic Review Team agrees with all the parties to collective bargaining - Fish, Food and Allied Workers (FFAW), Association of Seafood Producers (ASP) and the Panel, that the fact-finding and reporting leading up to negotiation is deficient. There needs to be much more comprehensive and detailed market intelligence -data on pricing, demand, inventory, supply, and other associated market and industry risks for the various Newfoundland and Labrador Products in international markets. These requirements will be event more critical with the adoption of formula driven market based price-setting as recommended by the Review Team.

5. The review of historical pricing in the industry indicates that there is much more stability in price-setting when market factors and harvester prices are linked as is the case for species such as lumpfish roe, halibut and lobster.

6. Formula based pricing requires a common set of elements. These key elements include: a reliable independent market price index that is reflective of the market for the products produced in Newfoundland and Labrador for any given species; the exchange rate risk is a variable for all species that are traded in export markets; a starting harvester price needs to be established that varies based on market and exchange rate changes; an advance payment system is required whereby the risks during the harvest season is shared between harvesters and processors; and a settlement price mechanism is established to average the market returns and harvester final price on a periodic basis. There will always be risks that remain with the buyers and processors, however, a seasonal market based approach to pricing, if practical, is a far superior approach.

7. The Strategic Review Team concluded that the 2023 crab crisis was caused by a lack of responsiveness within the industry itself. The analysis shows that the seeds for the crisis started in late 2021 to early 2022 when market indicators first showed a sharp drop in demand and a very concerning price decline. At this same time, supply was dramatically increased and export markets were distorted resulting from the Ukrainian war. This was followed by a harvest season where market prices were in free-fall, inventory was building and the market was dysfunctional. Throughout this period the industry was unable and unwilling to address the changing market reality. In 2022 and 2023, the market challenge was exacerbated by a further increase in supply (TAC for snow crab increased by 44 percent) while the industry was holding abnormally high seasonal inventory. This all culminated into an historic collapse of the crab market.

8. A comprehensive analysis of the historical UB market price for 5 to 8 ounce Newfoundland and Labrador crab sections indicates that there is a very strong correlation between this market index and the price paid for Newfoundland and Labrador crab over a period of approximately 15 years from 2006-2019 and 2023. There is little to no correlation during the Covid-19 period 2020-2022.

9. The Strategic Review Team examined a number of different approaches to establishing a formula framework for crab. It established a formula based market pricing framework through extensive modelling and analysis using the UB average weekly price data, the currency exchange rate between the US and CDN dollar, and the weekly harvester prices paid in the Newfoundland and Labrador industry over the period 2006-2023. The framework presented is a model that the Review Team is recommending that the parties adopt and modify as necessary to reach an agreement that should form the basis for pricing snow crab in the coming 2024 season. Such a framework should be established for a two to three year initial period followed by a comprehensive review with the objective to adopt this as the price-setting mechanism for crab for the long-term.

10. The Review Team suggests that, where the parties are unable to agree on any one of the key elements to establish a formula based pricing for crab prior to the 2024 season, the Fish Price Setting Panel should separately arbitrate each of various elements that are in disagreement. In addition, these framework elements should be settled, along with any of the other terms and conditions of the crab schedule, well in advance of the planned opening of the season (these issues should be resolved by an agreed prescribed timetable on or before January 31, 2024). This initiative requires immediate and sustained attention of the FFAW, ASP and Government in partnership. Only the opening minimum price should be outstanding in the immediate weeks prior to the start of the 2024 crab season.

11. The Review Team concludes that the legislation, regulations and policies governing the fish price setting process and the Panel be modified as necessary to ensure that the Panel has all the powers necessary to facilitate the formula based pricing framework envisioned. Government should assess the need to strengthen its legislation such that it is more consistent with the intended objective to have various fisheries start in a timely manner.

12. The Review Team has concluded that the current structure of fish pricing setting is not conducive to maximizing the inherent value of the resource. There is significant economic

opportunity to be gained from a market based approach driven by a focus on improving the quality of the harvest and the products derived there from.

13. The Review Team repeats the recommendations from a number of prior reports that fish prices reflect the inherent market value of products produced in the industry. As noted in our report, market value for most species is a function of size and quality characteristics. These attributes are best determined through independent dockside grading that correlate and reward attributes that give rise to increased market returns that can increase and improve the long- term viability of the entire industry. There is much more to share when value is maximized. The industry needs to establish clear and attainable goals over the short and long-term. These should be empirically measured and the benefits shared as gains and milestones are achieved.

14. The Review Team recommends that the FFAW, ASP and the Government take an active role in implementing a formula based pricing framework for crab and that this process be a mechanism that can be modified and adopted to achieve other improvements in regard to the price-setting for other species in future years.

15. The Review Team has concluded that the crab industry is currently highly dependent on the retail segment of the US market. It is recommended that the Government support industry led initiatives to diversify the US market and enable it to re-establish and expand Asian and other markets.

16. The Review Team has concluded that much of the disruption in the industry through the current crisis was avoidable, however, to avoid such outcomes, an independent fisheries management structure is required. Such a management structure was recommended by Vardy and Dunne (2003) and Cashin (2005). The review team concurs with their recommendation that the Government of Newfoundland and Labrador seek a workable arrangement with the Federal Government for coordinated and joint management of the harvesting and processing sectors. This would be an arrangement where the decision-

making powers of both governments are delegated to a single management authority. An authority similar to that utilized in the oil and gas sector.

17. The Review Team is grateful for the cooperation and support we received from the leadership of the FFAW, ASP, officials of the Department of Fisheries, Forestry and Agriculture and the Department responsible for Labour, and present and past members of the Standing Fish Price-Setting Panel, as well as the work of others who prepared electronic submissions. Your assistance was vital to our work and your insights were invaluable in guiding us through our mandate.

Introduction

The Newfoundland and Labrador inshore-based fishery is dominated by snow crab. In many ways, it is the foundation of the rural based fishing economy of the Province, just as cod was prior to the groundfish collapse three decades ago. The value of the industry has been setting records year after year up to 2022. Higher value has generated much higher incomes for participants as compared to the times when the industry was dependent on cod. The shift to crab generally has also meant an international diversification of the industry with important markets in Asia, as well as in the US.

There has been a significant recent shift occur in respect to market diversification as the Asian market, particularly Japan, has contracted due to recent higher product prices, shifting trade patterns due to increased supply and export restrictions associated with Russian production. In addition, the Covid-19 period has caused a marked increase in demand in the retail sector of the US market at the expense of the industry's more diverse presence in the foodservice sector – (restaurants, casinos, cruise lines, etc). Today one would characterize Newfoundland's industry as being very highly dependent on one species (snow crab), one market (US), and one market segment (US retail sector). So to speak, the industry is critically weak. Its dependence today is so concentrated at a time when market pricing has virtually collapsed, demand is relatively slow, and supply is at record levels. Needless to say, the industry needs rebuilding.

The risks the industry is enduring includes a period of unprecedented environmental and climatic change. Hardly a week goes by that there is not a new record in oceanographic or climatic terms. Our ocean temperatures are warming, currents are changing, and foreign species to our waters are appearing. All these changes have yet to visibly change the crab abundance, however, resource change is occurring. Once abundant shrimp resources that exploded following the groundfish decline have come and gone, while lobster populations may be benefiting from warmer waters, especially on the south and west coasts of the island.

During the Review Team's review of fish price-setting, it became painfully obvious to all of us that there is no overall management of the Newfoundland and Labrador fishing industry. Decisions are made that are not in the best interests of harvesters, processors, or the economy in general. The Review Team believes the crisis arising from the changing market dynamics is much deeper and

much more economically damaging than would otherwise have been the case had there been a better decision-making process for the whole of the industry's best interests. This issue was addressed in the 2003 Royal Commission on Strengthening our Place in Canada. At that time the report on "New Arrangements for Fisheries Management in Newfoundland and Labrador" by Vardy and Dunne recommended:

> *"a major restructuring of fisheries management, with the creation of a federal Atlantic Fisheries Management Commission, a joint Canada/Newfoundland and Labrador Licensing and Allocations Authority, along with a joint federal-provincial policy board"*

Two years later in 2005, Cashin recommended the creation of the Standing Fish Price Setting Panel but was also very critical of the lack of an overall management regime and recommended that:

> *"the Provincial Government seek a workable arrangement with the Federal Government for coordinated and joint management of the harvesting and processing sectors. This would be an arrangement where the decision-making powers of both governments be delegated to a single management authority. This authority should administer an agreed set of management policies."*

In the 18 years since that report, there has been no movement on these key recommendations and given the current crisis in the Newfoundland and Labrador fishery, it is very apparent the effect that a lack of overall management has on the industry. The Review Team believes it is time to revisit and explore the option of establishing a comprehensive management authority to govern the industry.

Background

Understanding the market dynamics and the inability of the Newfoundland and Labrador industry to respond to the market are fundamental to understanding the challenges the industry now is experiencing. It is important that the Strategic Review Team outline the recent market dynamics that have brought the Newfoundland and Labrador industry into the 2023 crisis.

Market Price Trend

For months leading up to the scheduled start of the Newfoundland and Labrador snow crab season (April 2023), there were apparent warning signs of the crisis that was about to unfold. First and foremost, the US market price for snow crab from Newfoundland and Labrador, which has been independently monitored for decades, was literally free-falling. UB reports bi-weekly the quoted market price of Newfoundland and Labrador snow crab sections (5- 8oz). [1] In more recent years, this product was selling between US$5 to 8.00 /lb. It reached an all-time high in November, 2021 at US$16.80 /lb, due to high retail demand during the Covid-19 pandemic, and the product maintained that price until the week ending January 22, 2022. However, from that point forward, for a period of 67 weeks, the product experienced precipitous decline, reaching a low in the week of May 6, 2023 at US$4.65 /lb. A price decline of 72.3 percent. This market collapse was the largest market correction in the history of the snow crab industry.

Throughout the 2022 crab season, market prices (5-8oz section) were steadily falling, dropping from US$12.62 at the start (April 2022) to US $7.05 at the end (July 2022). A price drop of US $5.57 /lb in four months, or 44.1 percent. Incredibly, during the 2022 snow crab season the market collapse was not reflected in the raw material price paid in the industry. Processors chose to disregard market reality and continued to buy at the prices established in April/May by the Standing Fish Price-Setting Panel (Panel). The declining market price and declining demand did not cause a needed response within the industry and the harvester prices exceeded the market return. This situation affected the start of the 2023 fishery when the combination of unsold product from 2022 and another significant Total Allowable Catch (TAC) increase caused further market deterioration.

Crab Production and Market Dynamics

In order to understand the scope of the market shift, an analysis of Newfoundland and Labrador crab production and its export is necessary. The Department of Fisheries, Forestry and Agriculture maintains data on the total crab production and exports of the Newfoundland and Labrador industry (see Appendix B). The table below highlights select data for the period 2018-2022:

[1] Urner Barry US average weekly market prices for 5-8 sections see Appendix A

NL Crab Production and Exports (kgs) (2018-2022)					
Year	**2018**	**2019**	**2020**	**2021**	**2022**
Production	19,343,443	19,009,863	21,073,154	27,146,354	35,083,562
Exports	16,247,092	16,658,037	18,946,227	26,159,178	25,535,137
Exports as a % of Production	84.0%	87.6%	89.9%	96.4%	72.8%

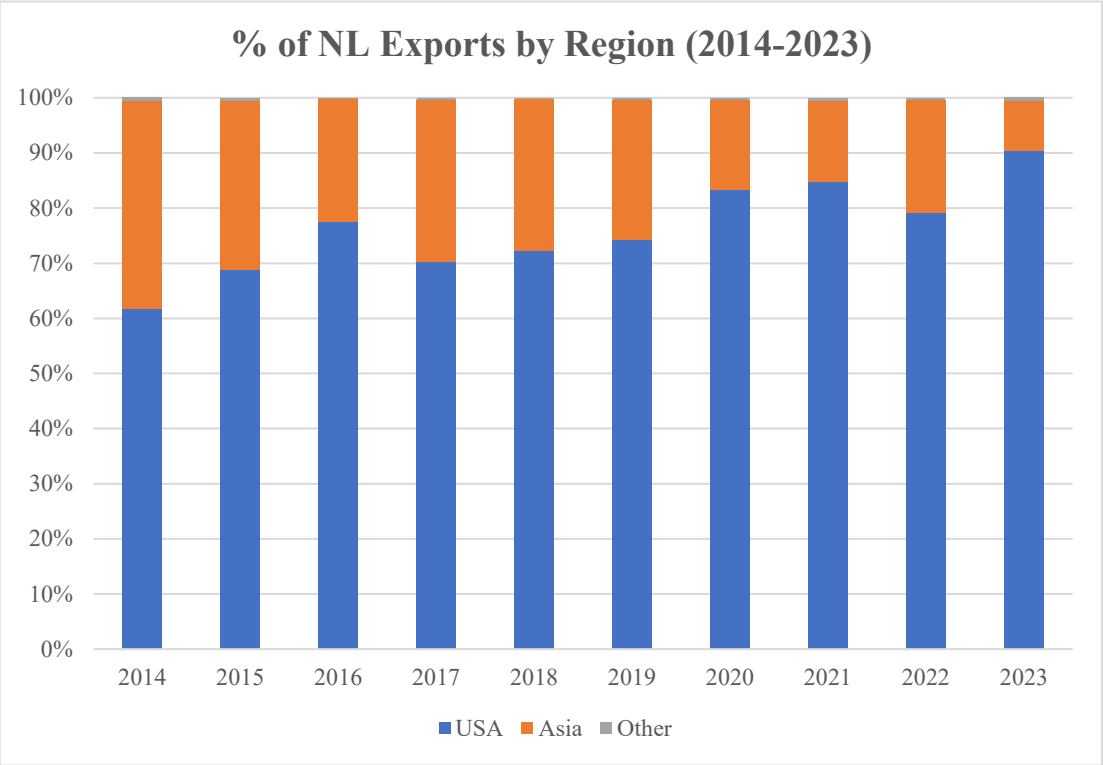
For the period 2018 to 2020, exports during the year had been tracking several years prior at 84 to 89 percent of production. However, in 2021 there was a significant shift higher to 96.4 percent, indicating that the Newfoundland and Labrador industry was exporting more to the US market driven by high retail demand and high market pricing in that sector. In 2022, there was a dramatic drop in exports from Newfoundland and Labrador to international markets as total exports for the year declined very sharply by some 23.6 percentage points. This percentage decline was on much higher production (over 35,000 tonnes). Clearly, the data shows a very high build of Newfoundland and Labrador crab inventory during 2022. Based on the percentage decline from 2021, the inventory build in Newfoundland and Labrador can be estimated at 8,285,417 kgs, or 18,266,030 lbs. Note this estimate does not account for the inventory that built during this period in the export markets, which were generally known to have high inventory holdings as well.

The 2023 export data for the first seven months to July show a very significant shift to the US market. In fact, Newfoundland and Labrador exports of crab to the US set an all-time record of 53.1 million lbs. to July. This is more crab than in any other full year. The export quantities to July, 2023 exceeded the prior record year (2015), by 27 percent. This is indicative of the large quantity of Newfoundland and Labrador crab from 2022 that had been in cold storage for months, carried over from the prior season.

Analyzing the Newfoundland and Labrador crab exports by country also shows a very dramatic shift in export markets. In 2014, Asian markets represented 37.7 percent of Newfoundland and Labrador crab exports. However, the trend has been a fairly steady decline to 2023 (see chart below), where thus far to July 2023, only 9.0 percent of total Newfoundland and Labrador crab exports are to Asia.

As market prices increased and market flows shifted, due to the Covid-19 shutdowns in the food

service sectors of the economy, Newfoundland and Labrador crab exports became very highly concentrated in the US market. Within that market, Newfoundland and Labrador crab has become very dependent on the retail food sector.



Some processors recognized the predicament the industry was in, early in the 2022 crab season, and temporarily stopped production. But local competitive factors caused them to restart their processing activity, despite knowing that it made no economic sense. The industry also knew well, at the time, that US based retailers, who had become dominant in the market early in the Covid-19 period, had curtailed buying snow crab due to the high financial risks posed by the declining prices relative to their high-cost inventory from 2021. As reported by John Sackton, cold storage space became more and more challenging as inventory from the production facilities all over Atlantic Canada were at a premium. As evidenced, the seeds for the unfolding crisis were planted and growing long before the 2023 season. It was the perfect storm.

In May, 2022 the Panel reduced the price to harvesters from $7.60 to $6.22 /lb in May, as a result of a reconsideration request by ASP. However, the price adjustment was not reflective of the overall continuing decline in demand and the resulting drop in market prices that occurred during

the processing season. The market price continued to fall as noted earlier. Producers were building inventory, the food service industry was virtually closed due to Covid-19, the Ukraine war had shifted global trade and Russia began shifting its exports to Asia.

The collapse of Alaskan snow crab in the market due to an ongoing resource crisis failed to alleviate the glut of snow crab in the US market. In addition, the decline in demand for NL crab in Asian markets had already taken hold. These market dynamics continued to prevail through to the start of the 2023 season. When yet again, the industry ignored all market signals, including the glut of unsold high-priced crab from the 2022 season, and unbelievably, substantially further increased supply from Atlantic Canada by increasing Total Allowable Catches (TAC).

Consequently, the Newfoundland and Labrador 2023 industry started, in an almost impossible situation. During collective bargaining, the parties attempted to cover the risks by negotiating a formula for price-setting. They made some progress agreeing on some general principles, but remained far apart in regard to pricing for raw material. The parties were destined for arbitration. The Panel process had just been renewed and a new format for the Panel had been established by Government, following the Conway report in the fall of 2022.

The Panel was challenged to deal with the "next to impossible" task of predicting the future and establishing a price to start the snow crab fishery in April. The Panel set the price based on the best indicators of market realities at that point in time and which also reflected the prices paid for snow crab throughout the remainder of Atlantic Canada.

Unfortunately, there was no acceptance of the market reality in the industry. The high degree of mistrust and the dramatic rise and fall of prices resulted in chaos and economic fallout that will affect the industry for years to come.

In the seven-week standoff at the start of the season, the Province intervened to get the fishery started and the Government committed to another review of the price-setting process which the Strategic Review Team is now undertaking.

Fish Price-Setting Strategic Review Team

On September 6, 2023, The Honourable Bernard Davis, Minister responsible for Labour announced the establishment of the Strategic Review Team to assist with the development of a formula-based framework for fish price-setting, and other potential mechanisms, to address ongoing issues with the current price-setting process. The Strategic Review Team's mandate includes an economic analysis, stakeholder consultations and review of current legislation, policy and regulations, with the objective of finding a solution that reflects the respective roles and values of the harvesting and processing sectors.

The strategic review team consists of three members (Glenn Blackwood-Chair, Gabe Gregory and Bill Broderick) appointed by the Lieutenant-Governor in Council, based upon nominations from Fish, Food and Allied Workers – Unifor, the Association of Seafood Producers Inc., and the Provincial Government.

The mandate and objectives of the Strategic Review Team follow.

Mandate and Objectives

The Strategic Review Team will make recommendations to the Minister responsible for Labour about matters regarding the process for fish price-setting as outlined in the Act, including the recommendation of a new formula-based framework. The objective is to find a solution that reflects the respective roles and value of the harvesting and processing sectors, and leads to a fair and balanced distribution of the market value to all participants in the fishery. To complete the work, the Strategic Review Team will:

1. Consult all interested parties such as the respective organizations of fish harvesters and processors, and consider these views in the recommended framework;
2. Consult current and past members of the Panel;
3. Consider current relevant legislation, regulations, and policy;
4. Consider the findings of reports, previously prepared for the Province, about the Act and fish price-setting;

5. Complete economic analysis of historic pricing structures for various species;
6. Examine pertinent formula-based approaches applied in the fishing industry in other jurisdictions;
7. Report on the type and rationale for each variable that should be considered in a new formula for determining annual fish prices, such as price to harvesters, labour cost, yield, market prices and exchange rates;
8. Develop and test formulaic approaches to price setting and seasonal adjustments, including economic modelling cases depicting how the recommended formula framework will function under various scenarios of fluctuating market conditions and for different species;
9. Outline any important considerations for implementation of the recommended formula (e.g., time period for applying the formula and any potential interruption mechanisms such as seasonal adjustments);
10. Report observations to the Minister regarding potential impacts to industry parties under different possible scenarios and at different stages of formula implementation; and,
11. Provide recommendations regarding other considerations for fish price-setting that are identified through the review process.

Review Team Approach

The Review Team was initially requested to submit their report, including a recommended formula-based framework, by October 12, 2023. While the Review Team commenced immediately to review all the relevant background legislation, regulations and policy governing the industry, it was unable to complete the terms of reference within the established timeframe and requested and was granted a 19-day extension to October 31, 2023. The review included the study of all past decisions of the Panel, as well as past reports prepared for the Government in relation to the issues of Fish Price Setting in Newfoundland and Labrador, including reports by Vardy in 1998, Cashin in 2005, Jones in 2003, Gardner Pinfold in 2014 and Conway in 2022.

Similar to all past reports, this report is commissioned at a time of dispute and crisis between the harvesting and processing sectors, regarding snow crab. For the past 30 years, snow crab has been and continues to be the most valuable species landed in the Province. It is the mainstay for the large majority of participants that derive a livelihood from the industry. The current Review Team

creation results from the most disruptive breakdown in collective bargaining since 1997 and was commissioned following what some describe as the "worst crab season ever."

Following the review of past reports, the Review Team consulted the respective parties to collective bargaining, the current and past members of the Panel, including the Government appointed Panel facilitator and researched the pertinent formula-based approaches applied in the fishing industry in other jurisdictions. Furthermore, the Review Team sought and considered broad input by way of written submissions from interested parties through strategicreview@gov.nl.ca, a Government e-mail site established for that purpose. The Team was assisted by officials of the Department of Fisheries, Forestry and Agriculture who supplied data on the markets, local industry, and various other relevant factors that required study and consideration for the Review Team's analysis and understanding.

Concurrent with the period of consultations, the Review Team undertook an extensive historical analysis and developed a data set of economic indicators that could be analytically modeled using various statistical and mathematical techniques. It then tested various formulas that could be best suited to form the basis of a framework to serve the industry and enable a process of resolution and agreement between the parties during collective bargaining.

Following the analysis and development of formula-based approaches the Review Team undertook a process of consultation with the leadership of the FFAW and ASP. This process included a comparative analysis of their respective positions in bargaining during the spring of 2023. The result of the entire process has led to the conclusions and recommendations regarding a formula-based framework adopted in this report.

Considerations of Legislation, Regulations and Related Reports

The *Fishing Industry Collective Bargaining Act* (the "Act") has been governing the price setting in the Newfoundland and Labrador inshore fishery since 1971. Since 1993, the Act has been amended 14 times, most recently in 2022, following the Conway report. The adoption of the Final Offer Selection process followed the Vardy report in 1998 and the Cashin Report of 2005 recommended the establishment

of the Standing Fish Price-Setting Panel. Since that time, the intent of the Act and regulations has been to disallow strikes and lockouts in the fishery and establish a process of binding arbitration to set the price for various fish species in any instance that the FFAW and the ASP are unable through collective bargaining to agree to a price for any species.

The many amendments to the Act in the period since 1998 have resulted primarily from attempts to resolve issues arising from public disputes and disruption within the snow crab sector of the inshore fishery. There have been frequent disruptions caused by the parties to collective bargaining not abiding by the intent of the Act and its regulations, including most recently in 2023. The most recent amendments followed the 2022 Conway Report and were intended to resolve an ongoing problem of the fisheries not starting in a timely manner, even though a binding collective agreement and price had been set by the Panel.

Final offer selection arbitration is intended to cause parties to negotiate seriously through an interest-based bargaining process facilitated by an independent Government official and supported by a fact finding and issue identification phase prior to the face-to-face negotiation by the parties. Arbitration by this process intends that each party shall submit their final offer to arbitration knowing that if the other party's final offer is selected, it is final and binding on all parties. Fundamentally, this is where the process continues to fail as the parties do not abide by the arbitration decisions. In 2023, the system failed in regard to snow crab, shrimp and lobster.

The 2023 snow crab disruption was very damaging to the industry. It had many negative effects, among them:

- Long delay in the start of the fishery;
- Loss of market access;
- Loss of resource due to soft-shell issues;
- Disruption and displacement of other fisheries opportunities within the industry;
- Loss of employment and serious disruption to the livelihoods of many employees directly in harvesting and processing as well as many industries supplying and servicing the industry;

- The delayed and compressed season resulted in gluts at the processing plants which struggled to deal with high levels of landings for prolonged periods, which negatively affecting the quality of landings and products;
- Loss of productivity - both in yield and performance due to continuous stress on those employed; and harvesting and transporting the raw material during seasonally hot and humid periods that should and could have been avoided;
- General societal disruption even to the point of causing those dependent on the industryto seek employment elsewhere;
- Much personal strife and acrimony among participants; and
- Added significant economic losses and costs during a year that was already economically challenging.

The mechanisms of the law, regulation and arbitration processes are not working as intended in NL. It has been suggested that there are no timely consequential remedies when the parties collectively choose to disregard the outcome of final offer arbitration. A party can present a final offer that is not reflective of the combination of facts present and prevailing at the time of final offer arbitration. These circumstances become very challenging to resolve in a timely manner in order to start fisheries. Government will have to take a more active role to ensure the legislation and regulations are functioning as intended.

All of the parties to consultations highlight that the process of collective bargaining needs to be improved. The FFAW, ASP and the Panel all highlight that the fact-finding and reporting leading up to negotiation is deficient. They point to a need for more detailed market intelligence - data on pricing, demand, inventory, supply, and other risks for varying Newfoundland and Labrador products in international markets is necessary. Market trends and informed market analysis that predict market trends with probability-based forecasts that are specifically related to Newfoundland and Labrador industry and it's products will be even more critical with the adoption to market based formulas for price-setting. More transparency on aggregate industry costs of harvesting and processing, including productivity factors and risks for both sectors of the industry, are also required.

There is general and accepted recognition by the parties that the industry needs facilitated independent resources to enable it to work together and share information. There is also a need for independent and objective analysis and intel from sources affiliated with the industry but not with vested interests in the outcome of collective bargaining. For example, officials and professionals in industry and Government attend many international trade shows that assimilate, monitor, and digest intel on current market dynamics that can independently verify market trends and current risks.

Independent industry surveys and data collection would be useful tools to provide insight on current market trends, industry costs, financial and business risks. There are a variety of tools that can enhance collective bargaining and better inform the arbitration process.

The Panel will always be challenged to make a so-called "right decision" that will be judged to be satisfactory to both parties in collective bargaining. This is an inherent challenge for any Panel. This is so because it is an impossible task to accomplish with accuracy and precision. Let's reflect on the task and the parameters the Panel has to consider to decide between the final offers:

- The price to be arbitrated has to reflect the minimum price for the entire season and all landings, often irrespective of quality or size considerations which profoundly affect market value depending on the species. The tendency is for industry interests to focus on the 'spot market price' in March or April as though it will prevail through the fishing season;
- The market is dynamic and ever changing;
- The landings, and consequently the supply, is highly seasonal, unpredictable and subject to last minute quota changes that can have very significant impacts on markets;
- The market is for wholesale trade in a diverse international commodity form;
- The timing of export and sale are generally not the same unless the product is fresh or in whole form. For example after processing, frozen snow crab sections are generally exported within days or a couple of weeks of being processed, but its actual sale in the market could be weeks and several months from its date of export. Therefore, final pricing is not timed to the period of harvest nor production;

- The markets are export-oriented and dependent on a combination of foreign exchange risks across several foreign currencies;
- The Panel has prescribed limits on its decision time – it gets final offers at a 4 pm deadline and has to make a determination within hours on a matter that involves tens and/or hundreds of millions of dollars of business covering the livelihoods of thousands of people and hundreds of businesses.
- Complex analysis and reasoning are required to arrive at decisions that are primarily economically intricate;
- There are many risk factors that are not well-defined or delineated; (Note this shortcoming could be avoided as it would be in any final offer arbitration of this magnitude.)
- The arbitration process is lacking in its procedural rules, timing, and preparedness. (Note the characteristics of similar arbitration in any other aspect of business would involve days/weeks/months of preparation by financial experts/lawyers; expert reports and testimony; processes of discovery, cross-examination, and questioning of witnesses; these processes crystalize the facts and inform the adjudicator and the final decision. The arbitrator or a judge would also have the authority to force the parties to abide by the decision within very limited time periods to avoid the type of collateral damage that arises in the fishery when there is a work stoppage.)

The Panel process by its nature is impossible to get right because if it were possible then such a complex process of decision-making would be capable of foreseeing the future of market prices and thus such an arbitration would be equated to only buying winning stocks in the stock market. That is clearly not attainable, nor is it possible to set the price of any given species of fish in NL for the coming season with a host of uncertainties and accurately set the raw material price to the market. The Panel's best chance at being "right" for the season would be under conditions that the market is highly stable, currency fluctuations are minimal, and there is little to no uncertainty and business risk. Market demand would have to be buoyant across diverse international markets. Rarely, if ever, do such circumstances exist.

Some suggest that the Panel process would improve if the Panel was able to pick a price between the two final offers. Such suggestions are flawed because choosing in the middle would only cause the parties offers to consider this possible outcome. Then both parties would clearly be motivated to hedge their offers to reflect that middle of the road outcome from arbitration rather than their definitive final position. In conclusion, such a process would only weaken an already imperfect system. An intermediate position between the parties does nothing to change the factors noted above or deal with any of the inherent risks of predicting with accuracy what the final market price of a commodity will be and its corresponding raw material price. It will always be imperfect at best.

Historical Pricing Structures

Fish pricing in Newfoundland and Labrador L since 1971 has been governed by the Act. Collective bargaining under the Act for the period to 1998 was characterized by a traditional model whereby harvesters, as represented by the FFAW, and buyers/processors, (mainly through some non-accredited association) negotiated the main species of groundfish through face-to-face bargaining. This process was ad hoc and usually only governed some of the main species harvested within the inshore fishery such as cod, flounder, and other then abundant, groundfish species. The price of many species was dealt with between individual buyers/processors and the harvesters themselves. There was a master collective agreement in effect as there has been for decades, but the schedules to the master collective agreement that covered individual species were relatively limited. There were several long disputes principally relating to the price for cod in the 1970s and 1980s which arose due to strikes and lockouts by either party to collective bargaining.

In 1997, a long dispute related to snow crab prompted the Government to appoint a Task Force (Vardy) to review the Fishing Industry Collective Bargaining Act and examine other mechanisms for dispute resolution in the inshore fishery. The Vardy report recommended that the Government change the Act to prohibit strikes and lockouts and that collective bargaining adapt to an interest-based negotiation approach facilitated by the Department of Labour. The report also recommended that a process of final offer arbitration be instituted where the parties were unable to reach a negotiated settlement. Other recommendations of the Vardy report included that "…a price-to-market formula be used to reward quality and improve transparency" and "the Task Force

recommends to the parties the development of a pricing structure that recognizes and rewards high quality crab".

The Government adopted some of the recommendations of the report and changed the Act accordingly. Strikes and lockouts were prohibited and an arbitrator-in-waiting was appointed to settle the price for a species that the negotiation process failed to settle. The arbitration was a single professional arbitrator that made a selection of one of the final offers, of one of the parties. This process worked for a period and soon after, the parties adopted and developed a price-to-market formula-based pricing system for snow crab. The pricing formula derived specified prices for raw material which changed every two weeks of the fishery while the harvesting activity was taking place.

The price to market formula was based on the percentage of production produced in the industry of three different product forms (US sections, Japanese sections, and combo meat). John Sackton, a US based market consultant, was contracted to report on the market price of the three products every two weeks. Depending on the changing US dollar pricing for the three products, the US to Canada foreign exchange rate, and the percentage weighting of production, the raw material price changed at every two-week interval. The system worked effectively until the Pricing Panel ruled to throw out the price to market formula in favour of a fixed price as proposed by the FFAW. This resolved the issue of crab prices dropping after the first few weeks of the season but created a much larger issue of the perception about fair sharing when market prices rose during the season such as happened in 2020 and 2021, or when market prices declined dramatically during the season, as happened in 2022.

At the time, differing bi-weekly pricing favoured harvesters that were able to fish early in the season. The snow crab fishery, starting in April, has a tendency to have a higher opening price than when the bulk of supply enters the market. When the entire harvesting fleet becomes active round mid-May, and other Atlantic Canadian supply is also coming on stream, market prices have the tendency to decline.

The fixed price structure did not work for long because it was unable to respond to the changes in the dynamic market as described earlier. Following disputes within the industry the Government amended the *Act* to allow either party to revert to the Panel for a further arbitrated decision when the Panel deemed the fishery was in jeopardy during the season. This led to both parties seeking reconsiderations throughout the season as every time the market or currency changed materially, one party or the other was seeking a new arbitration depending on the movement up or down in market trends. The reconsiderations got out of hand naturally and caused even more dispute.

Next, the structure governing the Panel was changed to allow each party only one reconsideration request during any year for any given species. Requests for reconsideration were restricted to only consider material changes in the market pricing during the season. This assisted but, in each season, there was a contest between the FFAW and ASP as to when the best opportunity to utilize its one request to change the raw material price would be used. If one chose too soon after the opening to request reconsideration, there was the possibility that the Panel would not award a change in the price.

In other instances, the party that chose to request first may have been awarded a change, but of course, as soon as the market dynamics shifted, the other party was back to the Panel to reverse the change. There could be no further opportunity to modify the price no matter how much the market had shifted once reconsideration was done. This was indeed what occurred in 2022 when the market went into free-fall. the ASP used their one chance to adjust the price and then were stuck paying a harvester price that exceeded the market return for the remainder of the season.

The consequence of the 2022 season was the Conway review, which changed the structure again. Despite the changes and the reversion back to having a professional arbitrator chair the Panel, the Review Team has concluded there was no decision, or price formula, that could have enabled the fishery to start on time in 2023. The harvesters had taken a position contrary to the prevailing declining market position the industry was facing. There was a rejection of the Panel decision and it was not until May 19 that the price ($2.20 /lb) was accepted and fishing started at the price established over six weeks earlier by the Panel.

Historical Pricing Analysis

Historical prices and analysis for many species harvested in Newfoundland and Labrador is not readily available. There are some exceptions – lumpfish roe, halibut, lobster, and snow crab.

Lumpfish roe

Lumpfish roe is extracted by harvesters by capturing the lumpfish in nets in coastal inshore waters in the spring. The roe is sold directly to processors who process and salt cure it in large plastic barrels at processing plants. The barrelled roe is then exported to western European buyers where it is further processed into various roe products and distributed primarily to markets in western and northern Europe.

The pricing to harvesters in Newfoundland and Labrador for lumpfish roe has been formula-based since the 1990s. Harvesters are advanced a price /lb for the roe as it is landed in the spring to summer period. In recent years, the advanced price has been $1.35/lb. In the summer and early fall, the roe is exported to Europe and the price is settled with buyers/processors there.

The collective agreement has a price setting formula whereby when the market for a barrel of roe is above CDN $840 cif Europe, then the price is adjusted upward depending on the average actual prices settled for the roe from processors in Newfoundland and Labrador. In each fall, the settlement is made retroactively on the price when market prices exceed the established average threshold. Average market prices are determined based on actual sales reports from select Newfoundland and Labrador processors that represent the vast majority of sales volume. Verification through an independent audit of prices is at the discretion and cost of the FFAW.

Halibut

Halibut has a similar pricing structure to lumpfish roe in that harvesters are initially advanced a price based on current market indicators and then four weeks later when the buyers/processors have sold the halibut and received final payment, the harvester price is adjusted and paid. This price is determined from actual market returns. The buyers/processors of halibut provide their invoiced receipts to an independent accounting firm who compiles and averages market return on

an industry basis. The firm then informs the industry as to the final price to be paid for halibut purchased four weeks earlier. The initial buyer/processor retroactively compensates the difference between the advance and the final average settlement price to the harvesters.

Lobster

Lobster is the second most valued species in the Newfoundland and Labrador inshore fishery, second only to snow crab, which is by far the largest component of the industry. Lobster is also settled on a formula-based pricing mechanism, and it was most recently adjusted in early May 2023 following a dispute over pricing. A seasonal pricing challenge caused the buyers/processors to stop buying lobster early in the 2023 season.

The lobster pricing formula was derived from the UB market online quoted prices for lobster, referred to as American Hard 1¼ lbs., Quarters, FOB New England. Traditionally, the market price leading up to Mother's Day, a peak period of US market demand, has been seasonally very high. The price formula in Newfoundland and Labrador had been set based on the most recent weekly quotes of market prices. This timing caused Newfoundland and Labrador buyers/processors to pay high prices in early season that would not be sustained and the traditional market correction following Mother's Day would ensure they could only incur losses during the early weeks of the season. This caused the industry to stop buying in early 2023 and the parties then negotiated an adjustment to the pricing formula to enable it to remain competitive.

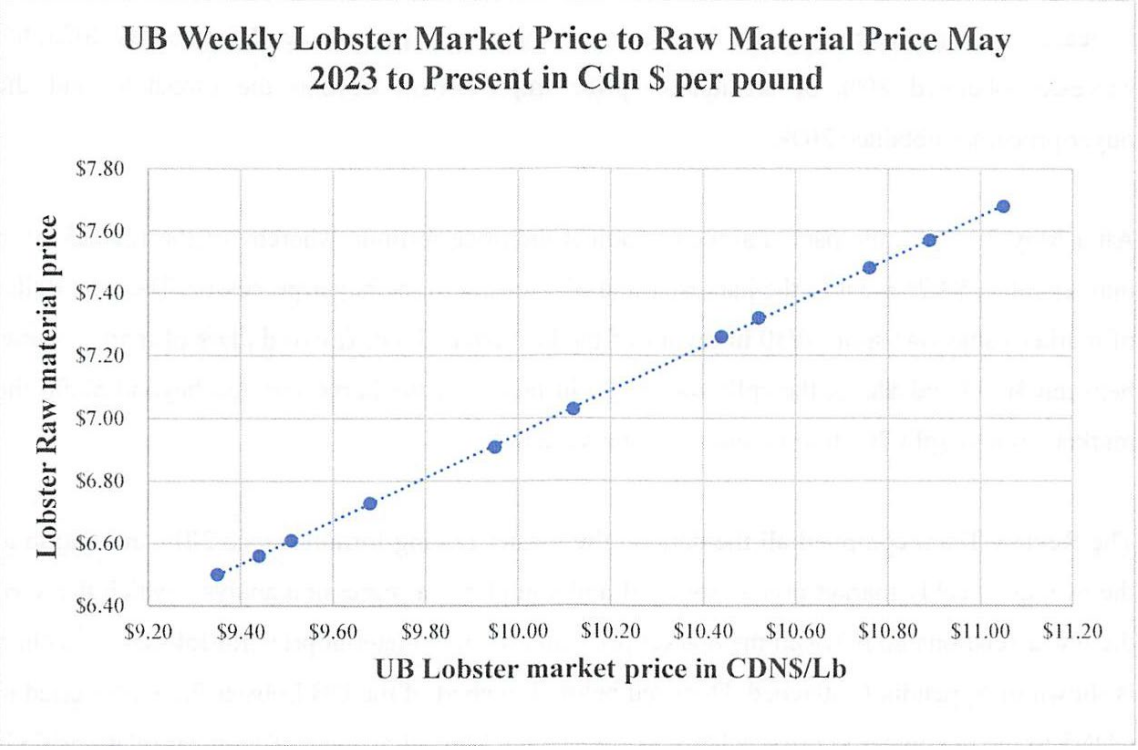
The history of the lobster prices in Newfoundland and Labrador is tabulated in Appendix C of this report. Appendix C outlines the weekly price from 2011 (the year the formula-based pricing was adopted) up to the end of the 2023 season in Newfoundland and Labrador. The table shows the yearly pricing by week (Sunday to Saturday) for each week the harvesting season was active. The yearly data shows the week, the average UB market price in US$ /lb, the average weekly foreign exchange rate CDN$ to US$, the CDN$ average market price, and the corresponding formula derived price paid to NL harvesters per pound landed weight.

The formula-based lobster pricing model is a linear formula whereby the buyers/processors have a set margin at a starting point. Beyond that point, as the Canadian equivalent market price

Increases, the value accruing to the harvester is set at a fixed percentage. Prior to May 2023, the harvester obtained 80 percent of all market price improvement beyond the threshold and the buyer/processor obtained 20 percent.

After May 7, 2023the parties agreed to adjust the price formula whereby of the first $5.00 in market value, $3.25 went to the harvester and $1.75 went to the buyer/processor. The next dollar of market value was split 70/30 in favour of the harvester; the next two dollars of market value, between $6.00 and $8.00, the split was 80/20 in favour of the harvester; and beyond $8.00 the market value is split 70/30 in favour of the harvester.

The Review Team compiled all the data on the lobster pricing formula since 2011 in relation to the average weekly market prices from UB and completed a regression analysis which depicted the linear relationship between the market price and the raw material price for lobster. This chart is shown in Appendix C attached. Depicted below is a chart of the UB Lobster Price converted to CDN$ to the raw material price paid in 2023 since the May adjustment. The linear relationship is clearly shown by the line that can be drawn through the points on the chart. There is a direct relationship between the market price in CDN$ to the price paid to harvesters for their catch on a weekly basis.



Formulaic approaches are relatively easy to develop for species such as lumpfish, halibut and lobster. All these species involve generally minimum processing activity and the weight of the product traded and sold more closely approximates the landed weight purchased. While there are quality and yield losses, they are not of the magnitude experienced when a landed pound of a species goes through a processing transformation as it would for cod, shrimp, or snow crab.

The buyer has market risk with all species, however, the formula or final settlement prices to harvesters enable the buyer to maintain a margin to cover handling, logistics, weight loss, and quality risks. The key in the development of the formulaic approaches to these species is to establish a fixed initial margin that covers both harvesters and buyer/processors variable costs and equitably shares the market value enhancement that accrues beyond the fixed initial margin for both parties dependent on the risks.

The challenges of inflationary pressures affect both parties in unequal ways and maintaining a fair sharing of the fixed threshold margins becomes a challenge for the party that is more exposed to inflation.

Energy costs affect harvesters and buyers/processors as fuel and transportation costs have escalated significantly, especially in the past several years. For species such as lobster and halibut, which are distributed live and fresh, respectively, the recent cost increases for shipping and logistics have been dramatic. These cost increases make it particularly challenging to make formula-based pricing work at the same time that market value returns decline. Analysis shows that in declining markets combined with sharp inflationary increases as experienced in the Covid- 19 period, margins can be squeezed to the point there is little economic incentive for parties to participate. Therefore, it is important that any formula-based system is dynamic and it is reviewed and adjusted over time. Otherwise, the formula is no longer representative of a fair sharing of risk, costs, and margins for both parties involved in the industry trade between the harvester and the buyer/processor.

The table set forth below shows UB average weekly lobster prices in US$ /lb for each week of the NL fishery starting in week 1 of the season (third week of April each year) for the period from 2011 to 2023.

UB Average Weekly Lobster Prices US$/Lb.													
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Week1	6.59	6.85	7.60	8.48	8.60	6.95	9.95				10.82	10.82	14.10
Week2	6.60	6.70	6.68	7.65	8.95	6.23	8.10	8.73	6.80		10.12	10.12	10.38
Week3	6.18	6.38	5.85	6.58	8.18	6.10	7.85	7.58	7.10	6.80	8.49	8.49	8.63
Week4		6.10	5.23	5.85	6.40	5.97	7.35	6.75	6.80	5.50	8.19	8.19	7.75
Week5	**5.80**	6.08	4.98	5.10	5.58	**5.85**	6.85	6.45	6.58	4.40	**8.04**	**8.04**	7.38
Week6	5.90	6.10	5.00	4.98	**5.30**	5.98	6.73	6.15	6.45	**4.20**	**8.04**	**8.04**	7.13
Week7	5.95	6.08	4.70	4.85	**5.30**	6.35	**6.35**	6.05	6.23	**4.20**	**8.04**	**8.04**	7.05
Week8	6.30	5.80.	4.48	4.73	5.38	7.10	**6.35**	**5.93**	**6.10**	4.45	8.07	8.07	**7.00**
Week9	6.75	5.75	4.35	**4.60**	5.98	7.48	6.48	6.40	**6.10**	4.65	8.49	8.49	7.13
Week10	6.92	5.68	4.35	5.00	6.53	7.60	6.95	6.70	6.30	4.95	9.37	9.37	7.68
Week11	7.20	**5.60**	4.85	5.35	6.90	7.73	7.35	7.45	6.60	5.15	9.74	9.74	7.95
Week12	7.15	**5.60**	**3.70**	6.10	7.15	7.85	7.48	7.60	6.95	5.15	10.02	10.02	8.10
Week13	7.10	5.70	3.70	6.35	6.90	7.73	7.73	7.45	7.25	5.60	10.14	10.14	8.25
Week14				6.60	6.90	7.60	8.10	7.70	7.60				8.38
Week15				6.95									

There are some very clear patterns in the data. Highlighted in red bold font is the low point in the US market price for each year in the series. In thirteen years since the formula was first introduced, the market low point in eleven of those years was in weeks 5 to 9, from mid-May to mid-June each year the market hit a low point. In those eleven years, the low point in the market reflected a drop of 10.0 percent to 50.4 percent in market price from week 1, at the start of the lobster fishery. The average annual price drop in those eleven years was 30.0 percent. In the two outlying years (2012-2013), the lobster market continued to decline through the season. Clearly, the fixed price system that existed prior to 2011 was very problematic for the industry. The analysis demonstrates that the market risks can only reasonably be managed by a system of pricing that reflects fluctuating market conditions.

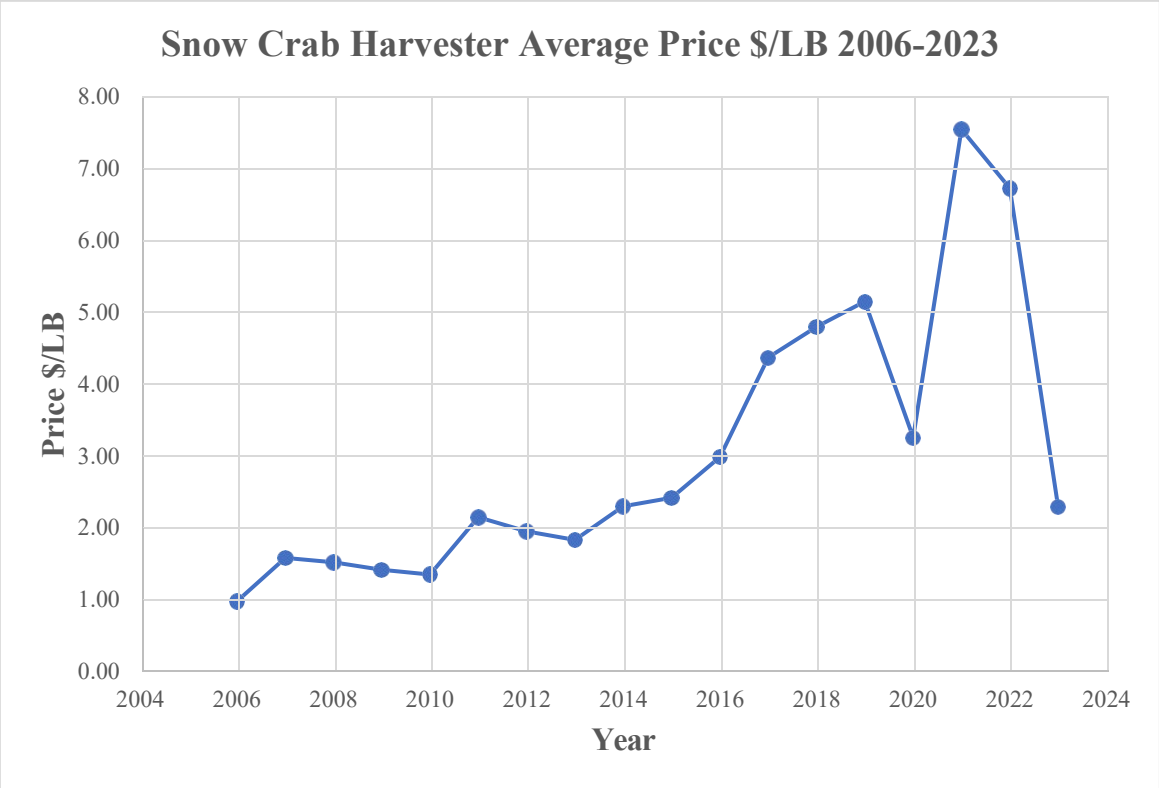
The Review Team is not suggesting that the lobster pricing formula is perfect but it does correlate well to the changing market price. The question remains as to how well the market index (UB) reflects the actual market prices obtained for lobster landed in Newfoundland and Labrador. If the US is the dominant market and the UB index captures most of the actual product mix landed and sold, then one can conclude that a formula tied to the UB index is reliable. To the extent that Newfoundland and Labrador lobster is sold live to Europe, Asia, or other markets within the same one-week lag that determines the pricing under the formula, then the market price index and the volumes sold in these markets would be required to refine the pricing formula and make it more reflective of the actual market.

In addition, the pricing-based formula does not consider the quality of lobster that is landed. The market value of most all fish species varies significantly and is most often dependent on the size and quality of the landings. The value of lobster is very much dependent on its liveliness. If the lobster is not lively then it must be processed. Lobsters that are destined for processing command a lower price. Similarly, small lobsters are of lower value. In addition, lobsters that are not whole, i.e., those missing claws or arms, are much less valuable as they are not suitable for the live market trade. To the extent lobster quality and size determine price then quality considerations and objective grading processes are necessary in the buying and selling process. Quality issues can only be addressed and resolved when the harvesting and processing sectors work together to maximize market returns for the long- term benefit of those involved in both sectors.

Snow crab

The Review Team gathered the historical harvester prices of snow crab from 2006 to present. These weekly prices for snow crab are presented in Appendix D. For the years 2006 to 2007 there was a formula-based pricing system for snow crab that changed the price on a bi-weekly basis, adjusting for currency and market fluctuations. From 2008 to 2023 the pricing has been based on fixed seasonal prices with intermittent adjustments by the Panel when market conditions, or currency fluctuations, caused prices to materially change.

The chart below shows the historical average annual pricing from 2006 to 2023 to harvesters for snow crab landed in NL. These average harvester prices are derived by averaging the weekly prices for each year in the time series as shown in Appendix D.



The snow crab prices were generally on an increasing trend from 2006 to 2019. In 2020, average prices declined sharply from $5.15/lb. to $3.26/lb, a decrease of 37 percent. However, prices recovered quickly and in 2021, more than doubled to $7.55/lb. Market resistance to high prices took hold late in the year and from there prices collapsed reaching an average of $2.29/lb. in 2023.

The challenge with fixed seasonal pricing is that it does not generally reflect the changes in market value. Market value has a tendency to fluctuate during the season and through the year. Market prices for snow crab are highly elastic. They can be seasonally high in late winter early spring before a new season harvest affects supply. NL has a large snow crab fishery as does the other Atlantic coast provinces. Atlantic Canada has by far the majority of world supply (See Appendix E – World Supply of snow crab by country from 1998-2022 in metric tonnes (mts).

The world supply of snow crab has increased significantly since 2018 when the catch was at 91,015 mts. Since then, it has increased over 70 percent to 155,146 mts in 2022. In the current year, Canada has increased to over 100,000 mts, making it about two-thirds of world supply. Russia has also been increasing its harvest. In 2022, it reached over 47,000 mts, a five-fold increase from 2018.

For many of the past several years, the snow crab market remained relatively stable with a year-to-year trend of higher average prices similar to the chart above, showing the harvester price. The seasonal and year-to-year changes in the snow crab market prices are reflected in Appendix F. The Review Team has set-out the average weekly UB market price for snow crab sections 5 to 8 ounce, for the period 2006-2023, in US$ /lb. The chart below shows these average weekly market prices:

As shown, the US market price for Newfoundland and Labrador snow crab (5-8oz) sections trended up from 2006 to 2019. In 2020, prices rose sharply in the later part of the year and continued a sharp increase through 2021, reaching a peak of US$16.80/lb. Then in late 2021, early 2022, the market experienced a precipitous decline, falling to US$4.65/lb. by May 2023. The last time the market had reached such a low was ten years prior in May 2013, when the price to harvesters was $1.83/lb.

Formula Based Pricing in Other Jurisdictions

Pricing for various fish species the world over is predominantly determined by market based pricing between sellers/buyers as any other trade would take place in a market based economy. This is the method of price setting in other provinces of Canada, with the exception that Quebec has a regulatory pricing system. In Quebec, the regulatory pricing system applies to one fishing zone (Zone 16) in the Gulf of St. Lawrence for snow crab. The only formula-based pricing system that the Review Team has been aware of is that for various crab species in Alaska (Sackton 2008).

The formula-based pricing in Alaska commenced in 2005. The pricing system arose because the fishery adopted a quota system whereby each harvester and production plant were assigned individual quotas (IFQ) as a percentage of the overall TAC, set by Alaska's Fishery Management Council. The IFQs were transferable but the harvester quotas were also matched to the processing facilities. All participants who were invested in the fishery (harvesters and processors) had quotas. The price setting system was designed so that no harvester would be penalized by getting a lower price than others. Its aim was to establish a single seasonal price across the fishery.

The crab pricing formulas for differing species of crab were designed to reflect the "historic division of revenue" (not income or profit) in the fishery. The formulas were extensively reviewed, challenged and tweaked with comments from both sides. After the first three years of implementation, by 2008, the pricing formulas were firmly established and they have remained the same for the past 15 years.

In Alaska, the snow crab season is set to open by mid-October, but generally fishing does not start until mid-January and concludes by March. Processors advance 80 to 85 percent of the initial ex-

vessel price to harvesters during the fishing season. When the crab is shipped and sold, generally by May or June, the processors make their final settlements with harvesters based on sales values for the crab sections.

The Alaska snow crab formula is as follows:

Ex-vessel price = (Wholesale market price X 0.5760) – 0.5427

The ex-vessel price is the price paid to the harvesters. The wholesale market price is the first Free on Board (FOB) wholesale price obtained by the processor for the crab products produced. This price is determined by assessing the market prices over a period of months and is compiled by a market analyst. Once the settlement price is determined by the formula, then the processor settles the balance of the seasons payment for crab by deducting the 80 to 85 percent advance that was made initially.

In order to simplify the formula, a table has been developed which sets forth the FOB wholesale price and the corresponding ex-vessel price at five cent increments to the FOB wholesale price.

The formulas were derived by simple regression analysis between the wholesale price of crab and the ex-vessel prices paid to harvesters over the historical period dating back twenty years. There was a review of the crab formulas in 2017 as a result of labour cost increases in the Alaskan industry, however, the arbitrator of the pricing–formula concluded that the change was not material enough to warrant changing the pricing formula.

Variables for a Pricing Formula

Variables in formulas are variables that can be expressed numerically. The variables are known as independent and dependent. As an example, the principle independent variable measured to determine the price of a fish species being harvested would be the market price. The market price is independently determined and it varies up and down, primarily based on market demand. Another variable in determining price would be the currency exchange rate between the international export market that is purchasing the product and the domestic market that is offering the seafood product for sale.

To illustrate, the Alaskan fish price formula derived a pricing relationship between the FOB wholesale market price and the ex-vessel price, over a period of twenty years. The formula did not have to consider an exchange rate as the product was sold in the same currency that the fish was being purchased from the harvesters. The market price, however, was adjusted to reflect the price at the processing plant so that differing freight out and selling costs did not distort the relationship. Having plotted the points on a chart between FOB wholesale price and ex-vessel price for each year in the twenty-year time series, a formula was calculated using regression analysis that sets out the relationship between market and ex-vessel prices. As the market price (independent variable) varies, the formula determines the ex-vessel price (dependent variable).

Standardizing market returns is important because market prices can vary for the same product dependent on where the product is sold. In the case of snow crab, the market price delivered to Boston, is different than it is for the same product delivered to California. Similarly, the market price for a product produced and delivered to Japan is different than it is for the same product delivered to Boston. The freight, logistical, selling and marketing costs are important considerations to consider to standardize the market return. In our case, net FOB market prices ex-plant would be a good indicator of market return for a product.

Another consideration of market return is the product mix produced from a given species. If there is only one product that is the dominant product form, such as a whole dressed halibut sold fresh, or a whole live lobster, then the relationship is much simpler to analyze and determine. For species such as cod, it can be complex as there can be various forms of product produced - fresh whole fillets; frozen loins, tails, portions, blocks, minced, etc.; or salt bulk and dried cod. This combination of product forms requires very detailed analysis on an industry wide basis to assess whether there can be a formula-based relationship established between market return and prices to harvesters. There would be a lot of data to collect, standardize, and mathematically analyze to attempt to reliably set a formula that could set prices at the wharf.

In addition, once a data set is established, it is most important that the relationship between independent and dependent variables is determined to be statistically precise. There are ways to objectively measure precision of a formula and there are various complexities to determine

whether a formula is best established as a linear, exponential, or quadratic equation, based on the best fit of a line through the data points in a series. Already it is apparent that formula-based pricing can be complex to determine, however, while the formula establishment maybe complex, the outcome can remain very simple. That is to say that for any given set of market variables, be they market prices, exchange rates, product forms, or various selling costs, they can all be factored to arrive at an industry-wide market return that can be related to a price to harvesters.

The outcomes may not always be practical, however. For example, examine more closely the case of cod. One group of processors may be producers of saltfish products, and another group may be producers of frozen products. These markets can act entirely independent of each other and a market price based on one market, or a combination of the two, may totally distort the competitiveness of the other. Therefore, it would be impractical to establish a formula that would serve all the cod sectors of the industry. Similarly, a market price for whole frozen herring (a product used for bait) may be entirely independent of the price for herring fillets that requires a significant component of processing labour and investment to produce. Again, in this case, a formula based on one or the other would have very significant economic effects on one component of the industry. In conclusion, there are instances where formula market based pricing is not practical.

The other important variable that requires consideration in a formula based pricing system is the degree to which size and quality considerations affect market pricing. For many species, harvester prices have had a tradition of varying, based on the size and quality of the catch. For example, cod prices vary by the length of the fish or the quality (gear type or fillet grading for colour, defects, etc.). Shrimp is traded based on its size or count (# /lb) when landed at the wharf and in the market; it is also subject to quality standards in the determining its market price. Snow crab prices in the market are dependent on size and the presence of barnacles and other defects. Its market value varies dependent on size and a host of quality considerations including colour, full shape, leech eggs, etc. Most all seafood species are marketed, distinguishing size and quality. These considerations formed part of the Vardy Report which recommended that a formula-based pricing system be used for snow crab and that pricing recognize and reward quality. Similar recommendations came out of the report commissioned by the Government in 1997, written by Thistle.

The costs and productivity factors (such as yield) of harvesters and processors are variables but they only need be considered initially when a formula is established. Otherwise, they need to be reviewed periodically and sometimes may not affect a formula-based pricing model at all. What is important with these factors is that there will be a base variable cost for the harvester and the processor that will have to be covered from the start. Otherwise, the harvesters and the processors have no gross margin.

If either the harvesters or the processors cannot cover their variable costs, then there is every likelihood that neither will participate in the activities of catching a given species or buying and processing that species. Where there is a history of activity by both parties, then there is likely to be an economic return for both beyond their variable costs. If both parties are generally profitable for a species then there is the issue of reasonable profit to both parties at varying market returns, that should be based on risks.

In general, we can characterize the variable costs of harvesters to include fuel, gear, bait (where it is required), variable maintenance, and monitoring, etc. Then of course there are the fixed costs which include an investment in vessel and equipment, insurance, and licenses. Obviously, as an owner/operator, the harvester is seeking a return on the capital and labour employed.

The processor on the other hand, depending on the species, has the variable costs of collection (freight, ice, forklifts, grading and weighing, benefits, etc.), processing labour, packaging, fuel and electricity, water, chemicals and cleaning, repairs and maintenance, and refrigeration. The processor has a variable overhead cost for salaries, supervisors, production management, quality control, payroll, accounting and general administration. In addition, it has fixed costs similar to the harvester for plant and equipment, insurance, licenses, general management, selling and marketing, etc. Depending on the species being harvested and processed, and the extent of costs incurred by both parties, the costs and risks vary significantly.

Formula Price-Setting, Testing and Adjustments

The Review Team was mandated to develop, test, and seasonally adjust formulaic approaches under fluctuating market conditions for different species. This is a challenging task, particularly given that many species are data deficient. The Review Team understands the importance of

having objective, independent data to develop formula-based approaches. Upon reviewing the species of most importance, and those species that do not have formula-based pricing, the Review Team focused its efforts on snow crab.

Snow crab is by far the most important species landed in the province. In 2022, its landed value was $761 million of the total landed value of $1.2 billion, or 63percent. The TAC was 50,470 tonnes, a 32percent increase over 2021 (37,786 tonnes). In 2023, the snow crab TAC further increased by 8percent to 54,277 tonnes (see Appendix G – Historical Quotas and Landings of Snow Crab by Fishing Area). The 2023 crab quota represents a more than 100percent increase over 2019.

In order to develop a formula-based approach, the Review Team first collected all the relevant data available on snow crab. The Department of Fisheries, Forestry and Aquaculture officials were most helpful in providing its data on market prices, production, quotas, landings, etc. In considering the variables required, the Review Team obtained the currency exchange rates between the US$ and CDN$ as reported daily by the Bank of Canada and sourced the snow crab fish prices from the Panel and other industry sources such as the FFAW website, which included years where the price was agreed by ASP and FFAW.

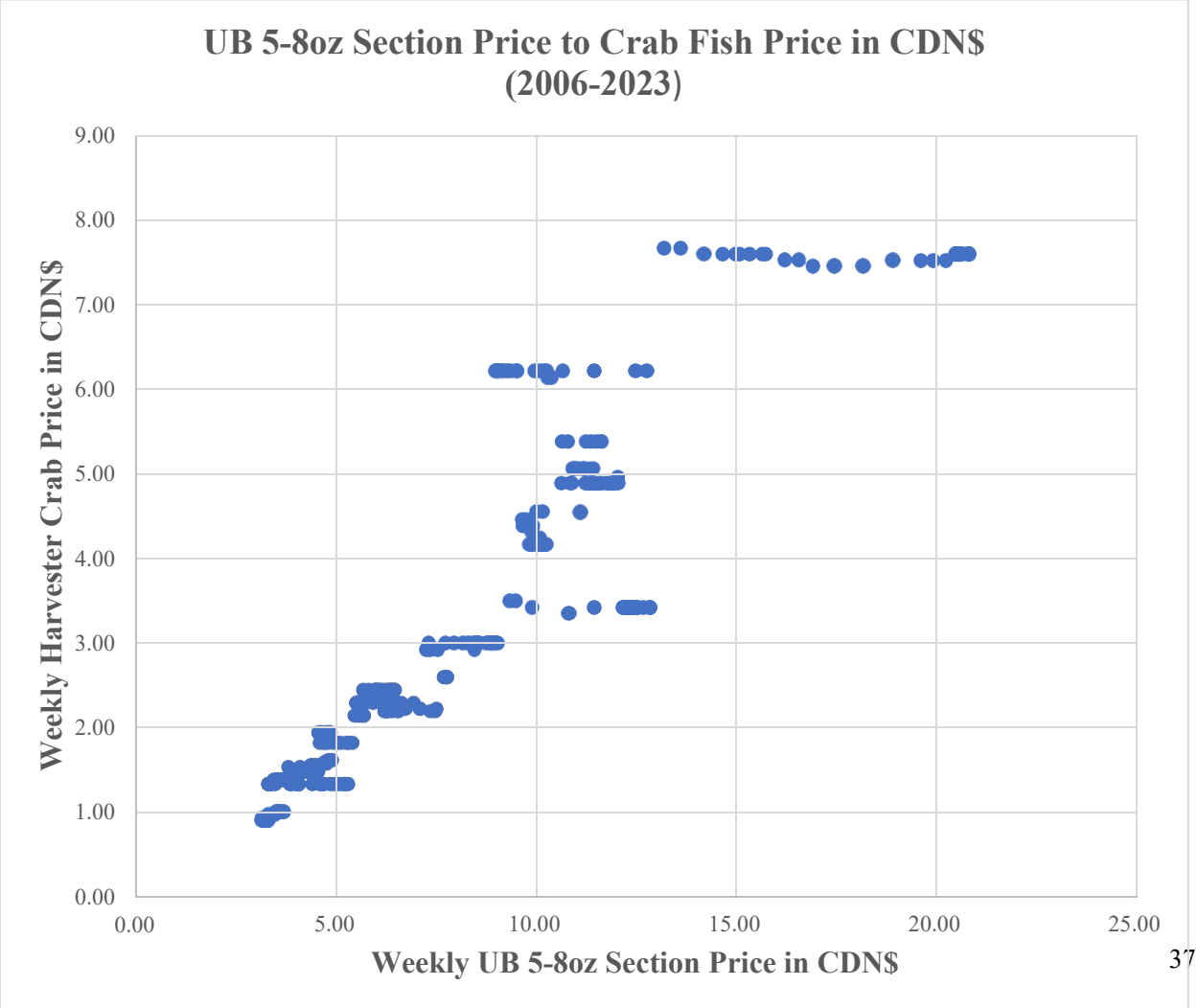
The Review Team prepared a table of the average weekly market price, the average weekly exchange rate, the weekly CDN$ market price, and the weekly harvester price. The average weekly market price was derived from the bi-weekly UB posted prices for 5 to 8 ounce sections in US$ /lb. The average weekly exchange rate for the CDN$ to US$ was derived from the daily closing prices as reported by the Bank of Canada for each week. The average weekly CDN$ for 5-8 ounce sections were then determined by taking the average market price and multiplying it by the average weekly exchange rate. Lastly, we obtained the weekly price for snow crab paid to harvesters from reports of the Pricing Panel and data posted by the FFAW.

Following the checking and verification of the data, the task was to refine the data set so that for each of the independent variables (US$ weekly market price and weekly average exchange rate) there was a corresponding weekly snow crab price (the dependent variable). Snow crab prices are only relevant for the period that fishing activity is occurring. Therefore, for each year in the time series, the weeks that harvesting activity was taking place were selected. These included weeks

between the first week of April and the last week of August, depending on the year. Some years the fishery was delayed. However, in most years the data represent the period from mid-April to end of July. Appendix H outlines the complete set of data the Review Team considered.

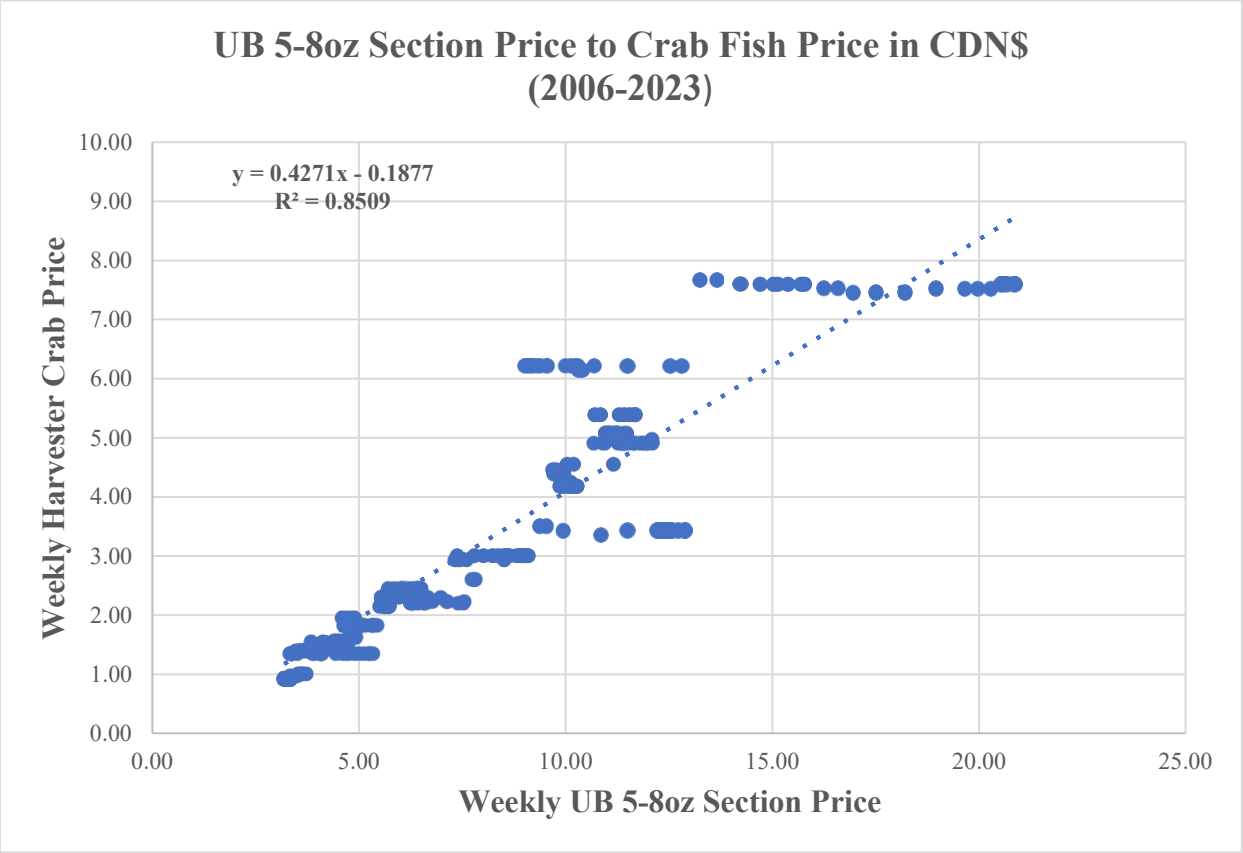
The time series the Review Team decided to use was from 2006 to 2023, a period of 18 years. The time series needed to cover the range of market pricing that was experienced over the recent dramatic decline, with some buffer to determine a relevant range in pricing for a formula. Note in some weeks there was a fish price set for snow crab but there was no market price quoted by UB. Unless there was a complete data set available for the week then it could not be used because the independent and dependent variables have to be present for the week in order for that week's data to be relevant.

The next step was to prepare a scatter diagram or chart of the data. The chart depicted below covers every week the fishery was active from 2006 to 2023 where relevant data were available:



There are over 350 data points in the scatter diagram. For a formula to be effective the formula has to be good representation of the data. In the Alaskan case when the data set was plotted, the formula that was derived was a very good fit to the data and that led to its adoption.

In the chart above, it is somewhat evident that a statistical linear line through the data points will not be an excellent fit. The Review Team completed a linear regression analysis of this data set and determined that the best fit line would be represented as shown below:



The chart with the line depicts the best fit linear line through the data. The mathematical equation represented by the line above is Y= 0.4271X-0.1877, this means that the harvester crab price (Y) is equal to 0.4271 multiplied by the weekly UB 5 to 8 section price (X) minus 0.1877. The linear equation is determined by a regression analysis that basically averages the fit of the line between all of the data points in the chart. There is, on average, as much of a price difference above the line as represented by the formula as there are price differences below the line. This is a mathematical calculation based on regression.

The fit of the line can be judged by the R-squared calculation noted above in the chart. The value is 0.8509, a measure of how precise the formula (equation) is as representation of all the data. The fit of the line is again a mathematical calculation. In simpler terms, the measure of best fit, precision, can be from 0 to 1.0. Of course, zero means there is no correlation between the independent variable (market price converted to CDN$) and the dependent variable (theharvester crab price). Whereas, if the measure of fit, or precision were 1.0, then it can be concluded that the formula is a 100 percent perfect fit with the data. This would be ideal but rarely are data sets of this nature perfect.

In the analysis above, the fit is 0.8509, or 85 percent accurate. This, in statistical terms, means that the formula reflects 85 percent of the variation in the harvester crab price. It is not bad, nor is it good. In statistical terms, the correlation coefficient as it is known, needs to be as high as possible. For example, the formula developed in this manner for the Alaskan snow crab price was determined to have a R-squared of 0.978. Therefore, it can be concluded to be an excellent fit and precise.

Further review and analysis of the Review Team data set clearly shows that during the Covid-19 years 2020 to 2022 there was little correlation between the crab price paid to harvesters and the UB price, which fluctuated dramatically upwards in 2020/21 and then downward in 2022. A closer review of those years reveals the following:

Date week ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
30-05-2020	**1.38238**	**6.90**	**9.54**	**3.50**
06-06-2020	1.35172	6.95	9.39	3.50
13-06-2020	1.3469	7.38	9.94	3.43
20-06-2020	1.35786	8.00	10.86	3.36
27-06-2020	1.35946	8.45	11.49	3.43
04-07-2020	1.361525	8.97	12.21	3.43
11-07-2020	1.35626	9.20	12.48	3.43
18-07-2020	1.35668	9.25	12.55	3.43
25-07-2020	1.34444	9.25	12.44	3.43
01-08-2020	1.33894	9.25	12.39	3.43
08-08-2020	1.332575	9.25	12.33	3.43
15-08-2020	1.32732	9.25	12.28	3.43
22-08-2020	1.31896	9.28	12.24	3.43

29-08-2020	1.31564	9.35	12.30	3.43
01-05-2021	**1.23498**	**12.45**	**15.38**	**7.60**
08-05-2021	1.22444	12.82	15.70	7.60
15-05-2021	1.21092	13.43	16.26	7.53
22-05-2021	1.20726	13.75	16.60	7.53
29-05-2021	1.20815	14.03	16.95	7.46
05-06-2021	1.20702	14.50	17.50	7.46
12-06-2021	1.21014	15.05	18.21	7.46
19-06-2021	1.22562	15.47	18.96	7.53
26-06-2021	1.2326	15.95	19.66	7.53
03-07-2021	1.23665	16.15	19.97	7.53
10-07-2021	1.24816	16.25	20.28	7.53
17-07-2021	1.2587	16.30	20.52	7.60
24-07-2021	1.2602	16.35	20.60	7.60
31-07-2021	1.2514	16.40	20.52	7.60
07-08-2021	1.25202	16.40	20.53	7.60
14-08-2021	1.25298	16.40	20.55	7.60
02-04-2022	**1.25056**	**12.62**	**15.78**	**7.60**
09-04-2022	1.25246	12.00	15.03	7.60
16-04-2022	1.26115	12.00	15.13	7.60
23-04-2022	1.2595	11.68	14.71	7.60
30-04-2022	1.28008	11.12	14.23	7.60
07-05-2022	1.28512	10.62	13.65	7.67
14-05-2022	1.29876	10.20	13.25	7.67
21-05-2022	**1.28402**	**9.97**	**12.80**	**6.22**
28-05-2022	1.279825	9.80	12.54	6.22
04-06-2022	1.2625	9.10	11.49	6.22
11-06-2022	1.2616	8.25	10.41	6.15
18-06-2022	1.2942	7.97	10.31	6.15
25-06-2022	1.2956	7.95	10.30	6.22
02-07-2022	1.287875	7.95	10.24	6.22
09-07-2022	1.29812	7.70	10.00	6.22
16-07-2022	1.30334	7.33	9.55	6.22
23-07-2022	1.29014	7.15	9.22	6.22
30-07-2022	1.28532	7.05	9.06	6.22
06-08-2022	1.287425	7.05	9.08	6.22

It is evident that in 2020 a seasonal price was set at $3.50/lb by the Panel in the week ended May 30, 2020 (the table notations in red font are weeks when the Panel set the harvester price). This price was a reconsideration decision by the Panel following an earlier decision by the Panel for the normal start of the crab fishery at $2.90/lb. The earlier Panel decision reflected earlier market pricing as Covid-19 had just started to have its profound effects on society and public shutdowns had just taken effect. There was unprecedented uncertainty. A closure of restaurants and the food

service sector of the US market brought with it the total shutdown in demand from the historically largest component of the market for snow crab. The virtual total reliance on the retail sector was a huge unknown for all involved. UB was not reporting the market price because there was so little market activity.

A reconsideration decision at the request of the FFAW was based on the fact that UB was now reporting a market price and that the average price was US$6.90 /lb. Based on the reconsideration, the Panel set a new seasonal price for crab at $3.50 /lb. As shown in the table above, by late June 2020, market prices had increased to US$8.00 /lb and by mid– July had further increased to US$9.25 /lb. For most of the 2020 crab season the price of crab to harvesters was fixed at $3.43/lb, having been adjusted slightly lower because of currency change.

Overall, it can be concluded that the fixed price of crab to harvesters had no variation despite the fact the market increased significantly in 2020. Over the course of the 2020 crab season the CDN$ average market section price for 5 to 8 ounce crab as reported by UB increased from $9.54 to $12.30 /lb, a net change of $2.76 /lb in the market with no change in the crab price to harvesters.

In 2021, the data in the table above show a similar picture. The initial decision of the Panel was $5.73 /lb to start the fishery in early April. Then in late April, a reconsideration of the price to harvesters was made and the price increased to $7.60 /lb. At that time, market prices were increasing and the UB reported average market was US$12.45 /lb, or CDN$15.38 equivalent. During the remainder of the season, the market price continued to increase and was at US$16.40, or CDN$20.55, at the end of the season.

In 2022, a reverse pattern in pricing occurred. The April opening price for crab was set by the Panel at $7.60 /lb. At this point, the market was reported by UB to be US$12.52, or CDN$15.78. Then in mid-May, at the request of ASP, the Panel reduced the crab price to $6.22 /lb, when the market price had dropped to US$9.97, or CDN$12.80. But for the remainder of the season market prices nose-dived to US$7.05, or CDN$9.08 /lb while the crab price remained fixed at $6.22. Overall, during the 2022 season, the market return in CDN$ for snow crab sections dropped by $6.70 /lb and the crab price to harvesters was reduced by only $1.38.

Clearly, when one analyzes the crab pricing for the entire period of 2020 to 2022, there is little to

no correlation between average UB market pricing and the crab price paid in the inshore fishery. The conclusion of the Review Team is that this entire period represents data points that are outliers and are highly distorting the Review Team's efforts to determine a reasonable market-based formula that would correlate well the crab price paid to harvesters with the market prices as reported by UB.

The Review Team's next step was to remove the outliers in the data set from the Covid-19 years. This was done by removing all the weeks of data during the Covid-19 period other than those weeks where the Panel set a crab price that was directly tied to an UB market price. Consequently, for each season we selected two weeks when crab prices were somewhat correlated to market prices. In the 2020 season, the weeks ending May 30 and June 6 were included when the crab price was set at $3.50 /lb. In 2021, the weeks ending May 1and May 8 were included when the crab price was set at $7.60 /lb. And in 2022, the week ending April 2 , the $7.60 crab price was set and the week ending May 21 the crab price of $6.22 was set. All other data for weeks in the years 2020 to 2022 were determined to be outliers and were therefore, removed from the Review Team formula-based analysis.

Review Team Formula Based Crab Pricing Model

Before outlining the Review Team's recommended approach to a formula-based crab pricing model, there should be discussion of other considered modelling that the Review Team prepared and analyzed. The Review Team debated whether an exponential formula would fit the data set we had prepared. An exponential formula would recognize that as market prices increased, more and more of the return would accrue to the harvester crab price. The team did chart and develop a formula based on the weekly data as a best fit exponential model. However, upon analysis and testing, it is obvious that one of the conclusions to such a model is that as the market increases there is as implied by an exponential formula, the growth in market return goes primarily to one party. In fact, an exponential formula reaches a point when all the revenue growth goes to the harvester. This was concluded to be an unfair approach as there would be little to no market incentive, under such a model, for a processor to seek further market improvement as all the benefit would go to the harvester. There would be absolutely no reward for risk or investment by the processor or any market participants in the value chain beyond the processor. Therefore, this modelling exercise

was dispensed with.

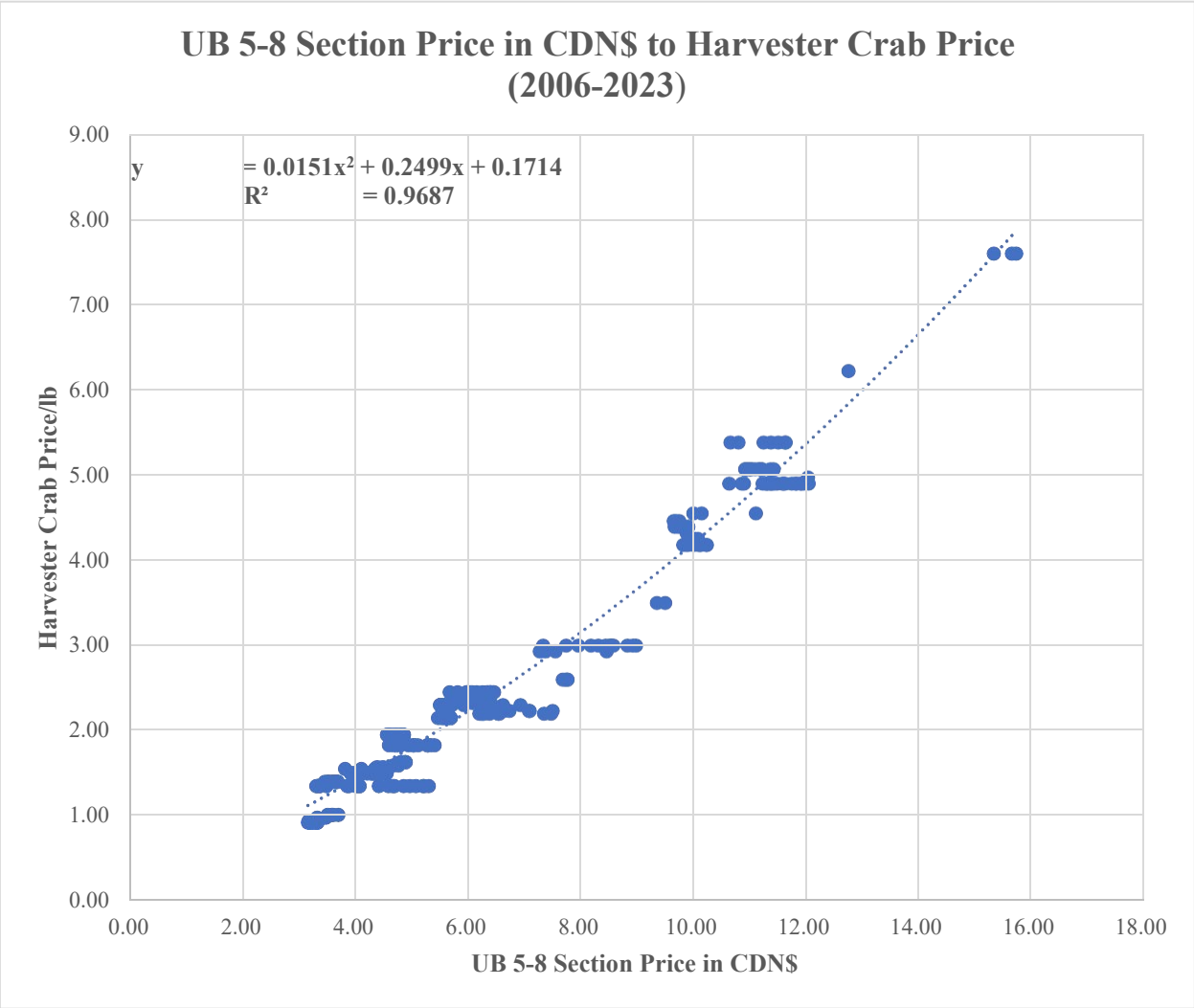
The Review Team's next step was to revert to a mathematical approach that did recognize that as the market improved there would be a proportionately higher percentage of the market return accrue to the harvester. This was analyzed to be the more equitable manner to develop a formula because any formula to start must recognize the reverse.

While the Review Team does not have any current data on the variable costs of the harvesters and processors, the fact that lower and higher percentages of market returns have been recognized in crab price setting for years, even in the years where fixed pricing prevailed. This is also reflected consistently in the decisions of arbitration over the past decades. At lower market prices, the percentage of the net return accruing to both parties varied. As market return declined, the share to the harvester decreased and the processor increased. While as the market returns increased, the market share to harvesters increased and the processor decreased. The report will further comment on this point about market shares to both parties later.

In analyzing the crab price to harvesters as it relates to the market returns historically, theReview Team developed a linear formula relationship and analyzed its fit to the data. Next the Review Team developed a non-linear formula, or as it is known, a quadratic formula to test its best fit to the same data set. The linear formula is a straight line as was developed in our prior analysis discussed earlier. In contrast, the quadratic formula is a curved line, as it recognizes a shift in the sharing of market returns as market prices increase. Upon completing both analyses, the Review Team concluded the quadratic formula, or curved line, was best because it was a more precise and better fit with the data. This formula has a higher correlation coefficient which explains most of the variation between the data points in the time series and the line, generated by the formula. As discussed earlier, the higher the correlation coefficient, the more precise the formula is in determining the price to harvesters.

The data set used in the formula comprises 296 weeks of data covering the period 2006 to 2023. The data for the years 2020 to 2022 includes two weeks of data for each of those years. These data points were those established at the week of the Panel decisions and all other data points, which are statistical outliers, were removed.

The following chart shows the scatter points in the time series, the curved line derived from the regression analysis that represents the best fit of the data to the formula. It also depicts the formula equation represented by the line, and the R-squared value which represents a measure of precision of the formula:



The chart above shows many data points when the Canadian equivalent market price for US 5 to 8 ounce sections were between $4.00 and $12.00 /lb with the corresponding harvester crab price. Beyond that range, the data is sparse, reflecting the limited market-based price-setting data from the Covid-19 years 2020-2022.

As one can observe, the formula derived line is a close, tight fit to the data throughout the series. This reflects a very good representation of the correlation between the US 5 to 8 ounce section

market price and the price paid to harvesters for crab. The formula has an R-squared value of 0.9687. This is a relatively precise fit as measured in statistical terms.

Formula Explanation

The formula is $Y = 0.0151x^2 + 0.2499x + 0.1714$.

The formula means that where Y is the harvester crab price, it is equal to 0.0151 multiplied by X squared, where X is the market price of 5 to 8 ounce sections in CDN$, plus 0.2499 multiplied by the market price of 5 to 8 ounce sections in CDN$, plus 0.1714.

Let us illustrate an example where the UB market price of 5 to 8 ounce crab section is US$5.25 /lb and the Canadian dollar exchange rate to the US dollar is 1.33. Then that means that the Canadian market price of the 5 to 8 ounce crab section is $6.98 ($5.25 x 1.33). So therefore, at $6.98 market price that is what replaces the value of X in the formula. Therefore, the crab price to harvesters at $6.98 market price is equal to:

$$\begin{aligned}\text{Harvester crab price} &= 0.0151\ (6.98)^2 + 0.2499\ (6.98) + 0.1714 \\ &= 0.0151(48.7204) + 0.2499\ (6.98) + 0.1714 \\ &= 0.7357 + 1.7443 + 0.1714 \\ &= 2.6514 \\ &= \$2.65\ /\text{lb}\end{aligned}$$

Appendix I shows the crab price that would be set by the formula for every one cent change in the Canadian equivalent value of the crab market. The table starts at $4.50 market price, which determines a harvester crab price of $1.60 /lb and continues in one cent increments to $12.00 market price, which corresponds to $5.34 harvester crab price /lb.

Formula Price-Setting and Seasonal Adjustments

The Review Team has analyzed the seasonal change in the crab market for each year from 2006 to 2023. In 2006 and 2007, the crab price to harvesters changed bi-weekly because the price was

adjusted by a formula that tracked changes in the market and the currency exchange rate. This was a much more effective way to price the crab landed but it had weaknesses that were not addressed at the time. The most serious weakness was the fact that crab landed and produced varied in price related to the week it was harvested. Of course, because crab is landed in a particular week and is processed within days of harvest, it does not mean that the product sold, nor does it mean that the product fetched the market prices that prevailed at the time it was harvested. Depending on when harvesters were active during the season and depending on market prices and exchange rates in the week of landing, that determined the differing prices paid.

An average price over the season was viewed as more effective as it compensated all harvesters alike, no matter the timing in the season of their landing crab. This caused the 2008 Panel to dispense with the formula-based pricing. As the pricing shifted to fixed seasonal pricing with reconsideration, the pricing was no longer able to adjust to reflect market changes nor exchange rate changes. While there were reconsideration decisions, they only served to adjust prices at a point in time. The fixed seasonal pricing was viewed as working, but the degree it worked was only when the market and currency fluctuations were relatively stable. In any season or year that the market increased, the harvesters were dissatisfied.

The weaknesses in the fixed pricing system caused ongoing challenges and finger-pointing became routine. There was always someone else to blame – primarily the Panel was deemed to be at fault. Time after time, the process of arbitration and the Panel was adjusted but the inherent systemic weakness was never addressed. Obviously, any effective seasonal pricing has to take into account the dynamics of a fluid market and changing currency exchange rate.

To address this issue, the Review Team concludes that weekly pricing over the season must get averaged over some period of weeks and a formula market-based pricing model be adopted to determine the seasonal average price. An equitable seasonal price would compensate all harvesters for their catch irrespective of when the landings occurred in the season. This framework of pricing would also address some of the challenge to scheduling landings during the season.

The start of harvesting crab as early as possible in the spring is in everybody's interest. An early start ensures:

- that crab is landed when it is of most value. The crab is lively when it is harvested early. The crab is biologically full of meat, the shell is hard, and the quality is at its highest early in the season. As the season progresses all these factors change and therefore reduce the inherent value;
- that the crab harvest can be spread out over the season. There is no need for so-called big boats and small boats to all be active at the same time, generating high weekly landings that are beyond the reasonable capacity of the processing sector;
- that processing capacity and harvesting capacity can be utilized in a much more reasonable manner which avoids the gluts in landings that cause poor quality, untimely processing of the catch, poor labour and yield productivity, much higher handling and logistical costs, higher harvesting and processing costs, and overall, less market discipline and orderly supply of quality products to the marketplace;
- that harvesting activity considers the safety of when and which enterprises are best suited to be active in the early season when ice conditions and weather are less suitable for smaller size vessels to operate;
- that harvesters in various fishing zones could plan their catches to avoid soft-shell molting periods often encountered in the late June to August period;
- that the overall value of the entire industry is maximized and that those who are dependent on the employment in the industry are also able to work a reasonable number of hours/week, and obtain the work schedule that best enhances and rewards their labour in having to meet the regulatory requirements for income support outside the seasonal industry work demands; and
- that everybody engaged in the entire industry, whether it is in harvesting, processing, marketing, or servicing, are optimally benefitting from the value that can be maximized to the Province.

In order to support an average market-based seasonal price, the pricing framework should establish an advance payment system for crab as it does for lumpfish roe and halibut. The advance should take into account the risks of market price shifts and currency change. The Review Team analyzed

the seasonal averaging of crab pricing under the formula-based framework identified and determined that an advance of 80percent of the formula based crab price would cover the normal risks of market price changes and currency adjustments. An 80percent advance payment system was retroactively determined to have worked in every year, except 2022, when the market price collapsed.

For example, if the initial crab price was set by the formula at $3.00 /lb at the start of the fishery, then $2.40, or 80percent of the $3.00 price, would be paid as the advance for crab landed in that week. This advance could adjust week to week during the harvest season, changing to follow the market trend and the currency fluctuation. At a point to be agreed when the season is over, and when much of the production has been shipped to market and sold, there would be a final settlement of the pricing using the formula adopted for the entire time period. This would set an average price for crab over the entire season. This final price would be paid to all crab harvesters at the same time. The settlement would be the final price as determined by the formula for the season less the average advance payment made to each harvester during the season.

The Review Team considered the timeframe for the final settlement payment for the season and concluded that the final pricing should take into account the period up to the end of the fishing season and potentially beyond that period each year. In any case, the final payment for crab would take place after the end of the harvest season or at an agreed cutoff date.

The illustration below sets forth the framework for seasonal average pricing based on the adopted formula, adjusted for market and currency changes through the season, with an 80 percent advance payment weekly, and a final settlement at the end of the season that averages weekly prices over the entire seasonal period (for illustrative purposes):

Formula based Pricing for Crab Season					
Week ended 1	**UB US$ 5-8oz section 2**	**Exchange Rate 3**	**CDN$ 5-8 oz section price 4**	**Crab price $/lb. 5**	**Advance @ 80% 6**
06-04-202X	5.25	1.32637	6.96	2.64	2.12
13-04-202X	5.20	1.32538	6.89	2.61	2.09
20-04-202X	4.93	1.32358	6.53	2.45	1.96
27-04-202X	4.85	1.32211	6.41	2.39	1.92
04-05-202X	4.80	1.33075	6.39	2.38	1.91
11-05-202X	4.80	1.33083	6.39	2.38	1.91
18-05-202X	4.75	1.33023	6.32	2.35	1.88
25-05-202X	4.90	1.33234	6.53	2.45	1.96
01-06-202X	5.00	1.33414	6.67	2.51	2.01
08-06-202X	5.10	1.34468	6.86	2.60	2.08
15-06-2024	5.25	1.34318	7.05	2.68	2.15
22-06-202X	5.30	1.34272	7.12	2.71	2.17
29-06-202X	5.35	1.34339	7.19	2.75	2.20
06-07-202X	5.45	1.34497	7.33	2.81	2.25
13-07-202X	5.55	1.34698	7.48	2.88	2.31
20-07-202X	5.65	1.34871	7.62	2.95	2.36
27-07-202X	5.75	1.34011	7.71	2.99	2.39
03-08-202X	6.00	1.34001	8.04	3.16	2.53
Average			**6.97**	**2.65**	**2.12**

The assumed UB average market prices for each week through the season are shown in column 2 of the table above. The weekly currency exchange rate assumed is listed for each week in column 3. Next in the table, in column 4, is the CDN$ market price of the 5 to 8 ounce section at the assumed price reported by UB (note this is the product of column 2 multiplied by column 3).

Column 5 identifies the harvester crab price for the week as determined by the pricing formula outlined in the earlier section of the Review Team's report. Next is the 80 percent advance that would be paid by the processor for each week in the fishery as the fishery proceeded.

As shown in the table each week the price would change slightly reflecting the dynamic changes in the market for both product price and currency exchange rate. The last step would be to calculate the final settlement price for the entire season. The final settlement price would be to average the weekly market prices in CDN$ for all the weeks in the season or for the period established through negotiation. This average price works out to be $6.97 in our illustrative example above. Then the

formula adopted is applied to that average seasonal market price and the seasonal average crab price to harvesters is then established at $2.65 /lb. This price would be used to pay each harvester the difference between $2.65 /lb and the advance payments made weekly during the season. If the average of $2.12 advance is used for illustrative purposes, as above the settlement would be the difference between $2.65 and $2.12, or $0.53 /lb. This difference would be applied to the total pounds purchased by the processor from the individual harvesters during the season.

Under this formula-based system, the harvester would share in the upside and downside that occurred over the season. In these years when the average net market price improved, the average price would increase, and in years when the net average market return declined the final average price would be less. The advantage is that there would be an average price paid that would be fair to all involved and it would precisely track the net market returns adjusted for currency fluctuations over the season. In addition, there would be no bias in favour of when a catch was harvested during the season. This would allow for an orderly, scheduled fishery, with focus on the highest quality landings, consistent work throughout the season, and the maximization of market value. Such a system would greatly enhance the total market value derived which would be equitably shared among participants in the industry.

It is important to note the above table is only for illustrative purposes to demonstrate how the formula based pricing would work and how averaging of prices over the season is a much more effective way to fairly and equitably price the crab harvested. The 80 percent advance is a means to enable the sharing of risk during the harvest season which enables harvesters to share the market risk over a period of time that harvesting is taking place. It is also a means to equitably pay the same harvester price irrespective of when landings occur in the season.

The price established would be the minimum price as defined by the collective bargaining process and would be subject to all the terms and conditions as would normally apply as per the schedule agreed or arbitrated as the case may be. The formula market based pricing framework as presented is intended as a replacement of the current fixed price system which has many inherent weaknesses as discussed.

Other Price Considerations

Size and Quality

All of the comprehensive reviews of the crab industry since the late 1990s have recommended that crab pricing consider the size and quality of crab landed and processed. Unfortunately, these issues have not been addressed to date. In addition, the industry's performance in that regard took a significant backward step in 2023. The late start to the fishery caused a mismatch between harvesting and processing capacity as seven prime weeks of the season were lost. There were widespread reports of crab spoilage and discarding, as well as the transportation and processing of critically weak crab during periods of hot, humid weather.

The shift of the season into the summer months increased costs and had a negative effect on quality and the overall value of the product. The Review Team questions the decisions to increase TACs during a time when markets are glutted, as such decisions contributed to further depressing market prices at low levels. These decisions in the 2022 and 2023 seasons further contributed to the market oversupply and subsequent dramatic price decline for snow crab.

The Review Team has concluded that there is a lot of market value being forfeited that should otherwise accrue to the economy. While the Review Team feels that adopting the pricing framework outlined will improve the industry performance, it will not fully address the many issues in the industry. As stated in the Vardy report in 1998, the size of crab landed and the quality of the crab landed should be reflected in the price paid to harvesters. For example, the industry has a price to size discount of $0.30/lb. in respect to small crab under 4 inches but it does not have a premium above the average price for crab that command a premium due to size in the market.

The biological reality is that size, colour, and extraneous materials such as barnacles and leech eggs attached to the crab, all affect the market value of NL crab. It is essential that the harvesting and processing sectors work together to address these issues and maximize the market return.

Similarly, the industry needs to improve the handling of snow crab. The exoskeleton of snow crab appear robust, however, the crab is very fragile and is negatively affected especially when out of

the water. Snow crab are exposed to dramatic changes in water temperature while pots are being hauled, handled on board, loaded onto trucks, being transported, and awaiting processing. The improvements to handling and holding should be subject to best practices throughout the industry. Much can be achieved by early, timely starts in the season when water and air temperatures are cooler and crab are in good condition, prior to the warmer summer days and subsequent molting period. Where possible, refrigerated seawater (RSW) systems should be encouraged. These systems ensure the crab are maintained in optimum condition and such systems facilitate timely quality processing at plants, particularly when the crab is landed at the processing facility. RSW systems are an ideal means to hold the crab for extended periods and are in widespread use in other jurisdictions (New Brunswick and Alaska).

Pricing adjustments for size and quality require enhanced grading processes but grading should be an integral part of buying all species. Without grading there is no objective means to assess value and reward and motivate the industry to optimize the market returns to the industry. Price adjustments can be readily implemented as an established premium or discount from the average price derived from the adopted formula based pricing. The reality is that all the crab are not worth the same price. The price should reflect the value of what is being traded just as it does in the marketplace. If the industry truly wishes to achieve to maximize the value of the resource, and that should be everybody's goal, the pricing needs to reflect mechanisms that will achieve that goal. Otherwise, the industry's economic potential is much lower than can be derived. That is the general characterization of where the crab industry is today its overall economic value is much lower than optimal.

Limitations of the Formula

The formula developed by the Strategic Review Team in this report has precision within the historical data set that it is derived from. When market returns are at the lower and higher limits of the data set, the formula should be comprehensively reviewed to ensure that the sharing of revenues at those points remain consistent with the overall risks borne by the parties. Beyond the CDN$ equivalent price of $12.00 /lb market value for 5 to 8 ounce sections, the formula is data deficient and is highly dependent on a period when the market was very highly concentrated

on demand in the retail sector of the US market only (see discussion on market shifts and inventory buildup during Covid-19 period earlier in this report).

Additionally, the formula requires periodic review as changing market dynamics and industry structures evolve over time and these shifts will require that the formula be adjusted. For example, the products produced in the industry could shift away from a section format as it did in the past when the industry shifted from almost entirely extracted crab meat to a section-based business. Such industry changes would have material impacts on a formula that is currently based primarily on the 5 to 8 ounce crab section product form.

Inflation is also an underlying economic factor which requires monitoring and analysis in the context of a formula. It is particularly relevant at lower market returns because it can virtually eliminate the margin of one party or the other in the industry. For example, because the industry had a price to market when the price of crab sections was at CDN$5.00 /lb, in the early 2000s, does not mean that the same crab price can work for the industry 24 years later.

Inflation on base costs has increased very significantly over time and inflation has the effect to reduce and or eliminate margins. Therefore, formula-based pricing has to recognize that limitation. It would not serve the industry well if the formula produces pricing that inherently means that one party or the other cannot function because it is totally uneconomic. Cost inflation in Canada has been a serious issue in recent years and its cumulative effect is material. To illustrate, the consumer price index (CPI) reported by the Bank of Canada indicates that CPI has increased by 65.8 percent since 2000. So, $1 of cost in year the 2000 is now $1.66.

Consequently, if we used the formula to apply to a low market price that was applicable 20 or so years ago, there is a high probability that it would not produce a workable price for crab because inflationary costs over that time would likely leave one or both parties with no margin and no incentive to harvest or process crab. The formula framework presented is derived from the data set the Review Team selected. We would strongly caution its application to establish pricing at the lower end or higher end of the pricing range without a comprehensive review.

As the Review Team pointed out earlier in its report, the collapse in market price in 2022 is also outside the limits of the formula-based pricing model the Review Team adopted. If the framework and pricing formula were applied to the situation that occurred in 2022, the processors would have inherently advanced more to the harvesters during the season than the market value derived. The market collapse was so deep and so sharp that any formula framework that could account for the all the risks in that year would cause a formula-based system to be impractical. The Review Team recognizes this and advises that in the event that such an unprecedented situation occurs in the future, the regulatory Panel has to be able to intervene and adjust to the economic situation arising as this occurrence is outside the scope of the formula-based pricing framework to resolve. This unique situation was addressed following the Conway report which caused the legislation to change and reflect a "*force majeure*" development.

Sharing the Market Return

There is much debate within the industry about sharing the return from the market. Collective bargaining and the final offer selection process is by its nature a fair process. Each of the parties has the opportunity to submit and defend its position on issues in a process that is intended to bring the parties closer together through negotiation. The final offer arbitration process is supported by market information and other relevant factors to assist in the setting of a minimum price and conditions of sale for various species.

It is apparent that, while the process has been tweaked over the years, it has functioned relatively well particularly in periods of market price and exchange rate stability. The debate about fairness arises when the market and exchange rate changes significantly, upwards or downwards, after the harvester price has been established. The current fixed pricing approach produces a minimum price that is far from ideal, however, there is nothing inherently unfair about the process. As discussed earlier, the system has limitations that are all known. A fixed price cannot be expected to result in an ideal outcome when it is known that the market and the exchange rate are dynamic and constantly changing.

The challenges of timing, risks, seasonality, variations of quality, the start to fisheries, and the potential to share the risks during the season through advances, etc. have all been

discussed in detail. To modify and improve the system requires the commitment of Government and both parties to make it work. There has to be widespread acceptance that it is the process by which the parties choose through collective bargaining to use. No matter the process that has been chosen to use, the collective objective has to be to maximize the market return. That is the only way to ensure that all are getting a fair share from the public resource.

There is also much debate about yields, which is an inherent part of the cost and productivity of the processing sector. It has some relevance but no more relevance than the cost and productivity of the fishing enterprises. Combined with this, is the issue of additional processing capacity. There is a need to have adequate capacity to harvest and process the resource but too much capacity in either sector adds very significant investment and costs on the entire industry. These costs and productivity factors are relevant in understanding the risks and returns necessary for the industry to function and be competitive, however, price setting is directly associated with the value derived from the market. That is what ultimately determines the traded price of all the different species of fish landed.

The costs and other characteristics have been independently studied in the past. Gardner has prepared a couple of in-depth reports on these factors in the crab industry and the reports have relevance today as much as when they were initially prepared. They explain the factors that distinguish the crab industry in Newfoundland and Labrador from that in the Maritimes. These regulatory, biological, and structural characteristics are much the same now. They have not changed the size, colour and defect free nature of the crab resource in the Gulf of St. Lawrence that distinguish it from the resource in Newfoundland waters. That is why the product from that region commands a slightly higher price as compared to Newfoundland and Labrador. The regulatory and operating structure of the industry is different than in Newfoundland and Labrador, and as a consequence the costs are lower for both harvesters and processors. Despite these competitive differences, the industry here has paid very competitive prices in comparison to the Gulf. Indeed, in 2023, a year of turmoil in Newfoundland and Labrador, the price here was competitively much better considering all the factors noted. Yet the debate still rages that the Newfoundland and Labrador industry is unfair in its pricing. There is no merit to such statements.

Apples and Oranges

Where did that heading come from? Well, it is the analogy that the Review Team adopted to explain the sharing percentage between harvester and processor in the crab industry.

In order to indicate the share to harvesters for crab prices, the common fallacy is to take the market price in CDN$, divide it into the price paid to harvesters, and state that as the percentage share of the market that is going to the harvesters' benefit.

Let's illustrate the sharing fallacy:
UB market price is US$ 4.75 and the CDN$ is at 1.35 exchange rate to the US$, which means that the market return is CDN$6.41 for a pound of crab sections. The price to harvesters is $2.20 /lb. So, $2.20 divided by $6.41 is 34.3percent. And that means that harvesters are only getting 34.3percent of the market return. That is what is called comparing apples to oranges. They are two entirely different things. The price of a pound of sections is not comparable to a pound of live crab.
– they are apples and oranges. The 34.3percent share as it is called is inaccurate, it is wrong.

The pound of live crab (the 'apple') has been taken by the processor and totally transformed into a section of a crab (the 'orange'). One cannot compare the live crab to the section, one is but a part of the other.

In order to make a true comparison (apples compared to apples), one has to convert the section weight back to whole live weight, then we can get the percentage share that is paid to the harvester. The section value of $6.41 in live weight terms has to be multiplied by the yield. For illustrative purposes, assume it is 65 percent for crab. That means that in live weight terms, the market value is $4.17, or $6.41 multiplied by 0.65. Now we can take the market value in live weight terms and divide it into the live weight price paid to the harvester. This is $2.20 divided by $4.17 which equals 52.8percent. The share paid to the harvester in 2023, in this example, is 52.8percent, not 34.3 percent as many are stating.

To further illustrate the sharing of the market return between the harvesting and processing sectors,

it is useful to look at the overall landings, prices paid and market returns. While 2023 prices to harvesters was relatively low, the overall landed value for the 100,000,000 pounds of landings with an average price of $2.29, results in a landed value of $229,000,000, paid to harvesters. Meanwhile the quantity of crab sections, based on a 65 percent yield, would approximately be 65,000,000 pounds of product at a market price of CDN$6.90, for a total market value of $448,500,000. Therefore, the share for the 2023 controversial season is approximately 51 percent of the market return to the harvesting sector, and 49percent to the processing sector. By any measure the share of the market value accruing to harvesters is greater than 50percent in 2023.

The Sharing under the Formula

The sharing debate is not likely resolved but let's look at the sharing derived by the pricing-formula presented by the Review Team for crab. The table below shows the share in percentage terms of the market value in CDN$ that would be paid to the harvester under the pricing formula. The exchange rate is assumed at 1.33 for illustrative purposes and the yield is assumed at 65 percent.

The table shows that when the market price of sections is US$6.00 /lb, that the share ofthe market value paid to the harvester is 60.3 percent, under the pricing formula. As the market price increases, the percentage to the harvester increases. For example, at a market of US$8.00 /lb for sections, the percentage paid to the harvester increases to 65.65percent and at US$9.00 /lb the market share is 68.5 percent. This is about the limit that the formula is designed to precisely measure as beyond that CDN$12.00 equivalent price, the data are very scarce and were dependent on a period of much dysfunction in the market.

When one considers the risks of both parties, there naturally comes a point when the sharing should be set to increase no further. For example, beyond CDN$12.00 /lb section price a set split at each increment of market increase should be established as fair sharing among participants. This is an issue that requires further analysis of risks in the industry. There is no point of contention, however, that once the harvester is paid at any point in the season, all of the risk rests with the processors and those in the value-chain beyond the processor.

Too often there is no discussion or recognition of all of the business activity and business risks that are beyond the processor in the value-chain of the seafood industry. There are significant added costs of logistics, selling and marketing through various distribution channels that all require a margin to conduct business. This is perhaps the biggest weakness in the structure of the Newfoundland and Labrador industry in that it has little to no focus on the value-chain and the end customer buying the products the industry produces.

UB Section Price US$/lb.	Section Price in CDN$/lb. @ 1.33 Exchange Rate	Price paid to Harvester Using the Pricing Formula $/lb.	Section Value @ 65% Yield $/lb.	% Share of Market Value to Harvester %
5.00	6.65	2.50	4.32	57.9%
5.50	7.32	2.81	4.75	59.0%
6.00	7.98	3.13	5.19	60.3%
6.50	8.65	3.46	5.62	61.6%
7.00	9.31	3.81	6.05	62.9%
7.50	9.98	4.17	6.48	64.3%
8.00	10.64	4.54	6.92	65.6%
8.50	11.31	4.93	7.35	67.0%
9.00	11.97	5.33	7.78	68.5%

When one looks back at the cycle of the past three years since 2020, one realizes that everyone in the value-chain at one point or another suffered significant economic losses. There is a lot to recover from, to rebuild, and diversify the market back to where the industry was five years ago. The industry is at a low point in many respects and it is going to take a lot of coordination, cooperation and focus on the market, among harvesters and processors to rebuild.

Recommendations

1. **The Review Team recommends that formula-based pricing be adopted for all species where analysis determines that it is a more objective, independent and practical method of establishing pricing for a given species, such is the case for snow crab which should be undertaken immediately prior to the start of the 2024 season. The crab formula-based framework should be established initially for a two to three year**

period followed by a comprehensive review, with the objective to adopt this price setting mechanism for crab into the future. The formulaic approach developed by The Review Team is contained on pages 42 – 50 of the report. It is an option provided to the parties for their consideration.

2. **The development of formula-based pricing should be undertaken months prior to the seasonal start of fisheries. For example, the process of bargaining should be set for the fall-early winter period to develop formula-based pricing for a species, as well as the negotiation of other related terms and conditions attached as schedules, whereby if the parties to collective bargaining do not agree on the specific issues to be resolved for the implementation or modification of formula-based pricing models and terms and conditions thereto, then the Panel can be convened to arbitrate outstanding issues that require resolution between the parties long before the minimum starting price is set just prior to the season opening. This will require the Minister to establish a preset schedule for any species requiring the development or modification of formula-based pricing similar to that currently in place for the establishment of opening prices for various species. Timeframes should also provide the Panel with reasonable time periods to consider the issue(s) that require resolution.**

The implementation of the crab framework formula should commence immediately and be scheduled to conclude by January 31, 2024.

3. **The legislation, regulations and roles of the Panel should be expanded where necessary to enable it to hold regulatory hearings whereby it can determine independently through arbitration, under a process of final offer selection, any one aspect of formula-based pricing including:**

   a. **The percent advance that shall be set for the season as initial payment;**
   b. **The period (weeks) of the season that average market pricing will be**

monitored to settle final harvester prices for the season;

c. **Any adjustments, modifications, or reviews required in any formula- based pricing model that are necessary to ensure that the pricing system adjusts over time to respond to industry and market dynamics;**

d. **Any modification or adjustments to the schedule governing the terms and conditions of sale; and**

e. **Starting seasonal prices under formula-based pricing models. These can best be arbitrated just prior to opening of the season for a species, as is currently the case. This situation can arise when there is no independent market price quoted for the product.**

4. **The Review Team recommends that no reconsiderations be permitted during the season where there is a price setting formula in effect for a species, unless one of the parties is able to demonstrate explicitly that the economic risk in the industry is so challenged that to allow the fishery to proceed would do such economic damage as to have a long-term detrimental effect on the industry sector. Such economic conditions would be similar to the 2022 crab experience, when it was clear that the pricing mechanism is not able to practically address the economic risk. The Panel should have the authority to intercede and regulate by halting, adjusting, or otherwise limiting the production of the industry, so as to avoid the collateral damage that is caused to the fishery economy of the Province.**

5. **The Review Team recommends that the legislation, regulations and policies governing the Fish Price-Setting process and the Panel be modified as necessary to ensure that the Panel has all the powers necessary to facilitate the formula based pricing framework envisioned. Government should also assess the need to strengthen its legislation such that it is more consistent with its intended objective to have various fisheries start in a timely manner.**

6. **The Review Team has concluded that the current structure of fish pricing setting is not conducive to maximizing the inherent value of the resource. There is significant economic opportunity to be gained from a market-based approach driven by a focus on improving the quality of the harvest and the products produced.**

7. **The Review Team repeats the recommendations from a number of prior reports that fish prices reflect the inherent market value of products produced in the industry. As noted in our report, market value for most all species is a function of size and quality characteristics. These attributes are best determined through independent dockside grading that correlate and reward attributes that give rise to increased market returns that can increase and improve the long- term viability of the entire industry.**

There is much more to share when value is maximized. The industry needs to establish clear and attainable goals over the short and long-term. These should be empirically measured and the benefits shared as gains and milestones are achieved.

8. **The Review Team has concluded that the crab industry is currently highly dependent on the retail segment of the US market. It is recommended that the Government support industry led initiatives to diversify the US market and enable it to re-establish and expand Asian and other markets.**

9. **The Review Team has concluded that much of the disruption in the industry through the current crisis was avoidable, however to avoid such outcomes, an independent fisheries management structure is required. Such a management structure was recommended in the past by Vardy and Dunne (2003) and by Cashin (2005). The review team concurs with their recommendation that the Government of Newfoundland and Labrador seek a workable arrangement with the Federal Government for coordinated and joint management of the harvesting and processing sectors. This would be an arrangement where the decision-making powers of both governments be delegated to a single management authority. An authority similar to that utilized in the oil and gas sector.**

References

Cashin, Richard, 2005, Report of the Chairman RMS Review Committee.

Conway, David, 2022, Fishing Industry Collective Bargaining model: Past Present and Future.

Fish Prices | FFAW-Unifor | Fish Food & Allied Workers Union.

Gardner Pinfold 2014 Review of differences in snow crab shore prices paid in Newfoundland and Labrador vs. the rest of Atlantic Canada

Jones, David 2003 A Review of the Fishing Industry Collective Bargaining Act: A Framework for Stability

Sackton, John 2008 "Final Non-Binding Price Formula for Red King Crab, Opilio and Baridi" Seafood Datasearch, Seafood.com

Standing Fish Price-Setting Panel www.gov.nl.ca/fishpanel/ Pricing decisions

Thistle, Wayne et al, 1997 Conciliation Board Report on snow crab commissioned by the Department of Environment and Labour

UB, Seafood Price-Current – Various Issues

Vardy, David 1998 Report of the Task Force on Fish/Crab Price Settlement Mechanisms in the Fishing Industry Collective Bargaining Act

Vardy, David and Dunne, Eric 2003 "New Arrangements for Fisheries Management in Newfoundland and Labrador" in Royal Commission on Renewing and Strengthening Our Place in Canada. Page 87.

Appendix A

Urner Barry Snow Crab, Newfoundland, Cluster, 5-8 oz																		
	US$ lb*																	
Period	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
01/02/2023	2.95	4.22	4.53	4.00	3.40	5.50	5.05	4.95	5.25	5.25	5.25	7.95	8.10	8.70	9.25	9.90	16.80	7.47
01/09/2023	2.95	4.25	4.50	4.00	3.40	5.50	5.05	4.97	5.30	5.25	5.30	7.95	8.10	8.62	9.25	9.90	16.80	7.35
01/16/2023	2.95	4.25	4.50	4.00	3.40	5.53	5.10	5.05	5.40	5.25	5.35	7.95	8.10	8.50	9.25	9.90	16.80	7.15
01/23/2023	2.95		4.55	4.00	3.40	5.55	5.15	5.05	5.40	5.25	5.47	7.95	8.10	8.50	9.25	9.90	16.80	7.15
01/30/2023	2.95		4.55	4.00	3.40	5.55	5.17	5.12	5.40	5.25	5.50	7.95	8.10	8.50	9.28		16.73	7.15
02/06/2023	2.95		4.58	4.00	3.42	5.60	5.25	5.20	5.40	5.25	5.65	7.95	8.10	8.57	9.30		16.52	7.10
02/13/2023	2.95		4.60	4.00	3.48	5.62	5.35	5.25	5.40	5.17	5.67	7.95	8.10	8.65	9.30		16.27	6.92
02/20/2023	3.02		4.60	4.00	3.50	5.65	5.40	5.30	5.40	5.15	5.70	7.95	8.10	8.65	9.30		16.15	6.80
02/27/2023	3.05		4.60	4.00	3.65		5.40	5.30	5.40	5.15		7.95	8.10	8.65	9.30		16.02	6.45
03/06/2023	3.15		4.65	3.92	3.65		5.40	5.30	5.40	5.15		7.95	7.95	8.70			15.82	6.28
03/13/2023	3.15		4.67	3.90	3.65		5.40		5.40	5.15			7.95	8.75			15.75	6.08
03/20/2023	3.15		4.70	3.83	3.65		5.40		5.40	5.15			7.95	8.75			15.20	5.95
03/27/2023	3.15		4.70	3.80	3.65				5.40	5.10			7.95	8.75			14.25	5.80
04/03/2023			4.70	3.50					5.40	5.10			7.95	8.75			12.62	5.58
04/10/2023				3.35					5.40	5.00			7.95	8.75			12.00	5.50
04/17/2023										4.92				8.65			12.00	4.90
04/24/2023										4.85	5.80			8.50			11.68	4.72
05/01/2023		4.00	4.10	3.20		5.95	4.70			4.80	5.80			8.40		12.45	11.12	4.65
05/08/2023	2.90	3.98	4.05	3.15	3.80	5.85	4.70	4.60		4.80	5.80	7.10	8.68	8.05		12.82	10.62	4.65
05/15/2023	2.90	3.92	4.00	3.15	3.80	5.85	4.70	4.60	5.10	4.75	5.88	7.20	8.80	7.95		13.43	10.20	4.65
05/22/2023	2.90	3.92	4.00	3.17	3.85	5.85	4.75	4.60	5.10	4.78	5.97	7.20	8.88	7.95		13.75	9.97	4.65
05/29/2023	2.90	3.95	4.00	3.20	3.88	5.85	4.75	4.62	5.10	4.85	6.12	7.20	9.00	8.07	6.90	14.03	9.80	4.85
06/05/2023	2.95	4.08	4.08	3.20	3.90	5.85	4.75	4.65	5.10	4.90	6.30	7.25	9.10	8.18	6.95	14.50	9.10	4.85
06/12/2023	3.00	4.15	4.15	3.20	3.92	5.85	4.75	4.65	5.10	4.90	6.55	7.40	9.10	8.28	7.38	15.05	8.25	4.97
06/19/2023	3.00	4.17	4.22	3.20	4.00	5.85	4.75	4.70	5.10	4.90	6.60	7.50	9.10	8.32	8.00	15.47	7.97	5.05
06/26/2023	3.00	4.30	4.30	3.20	4.30	5.85	4.75	4.75	5.15	4.92	6.60	7.60	9.10	8.35	8.45	15.95	7.95	5.05
07/03/2023	3.02	4.30	4.30	3.20	4.38	5.85	4.75	4.80	5.20	4.95	6.60	7.65	9.10	8.40	8.97	16.15	7.95	5.10

Urner Barry Snow Crab, Newfoundland, Cluster, 5-8 oz																		
	US$ lb*																	
Period	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
07/10/2023	3.10	4.30	4.30	3.20	4.47	5.85	4.75	4.83	5.20	4.95	6.60	7.75	9.10	8.40	9.20	16.25	7.70	5.28
07/17/2023	3.12	4.50	4.30	3.10	4.55	5.85	4.70	4.90	5.20	4.95	6.62	8.00	9.10	8.40	9.25	16.30	7.33	5.40
07/24/2023	3.20	4.58	4.30	3.10	4.67	5.85	4.70	5.00	5.25	4.95	6.80	8.10	9.05	8.40	9.25	16.35	7.15	5.40
07/31/2023	3.20	4.60	4.30	3.10	4.83	5.80	4.65	5.15	5.25	4.95	6.85	8.10	8.95	8.40	9.25	16.40	7.05	5.67
08/07/2023	3.33	4.60	4.30	3.10	5.00	5.80	4.65	5.15	5.25	4.92	6.85	8.10	8.90	8.40	9.25	16.40	7.05	5.75
08/14/2023	3.40	4.62	4.30	3.10	5.05	5.80	4.65	5.15	5.25	4.90	6.85	8.10	8.75	8.45	9.25	16.40	7.05	5.75
08/21/2023	3.42	4.65	4.30	3.10	5.05	5.80	4.65	5.15	5.25	4.90	6.85	8.10	8.75	8.45	9.28	16.40	7.05	5.75
08/28/2023	3.48	4.65	4.28	3.10	5.05	5.75	4.65	5.17	5.25	4.90	6.88	8.10	8.75	8.45	9.35	16.40	7.08	5.75
09/04/2023	3.50	4.65	4.25	3.10	5.10	5.75	4.67	5.20	5.25	4.90	6.95	8.10	8.75	8.50	9.45	16.40	7.12	5.75
09/11/2023	3.50	4.65	4.25	3.10	5.10	5.75	4.75	5.20	5.25	4.90	7.08	8.10	8.75	8.50	9.55	16.40	7.17	5.75
09/18/2023	3.55	4.65	4.22	3.10	5.10	5.75	4.75	5.20	5.25	4.90	7.22	8.10	8.75	8.60	9.65	16.40	7.28	5.75
09/25/2023	3.55	4.65	4.20	3.10	5.20	5.75	4.78	5.20	5.25	4.90	7.35	8.10	8.75	8.65	9.65	16.40	7.55	5.75
10/02/2023	3.55	4.65	4.20	3.10	5.25	5.75	4.85	5.20	5.25	4.92	7.40	8.10	8.75	8.68	9.65	16.40	7.80	
10/09/2023	3.55	4.65	4.17	3.10	5.30	5.75	4.92	5.20	5.25	4.95	7.45	8.10	8.75	8.78	9.65	16.43	7.85	
10/16/2023	3.55	4.65	4.12	3.10	5.30	5.72	4.95	5.20	5.25	4.95	7.60	8.10	8.75	8.85	9.72	16.68	7.85	
10/23/2023	3.60	4.65	4.10	3.10	5.40	5.65	5.00	5.20	5.25	5.00	7.72	8.10	8.75	8.85	9.85	16.75	7.88	
10/30/2023	3.65	4.65	4.10	3.12	5.50	5.60	5.00	5.20	5.25	5.05	7.85	8.10	8.75	8.85	9.90	16.77	7.90	
11/06/2023	3.67	4.65	4.10	3.17	5.50	5.60	5.05	5.20	5.25	5.05	7.95	8.10	8.75	8.88	9.90	16.80	7.90	
11/13/2023	3.77	4.65	4.05	3.20	5.50	5.55	5.05	5.25	5.25	5.05	7.95	8.10	8.75	9.00	9.90	16.80	7.90	
11/20/2023	3.90	4.65	4.00	3.25	5.50	5.45	5.05	5.25	5.25	5.10	7.95	8.10	8.75	9.00	9.90	16.80	7.90	
11/27/2023	3.98	4.65	4.00	3.25	5.50	5.38	5.05	5.25	5.25	5.10	7.95	8.10	8.75	9.00	9.90	16.80	7.90	
12/04/2023	4.00	4.60	3.95	3.25	5.50	5.28	5.05	5.25	5.25	5.15	7.95	8.10	8.75	9.05	9.90	16.80	7.90	
12/11/2023	4.08	4.55	3.90	3.30	5.50	5.10	5.05	5.25	5.25	5.20	7.95	8.10	8.75	9.15	9.90	16.80	7.80	
12/18/2023	4.15	4.55	3.90	3.30	5.50	5.08	5.00	5.25	5.25	5.20	7.95	8.10	8.75	9.25	9.90	16.80	7.70	
12/25/2023	4.17	4.55	3.90	3.35	5.50	5.05	4.95	5.25	5.25	5.20	7.95	8.10	8.75	9.25	9.90	16.80	7.62	
53rd Week			3.90						5.25						9.90			
* When a price range is quoted the low in the range is used. Average of prices quoted during the week																		

Appendix B

Exports of NEWFOUNDLAND AND LABRADOR Snow Crab in Kgs. Data from Department of Fisheries, Forestry and Agriculture										
										YTD July
Country/Region	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
United States Of America	18,331,322	18,944,215	18,929,940	13,590,105	11,762,343	12,390,390	15,804,427	22,166,092	20,230,321	24,091,127
China	8,297,076	5,653,424	3,551,278	3,475,485	3,193,921	1,563,539	1,846,316	2,337,324	2,741,602	1,338,328
Indonesia	1,432,862	929,471	600,991	960,627	765,553	1,140,331	335,074	567,966	1,504,454	399,066
Viet Nam	461,507	658,948	276,524	550,676	244,153	785,999	532,174	388,727	602,392	501,021
Japan	632,305	615,479	398,874	298,948	140,999	570,811	202,671	453,068	177,295	83,912
Thailand	279,890	509,583	241,954	182,626	33,966	33,313	37,319	0	52,065	0
Hong Kong	81,661	46,770	176,936	184,463	80,422	111,757	106,101	108,546	122,658	73,047
Korea, South	16,983	462	203,025	37,787	0	0	0	0	14,194	7,062
Total Asia	11,202,284	8,414,137	5,449,582	5,690,612	4,459,014	4,205,750	3,059,655	3,855,631	5,214,660	2,402,436
Netherlands	95,958	18,860	50,204	37,720	0	52,539	34,745	54,899	13,268	0
United Kingdom	10,152	17,844	0	0	71	0	24,968	15,450	58,542	1,960
France	0	3	0	0	14	0	663	810	0	103,041
Singapore	37,699	0	0	32,903	16,805	7,348	0	0	0	17,145
Spain	0	0	0	0	0	0	0	15,795	8,818	18,681
Taiwan	0	0	0	0	0	0	54	35,015	272	0
Iran	0	93,405	0	0	0	0	0	0	0	0
Chile	0	0	0	0	0	0	0	15,486	0	18,670
Denmark	0	30	0	0	0	0	0	0	3,846	0
Myanmar	38,080	0	0	0	0	0	0	0	0	0
Russian Federation	5,006	0	0	0	0	0	20,000	0	0	0
Malaysia	0	0	0	0	8,845	1,819	0	0	0	0
Belgium	0	0	0	0	0	0	0	0	0	1,960
Germany	0	0	0	0	0	0	0	0	0	0

Exports of NEWFOUNDLAND AND LABRADOR Snow Crab in Kgs. Data from Department of Fisheries, Forestry and Agriculture										
										YTD July
Country/Region	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Christmas Island	0	0	0	0	0	0	0	0	0	0
Australia	0	0	0	0	0	0	0	0	5,410	0
Ukraine	0	0	1,361	0	0	45	1,715	0	0	0
Cabo Verde	0	14,006	0	0	0	0	0	0	0	0
Colombia	0	0	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0	0	0	0
Saint Pierre and Miquelon	0	0	0	0	0	146	0	0	0	0
Iceland	0	0	0	0	0	0	0	0	0	0
Sweden	0	0	0	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0	0	0	0
Korea, North	0	0	0	0	0	0	0	0	0	0
Total all countries	29,720,501	27,502,500	24,431,087	19,351,340	16,247,092	16,658,037	18,946,227	26,159,178	25,535,137	26,655,020
NEWFOUNDLAND AND LABRADOR Total Crab Production in kgs	33,747,863	31,739,924	28,128,440	23,395,268	19,343,443	19,009,863	21,073,154	27,146,354	35,083,562	34,754,505

Appendix C

Weekly Lobster Prices (2011-2023)				
	UB price	CDN $ Ex	CDN $	Harvester
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
2011				
Sun., April 17 – Sat., April 23	$ 6.59	0.96040	$ 6.33	$ 4.26
Sun., April 24 – Sat., April 30	$ 6.60	0.95341	$ 6.29	$ 4.23
Sun., May 1 – Sat., May 7	$ 6.18	0.94886	$ 5.86	$ 3.90
Sun., May 8 – Sat., May 14				$ 3.65
Sun., May 15 – Sat., May 21	$ 5.80	0.97226	$ 5.64	$ 3.70
Sun., May 22 – Sat., May 28	$ 5.90	0.97746	$ 5.77	$ 3.79
Sun., May 29 – Sat., June 4	$ 5.95	0.97599	$ 5.81	$ 3.81
Sun. June 5 – Sat. June 11	$ 6.30	0.97847	$ 6.16	$ 4.08
Sun. June 12 – Sat. June 18	$ 6.75	0.97810	$ 6.60	$ 4.43
Sun. June 19 – Sat. June 25	$ 6.92	0.98093	$ 6.79	$ 4.58
Sun. June 26 – Sat. July 2	$ 7.20	0.97124	$ 6.99	$ 4.74
Sun. July 3 – Sat. July 9	$ 7.15	0.96207	$ 6.88	$ 4.65
Sun. July 10 – Sat. July 16	$ 7.10	0.96041	$ 6.82	$ 4.61
2012				
Sun. April 15-Sat. April 21	$ 6.85	0.99360	$ 6.81	$ 4.59
Sun. April 22-Sat. April 28	$ 6.70	0.98540	$ 6.60	$ 4.43
Sun. April 29-Sat. May 5	$ 6.38	0.98930	$ 6.31	$ 4.20
Sun. May 6-Sat. May 12	$ 6.10	0.99970	$ 6.10	$ 4.03
Sun. May 13-Sat. May 19	$ 6.08	1.01310	$ 6.15	$ 4.07
Sun. May 20-Sat. May 26	$ 6.10	1.02470	$ 6.25	$ 4.15
Sun. May 27-Sat. June 2	$ 6.08	1.03210	$ 6.27	$ 4.17
Sun. June 3-Sat. June 9	$ 5.80	1.03210	$ 5.99	$ 3.94
Sun. June 10-Sat. June16	$ 5.75	1.02490	$ 5.89	$ 3.88

Weekly Lobster Prices (2011-2023)				
	UB price	**CDN $ Ex**	**CDN $**	**Harvester**
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
Sun. June 17-Sat. June 23	$ 5.68	1.02480	$ 5.82	$ 3.82
Sun. June 24-Sat. June 30	$ 5.60	1.02380	$ 5.73	$ 3.76
Sun. July 1-Sat. July 7	$ 5.60	1.01610	$ 5.69	$ 3.73
Sun. July 8- Sat. July 14	$ 5.70	1.01760	$ 5.80	$ 3.81
2013				
Sun April 14 – Sat April 20	$ 7.60	1.02430	$ 7.78	$ 5.37
Sun April 21 – Sat April 27	$ 6.68	1.02200	$ 6.82	$ 4.61
Sun April 28 – Sat May 4	$ 5.85	1.00940	$ 5.90	$ 3.88
Sun May 5 – Sat May 11	$ 5.23	1.00730	$ 5.26	$ 3.43
Sun May 12 – Sat May 18	$ 4.98	1.02000	$ 5.08	$ 3.30
Sun May 19 – Sat May 25	$ 5.00	1.03090	$ 4.85	$ 3.25
Sun May 26 – Sat June 1	$ 4.70	1.03560	$ 4.87	$ 3.25
Sun June 2 – Sat June 8	$ 4.48	1.02810	$ 4.60	$ 3.25
Sun June 9 – Sat June 15	$ 4.35	1.01850	$ 4.43	$ 3.25
Sun June 16 – Sat June 22	$ 4.35	1.03190	$ 4.49	$ 3.25
Sun June 23 – Sat June 29	$ 4.85	1.04980	$ 5.09	$ 3.31
Sun June 30 – Sat July 6	$ 3.70	1.05420	$ 3.90	$ 3.25
Sun July 7 – Sat July 13	$ 3.70	1.04570	$ 3.87	$ 3.25
2014				
Sun. April 13 to Sat. April 19	$ 8.48	1.10020	$ 9.32	$ 6.61
Sun. April 20 to Sat. April 26	$ 7.65	1.10300	$ 8.44	$ 5.90
Sun. April 27 to Sat. May 3	$ 6.58	1.09810	$ 7.22	$ 4.93
Sun. May 4 to Sat. May 10	$ 5.85	1.09020	$ 6.38	$ 4.25
Sun. May 11 to Sat. May 17	$ 5.10	1.08820	$ 5.55	$ 3.64

Weekly Lobster Prices (2011-2023)				
	UB price	CDN $ Ex	CDN $	Harvester
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
Sun. May 18 to Sat. May 24	$ 4.98	1.08850	$ 5.42	$ 3.54
Sun. May 25 to Sat. May 31	$ 4.85	1.08530	$ 5.26	$ 3.44
Sun. June 1 to Sat. June 7	$ 4.73	1.09190	$ 5.16	$ 3.36
Sun. June 8 to Sat. June 14	$ 4.60	1.08790	$ 5.00	$ 3.25
Sun. June 15 to Sat. June 21	$ 5.00	1.08170	$ 5.25	$ 3.42
Sun. June 22 to Sat. June 28	$ 5.35	1.07040	$ 5.73	$ 3.76
Sun. June 29 to Sat. July 5	$ 6.10	1.06550	$ 6.50	$ 4.35
Sun. July 5 to Sat. July 12	$ 6.35	1.06860	$ 6.79	$ 4.58
Sun. July 13 to Sat. July 19	$ 6.60	1.07400	$ 7.09	$ 4.82
Sun. July 20 to Sat. July 26	$ 6.95	1.07630	$ 7.48	$ 5.13
2015				
Sun. April 19 to Sat. April 25	$ 8.60	1.22070	$ 10.50	$ 7.55
Sun. April 26 to Sat. May 2	$ 8.95	1.21030	$ 10.83	$ 7.82
Sun. May 3 to Sat. May 9	$ 8.18	1.20860	$ 9.88	$ 7.05
Sun. May 10 to Sat. May 16	$ 6.40	1.20210	$ 7.69	$ 5.30
Sun. May 17 to Sat. May 23	$ 5.58	1.22100	$ 6.81	$ 4.60
Sun. May 24 to Sat. May 30	$ 5.30	1.24170	$ 6.58	$ 4.41
Sun. May 31 to Sat. June 6	$ 5.30	1.24610	$ 6.60	$ 4.43
Sun. June 7 to Sat. June 13	$ 5.38	1.23320	$ 6.63	$ 4.45
Sun. June 14 to Sat. June 20	$ 5.98	1.22780	$ 7.34	$ 5.02
Sun. June 21 to Sat. June 27	$ 6.53	1.23290	$ 8.05	$ 5.59
Sun. June 28 to Sat. July 4	$ 6.90	1.25140	$ 8.63	$ 6.06
Sun. July 5 to Sat. July 11	$ 7.15	1.26840	$ 9.07	$ 6.41
Sun. July 12 to Sat. July 18	$ 6.90	1.28740	$ 8.88	$ 6.26

Weekly Lobster Prices (2011-2023)				
	UB price	CDN $ Ex	CDN $	Harvester
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
Sun. July 19 to Sat. July 25	$ 6.90	1.30150	$ 8.98	$ 6.33
2016				
Sun. April 17 to Sat. April 23	$ 6.95	1.26852	$ 8.82	$ 6.20
Sun April 24 to Sat April 30	$ 6.23	1.25729	$ 7.83	$ 5.41
Sun May 1 to Sat. May 7	$ 6.10	1.28000	$ 7.83	$ 5.41
Sun May 8 to Sat May 14	$ 5.97	1.29104	$ 7.71	$ 5.32
Sun May 15 to Sat May 21	$ 5.85	1.30548	$ 7.64	$ 5.26
Sun May 22 to Sat May 28	$ 5.98	1.30517	$ 7.80	$ 5.39
Sun May 29 to Sat June 4	$ 6.35	1.30092	$ 8.26	$ 5.76
Sun June 5 to Sat June 11	$ 7.10	1.27571	$ 9.06	$ 6.40
Sun June 12 to Sat June 18	$ 7.48	1.28856	$ 9.63	$ 6.86
Sun June 19 – Sat June 25	$ 7.60	1.29119	$ 9.81	$ 7.00
Sun June 26 – Sat July 2	$ 7.73	1.29476	$ 10.00	$ 7.15
Sun July 3 – Sat July 9	$ 7.85	1.30072	$ 10.21	$ 7.32
Sun July 10 – Sat July 16	$ 7.73	1.29770	$ 10.03	$ 7.17
Sun July 17 – Sat July 23	$ 7.60	1.30931	$ 9.95	$ 7.11
2017				
Sun April 16 to Sat, April 22	$ 9.95	1.34580	$ 13.39	$ 9.86
Sun April 23 to Sat April 29	$ 8.10	1.36230	$ 11.03	$ 7.98
Sun April 30th to Sat May 6th	$ 7.85	1.36930	$ 10.75	$ 7.75
Sun May 7th to Sat May 13th	$ 7.35	1.37000	$ 10.07	$ 7.21
Sun May 14th to Sat May 20th	$ 6.85	1.35640	$ 9.29	$ 6.58
Sun May 21st to Sat May 27th	$ 6.73	1.34610	$ 9.05	$ 6.39
Sun May 28th to Sat June 3rd	$ 6.35	1.34870	$ 8.56	$ 6.00

Weekly Lobster Prices (2011-2023)				
	UB price	**CDN $ Ex**	**CDN $**	**Harvester**
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
Sun June 4th to Sat June 10th	$ 6.35	1.34700	$ 8.55	$ 5.99
Sun June 11th to Sat June 17th	$ 6.48	1.32340	$ 8.57	$ 6.01
Sun June 18th to Sat June 24th	$ 6.95	1.32650	$ 9.22	$ 6.53
Sun, June 25th to Sat, July 1st	$ 7.35	1.30370	$ 9.58	$ 6.82
Sun, July 2nd to Sat, July 8th	$ 7.48	1.29260	$ 9.66	$ 6.88
Sun, July 9th to Sat, July 15th	$ 7.73	1.27370	$ 9.84	$ 7.02
Sun July 16th to Sat July 22	$ 8.10	1.25750	$ 10.19	$ 7.30
Sun July 23 to Sat July 30th	$ 8.60	1.24770	$ 10.73	$ 7.73
Sun April 22 to Sat April 28	$ 8.73	1.28441	$ 11.21	$ 8.11
Sun April 29 to Sat May 5	$ 7.58	1.28526	$ 9.73	$ 6.94
2018				
Sun May 6 to Sat May 12	$ 6.75	1.28267	$ 8.66	$ 6.08
Sun May 13 to Sat May 19	$ 6.45	1.28474	$ 8.29	$ 5.78
Sun May 20 to Sat May 26	$ 6.15	1.29129	$ 7.94	$ 5.50
Sun May 27 to Sat June 2	$ 6.05	1.29520	$ 7.83	$ 5.42
Sun June 3 to Sat June 9	$ 5.93	1.29520	$ 7.67	$ 5.29
Sun June 10 to Sat June 16	$ 6.40	1.31097	$ 8.39	$ 5.86
Sun June 17 to Sat June 23	$ 6.70	1.32848	$ 8.90	$ 6.27
Sun June 24 to Sat June 30	$ 7.45	1.32230	$ 9.85	$ 7.03
Sun July 1 to Sat July 7	$ 7.60	1.31205	$ 9.97	$ 7.13
Sun July 8 to Sat July 14	$ 7.45	1.31568	$ 9.80	$ 6.99
Sun July 15 to Sat July 21	$ 7.70	1.31760	$ 10.15	$ 7.27
2019				
Sun April 21 to Sat April 27	$ 6.80	1.34560	$ 9.15	$ 6.47

Weekly Lobster Prices (2011-2023)				
	UB price	CDN $ Ex	CDN $	Harvester
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
Sun April 28 to Sat May 4	$ 7.10	1.34360	$ 9.54	$ 6.78
Sun May 5 to Sat May 11	$ 6.80	1.34470	$ 9.14	$ 6.47
Sun May 12 to Sat May 18	$ 6.58	1.34560	$ 8.85	$ 6.23
Sun May 19 to Sat May 25	$ 6.45	1.34385	$ 8.67	$ 6.08
Sun May 26 to Sat June 1	$ 6.23	1.35030	$ 8.41	$ 5.87
Sun June 2 to Sat June 8	$ 6.10	1.33230	$ 8.13	$ 5.66
Sun June 9 to Sat June 15	$ 6.10	1.33552	$ 8.15	$ 5.67
Sun June 16 to Sat June 22	$ 6.30	1.32560	$ 8.35	$ 5.83
Sun June 23 to Sat June 29	$ 6.60	1.31190	$ 8.66	$ 6.08
Sun June 30 to Sat July 26	$ 6.95	1.30830	$ 9.09	$ 6.42
Sun July 7 to Sat July 13	$ 7.25	1.30600	$ 9.47	$ 6.73
Sun July 14 to Sat July 20	$ 7.60	1.30610	$ 9.93	$ 7.09
2020				
May 3 – 9	$ 6.80	1.39950	$ 9.51	$ 6.76
May 10 – 16	$ 5.50	1.40700	$ 7.74	$ 5.34
May 17 – 23	$ 4.40	1.39650	$ 6.15	$ 4.07
May 24 – 30	$ 4.20	1.37690	$ 5.78	$ 3.80
May 31 – June 6	$ 4.20	1.34630	$ 5.65	$ 3.71
June 7 – 13	$ 4.45	1.35330	$ 6.02	$ 3.97
June 14 – 20	$ 4.65	1.35790	$ 6.31	$ 4.20
June 21 – 27	$ 4.95	1.36370	$ 6.75	$ 4.55
June 28 – July 4	$ 5.15	1.35730	$ 6.99	$ 4.74
July 5 – July 11	$ 5.15	1.35770	$ 6.99	$ 4.74
July 12 – 18	$ 5.60	1.35720	$ 7.60	$ 5.23

Weekly Lobster Prices (2011-2023)				
	UB price	CDN $ Ex	CDN $	Harvester
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
2021				
April 18 – 24	$ 10.82	1.24962	$ 13.51	$ 9.96
April 25 – May 1	$ 10.12	1.23182	$ 12.46	$ 9.12
May 2 – May 8	$ 8.49	1.21913	$ 10.35	$ 7.43
May 9 – May 15	$ 8.19	1.21130	$ 9.92	$ 7.09
May 16 – May 22	$ 8.04	1.20700	$ 9.70	$ 6.91
May 23 – May 29	$ 8.04	1.20770	$ 9.71	$ 6.92
May 30 – June 5	$ 8.04	1.20770	$ 9.71	$ 6.92
June 6 – 12	$ 8.07	1.21260	$ 9.78	$ 6.97
June 13 – 19	$ 8.49	1.23468	$ 10.48	$ 7.54
June 20 – 26	$ 9.37	1.23120	$ 11.53	$ 8.37
June 27 – July 3	$ 9.74	1.23640	$ 12.04	$ 8.78
July 4 – July 10	$ 10.02	1.24649	$ 12.48	$ 9.14
July 11 – 17	$ 10.14	1.25830	$ 12.75	$ 9.36
2022				
April 17-23	$ 10.50	1.26414	$ 13.27	$ 9.77
April 24-30	$ 9.88	1.28266	$ 12.67	$ 9.28
May 1-7	$ 9.35	1.28688	$ 12.03	$ 8.78
May 8-14	$ 8.88	1.29616	$ 11.50	$ 8.35
May 15-21	$ 8.63	1.28256	$ 11.06	$ 8.00
May 22-28	$ 8.23	1.27587	$ 10.49	$ 7.55
May 29-June 4	$ 7.75	1.26092	$ 9.77	$ 6.97
June 5-11	$ 7.70	1.26992	$ 9.78	$ 6.97
June 12-18	$ 7.55	1.29753	$ 9.80	$ 6.99

Weekly Lobster Prices (2011-2023)				
	UB price	**CDN $ Ex**	**CDN $**	**Harvester**
Weeks	**US$/Lb**	**Rate**	**Price/LB**	**Price $/Lb**
June 19-25	$ 7.60	1.29260	$ 9.82	$ 7.01
June 26-July 2	$ 7.65	1.28817	$ 9.85	$ 7.03
July 3-9	$ 7.65	1.29774	$ 9.93	$ 7.09
July 10-16	$ 8.10	1.30273	$ 10.55	$ 7.59
2023				
April 16-22	$ 14.10	1.34901	$ 19.02	$ 14.37
April 23-29	$ 10.38	1.35836	$ 14.09	$ 10.42
April 30-May6	$ 8.63	1.34794	$ 11.63	$ 8.45
May 7-13	$ 7.75	1.34760	$ 10.44	$ 7.26
May 14-20	$ 7.38	1.34881	$ 9.95	$ 6.91
May 21-27	$ 7.13	1.35917	$ 9.68	$ 6.73
May 28-June 3	$ 7.05	1.34926	$ 9.51	$ 6.61
June 4-10	$ 7.00	1.33632	$ 9.35	$ 6.50
June 11-17	$ 7.13	1.32493	$ 9.44	$ 6.56
June 18-24	$ 7.68	1.31850	$ 10.12	$ 7.03
June 25-July 1	$ 7.95	1.32361	$ 10.52	$ 7.32
July 2-8	$ 8.10	1.32831	$ 10.76	$ 7.48
July 9-15	$ 8.25	1.31998	$ 10.89	$ 7.57
July 16-22	$ 8.38	1.31925	$ 11.05	$ 7.68
Market prices derived from UB, exchange rate Bank of Canada end of day averaged for the week, harvester prices as per FFAW.				

Appendix D

Weekly Harvester Prices for Crab 2006-2023	
Date	**Harvester**
Week Ended	**Price/LB**
01/04/2006	$1.05
08/04/2006	$1.05
15/04/2006	$1.05
22/04/2006	$1.05
29/04/2006	$0.98
06/05/2006	$0.98
13/05/2006	$0.94
20/05/2006	$0.92
27/05/2006	$0.92
03/06/2006	$0.92
10/06/2006	$0.92
17/06/2006	$0.92
24/06/2006	$0.92
01/07/2006	$0.92
08/07/2006	$0.98
15/07/2006	$0.98
22/07/2006	$1.01
29/07/2006	$1.01
05/08/2006	$1.01
12/08/2006	$1.01
31/03/2007	$1.65
07/04/2007	$1.65
14/04/2007	$1.65
21/04/2007	$1.66
28/04/2007	$1.66
05/05/2007	$1.57
12/05/2007	$1.57
19/05/2007	$1.50
26/05/2007	$1.50
02/06/2007	$1.50
09/06/2007	$1.50
16/06/2007	$1.50
23/06/2007	$1.50
30/06/2007	$1.50
07/07/2007	$1.57
14/07/2007	$1.57
21/07/2007	$1.59
28/07/2007	$1.59

Weekly Harvester Prices for Crab 2006-2023	
04/08/2007	$1.63
11/08/2007	$1.63
18/08/2007	$1.63
25/08/2007	$1.63
01/09/2007	$1.63
05/04/2008	$1.61
12/04/2008	$1.61
19/04/2008	$1.61
26/04/2008	$1.61
03/05/2008	$1.50
10/05/2008	$1.50
17/05/2008	$1.50
24/05/2008	$1.50
31/05/2008	$1.50
07/06/2008	$1.50
14/06/2008	$1.50
21/06/2008	$1.50
28/06/2008	$1.50
05/07/2008	$1.50
12/07/2008	$1.50
19/07/2008	$1.50
26/07/2008	$1.50
02/08/2008	$1.50
09/08/2008	$1.50
16/08/2008	$1.50
23/08/2008	$1.50
30/08/2008	$1.50
04/04/2009	$1.55
11/04/2009	$1.55
18/04/2009	$1.55
25/04/2009	$1.55
02/05/2009	$1.55
09/05/2009	$1.40
16/05/2009	$1.40
23/05/2009	$1.40
30/05/2009	$1.40
06/06/2009	$1.35
13/06/2009	$1.40
20/06/2009	$1.40
27/06/2009	$1.40

Weekly Harvester Prices for Crab 2006-2023	
04/07/2009	$1.40
11/07/2009	$1.40
18/07/2009	$1.40
25/07/2009	$1.35
01/08/2009	$1.35
08/08/2009	$1.35
15/08/2009	$1.35
22/08/2009	$1.35
29/08/2009	$1.35
03/04/2010	$1.35
10/04/2010	$1.35
17/04/2010	$1.35
24/04/2010	$1.35
01/05/2010	$1.35
08/05/2010	$1.35
15/05/2010	$1.35
22/05/2010	$1.35
29/05/2010	$1.35
05/06/2010	$1.35
12/06/2010	$1.35
19/06/2010	$1.35
26/06/2010	$1.35
03/07/2010	$1.35
10/07/2010	$1.35
17/07/2010	$1.35
24/07/2010	$1.35
31/07/2010	$1.35
07/08/2010	$1.35
14/08/2010	$1.35
21/08/2010	$1.35
28/08/2010	$1.35
02/04/2011	$2.15
09/04/2011	$2.15
16/04/2011	$2.15
23/04/2011	$2.15
30/04/2011	$2.15
07/05/2011	$2.15
14/05/2011	$2.15
21/05/2011	$2.15
28/05/2011	$2.15

Weekly Harvester Prices for Crab 2006-2023	
04/06/2011	$2.15
11/06/2011	$2.15
18/06/2011	$2.15
25/06/2011	$2.15
02/07/2011	$2.15
09/07/2011	$2.15
16/07/2011	$2.15
23/07/2011	$2.15
30/07/2011	$2.15
06/08/2011	$2.15
13/08/2011	$2.15
20/08/2011	$2.15
27/08/2011	$2.15
03/09/2011	$2.15
07/04/2012	$1.95
14/04/2012	$1.95
21/04/2012	$1.95
28/04/2012	$1.95
05/05/2012	$1.95
12/05/2012	$1.95
19/05/2012	$1.95
26/05/2012	$1.95
02/06/2012	$1.95
09/06/2012	$1.95
16/06/2012	$1.95
23/06/2012	$1.95
30/06/2012	$1.95
07/07/2012	$1.95
14/07/2012	$1.95
21/07/2012	$1.95
28/07/2012	$1.95
04/08/2012	$1.95
11/08/2012	$1.95
18/08/2012	$1.95
25/08/2012	$1.95
01/09/2012	$1.95
06/04/2013	$1.83
13/04/2013	$1.83
20/04/2013	$1.83
27/04/2013	$1.83

Weekly Harvester Prices for Crab 2006-2023	
04/05/2013	$1.83
11/05/2013	$1.83
18/05/2013	$1.83
25/05/2013	$1.83
01/06/2013	$1.83
08/06/2013	$1.83
15/06/2013	$1.83
22/06/2013	$1.83
29/06/2013	$1.83
06/07/2013	$1.83
13/07/2013	$1.83
20/07/2013	$1.83
27/07/2013	$1.83
03/08/2013	$1.83
10/08/2013	$1.83
17/08/2013	$1.83
24/08/2013	$1.83
31/08/2013	$1.83
05/04/2014	$2.30
12/04/2014	$2.30
19/04/2014	$2.30
26/04/2014	$2.30
03/05/2014	$2.30
10/05/2014	$2.30
17/05/2014	$2.30
24/05/2014	$2.30
31/05/2014	$2.30
07/06/2014	$2.30
14/06/2014	$2.30
21/06/2014	$2.30
28/06/2014	$2.30
05/07/2014	$2.30
12/07/2014	$2.30
19/07/2014	$2.30
26/07/2014	$2.30
02/08/2014	$2.30
09/08/2014	$2.30
16/08/2014	$2.30
23/08/2014	$2.30
30/08/2014	$2.30

Weekly Harvester Prices for Crab 2006-2023	
04/04/2015	$2.34
11/04/2015	$2.34
18/04/2015	$2.34
25/04/2015	$2.34
02/05/2015	$2.34
09/05/2015	$2.34
16/05/2015	$2.45
23/05/2015	$2.45
30/05/2015	$2.45
06/06/2015	$2.45
13/06/2015	$2.45
20/06/2015	$2.45
27/06/2015	$2.45
04/07/2015	$2.45
11/07/2015	$2.45
18/07/2015	$2.45
25/07/2015	$2.45
01/08/2015	$2.45
08/08/2015	$2.45
15/08/2015	$2.45
22/08/2015	$2.45
29/08/2015	$2.45
02/04/2016	$3.00
09/04/2016	$3.00
16/04/2016	$3.00
23/04/2016	$3.00
30/04/2016	$2.93
07/05/2016	$2.93
14/05/2016	$2.93
21/05/2016	$3.00
28/05/2016	$3.00
04/06/2016	$3.00
11/06/2016	$3.00
18/06/2016	$2.93
25/06/2016	$3.00
02/07/2016	$3.00
09/07/2016	$3.00
16/07/2016	$3.00
23/07/2016	$3.00
30/07/2016	$3.00

Weekly Harvester Prices for Crab 2006-2023	
06/08/2016	$3.00
13/08/2016	$3.00
20/08/2016	$3.00
27/08/2016	$3.00
03/09/2016	$3.00
08/04/2017	$4.39
15/04/2017	$4.39
22/04/2017	$4.39
29/04/2017	$4.39
06/05/2017	$4.39
13/05/2017	$4.46
20/05/2017	$4.46
27/05/2017	$4.46
03/06/2017	$4.39
10/06/2017	$4.39
17/06/2017	$4.39
24/06/2017	$4.39
01/07/2017	$4.39
08/07/2017	$4.39
15/07/2017	$4.32
22/07/2017	$4.25
29/07/2017	$4.25
05/08/2017	$4.18
12/08/2017	$4.18
19/08/2017	$4.18
26/08/2017	$4.18
02/09/2017	$4.18
09/09/2017	$4.18
16/09/2017	$4.18
23/09/2017	$4.18
30/09/2017	$4.18
07/04/2018	$4.55
14/04/2018	$4.55
21/04/2018	$4.55
28/04/2018	$4.55
05/05/2018	$4.55
12/05/2018	$4.55
19/05/2018	$4.90
26/05/2018	$4.90
02/06/2018	$4.90

Weekly Harvester Prices for Crab 2006-2023	
09/06/2018	$4.90
16/06/2018	$4.90
23/06/2018	$4.90
30/06/2018	$4.97
07/07/2018	$4.90
14/07/2018	$4.90
21/07/2018	$4.90
28/07/2018	$4.90
04/08/2018	$4.90
11/08/2018	$4.90
18/08/2018	$4.90
25/08/2018	$4.90
01/09/2018	$4.90
08/09/2018	$4.90
15/09/2018	$4.90
22/09/2018	$4.90
29/09/2018	$4.90
06/04/2019	$5.38
13/04/2019	$5.38
20/04/2019	$5.38
27/04/2019	$5.38
04/05/2019	$5.38
11/05/2019	$5.38
18/05/2019	$5.38
25/05/2019	$4.90
01/06/2019	$4.90
08/06/2019	$4.90
15/06/2019	$5.07
22/06/2019	$5.07
29/06/2019	$5.07
06/07/2019	$5.07
13/07/2019	$5.07
20/07/2019	$5.07
27/07/2019	$5.07
03/08/2019	$5.07
10/08/2019	$5.07
17/08/2019	$5.07
24/08/2019	$5.07
31/08/2019	$5.07
07/09/2019	$5.07

Weekly Harvester Prices for Crab 2006-2023	
14/09/2019	$5.07
21/09/2019	$5.07
28/09/2019	$5.07
04/04/2020	$2.90
11/04/2020	$2.90
18/04/2020	$2.90
25/04/2020	$2.90
02/05/2020	$2.90
09/05/2020	$2.90
16/05/2020	$2.90
23/05/2020	$3.50
30/05/2020	$3.50
06/06/2020	$3.50
13/06/2020	$3.43
20/06/2020	$3.36
27/06/2020	$3.43
04/07/2020	$3.43
11/07/2020	$3.43
18/07/2020	$3.43
25/07/2020	$3.43
01/08/2020	$3.43
08/08/2020	$3.43
15/08/2020	$3.43
22/08/2020	$3.43
03/04/2021	$5.73
10/04/2021	$5.73
17/04/2021	$5.73
24/04/2021	$5.73
01/05/2021	$7.60
08/05/2021	$7.60
15/05/2021	$7.53
22/05/2021	$7.53
29/05/2021	$7.46
05/06/2021	$7.46
12/06/2021	$7.46
19/06/2021	$7.53
26/06/2021	$7.53
03/07/2021	$7.53
10/07/2021	$7.53
17/07/2021	$7.60

Weekly Harvester Prices for Crab 2006-2023	
24/07/2021	$7.60
31/07/2021	$7.60
07/08/2021	$7.60
02/04/2022	$7.60
09/04/2022	$7.60
16/04/2022	$7.60
23/04/2022	$7.60
30/04/2022	$7.60
07/05/2022	$7.67
14/05/2022	$7.67
21/05/2022	$6.22
28/05/2022	$6.22
04/06/2022	$6.22
11/06/2022	$6.15
18/06/2022	$6.15
25/06/2022	$6.22
02/07/2022	$6.22
09/07/2022	$6.22
16/07/2022	$6.22
23/07/2022	$6.22
30/07/2022	$6.22
06/08/2022	$6.22
08/04/2023	$2.20
15/04/2023	$2.20
22/04/2023	$2.20
29/04/2023	$2.20
06/05/2023	$2.20
13/05/2023	$2.20
20/05/2023	$2.20
27/05/2023	$2.20
03/06/2023	$2.20
10/06/2023	$2.25
17/06/2023	$2.25
24/06/2023	$2.30
01/07/2023	$2.23
08/07/2023	$2.23
15/07/2023	$2.30
22/07/2023	$2.23
29/07/2023	$2.23
05/08/2023	$2.23

Weekly Harvester Prices for Crab 2006-2023	
12/08/2023	$2.60
19/08/2023	$2.60
26/08/2023	$2.60
02/09/2023	$2.60
* The weeks noted in red font are	
prices and dates of Price Setting Panel decisions	
Source - Price Setting Panel, FFAW, and crab pricing formula in 2006-07	

Appendix E

World Catch of Snow Crab by Country 1998-2022 (metric tonnes)						
Year	**Canada**	**Greenland**	**Norway**	**Russian Federation**	**USA**	**Total**
2022	95,963	2,900	6,725	47,038	2,520	155,146
2021	76,828	3,076	6,861	14,513	20,020	121,298
2020	71,080	2,968	4,397	13,239	15,244	106,928
2019	74,493	2,696	4,049	9,821	12,365	103,424
2018	67,284	2,646	2,812	9,728	8,545	91,015
2017	92,458	2,210	3,101	7,841	9,671	115,281
2016	82,519	2,124	5,406	7,997	17,950	115,996
2015	93,519	1,104	3,105	8,917	27,629	134,274
2014	96,103	1,683	1,881	4,105	24,402	128,174
2013	98,065	1,973	189	63	29,705	129,995
2012	92,849	1,813	2		40,019	134,683
2011	84,372	1,806			24,517	110,695
2010	84,642	3,096			21,700	109,438
2009	97,308	2,991			26,349	126,648
2008	93,868	2,169			28,324	124,361
2007	90,672	2,189			15,479	108,340
2006	89,646	3,146			17,245	110,037
2005	95,347	4,454			11,279	111,080
2004	103,354	5,837			10,745	119,936
2003	96,897	6,862			12,479	116,238
2002	106,766	9,841			14,486	131,093
2001	95,299	14,247			11,246	120,792
2000	93,505	10,236			14,883	118,624
1999	95,148	2,896			83,007	181,051
1998	75,216	1,947			109,060	186,223

Appendix F

Appendix F	UB Crab, Snow, Newfoundland, Cluster, 5-8 oz US$ lb *																		
Period	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
01/02/2023	4.15	2.95	4.22	4.53	4.00	3.40	5.50	5.05	4.95	5.25	5.25	5.25	7.95	8.10	8.70	9.25	9.90	16.80	7.47
01/09/2023	4.15	2.95	4.25	4.50	4.00	3.40	5.50	5.05	4.97	5.30	5.25	5.30	7.95	8.10	8.62	9.25	9.90	16.80	7.35
01/16/2023	4.15	2.95	4.25	4.50	4.00	3.40	5.53	5.10	5.05	5.40	5.25	5.35	7.95	8.10	8.50	9.25	9.90	16.80	7.15
01/23/2023	4.15	2.95		4.55	4.00	3.40	5.55	5.15	5.05	5.40	5.25	5.47	7.95	8.10	8.50	9.25	9.90	16.80	7.15
01/30/2023	4.05	2.95		4.55	4.00	3.40	5.55	5.17	5.12	5.40	5.25	5.50	7.95	8.10	8.50	9.28		16.73	7.15
02/06/2023	4.00	2.95		4.58	4.00	3.42	5.60	5.25	5.20	5.40	5.25	5.65	7.95	8.10	8.57	9.30		16.52	7.10
02/13/2023	3.83	2.95		4.60	4.00	3.48	5.62	5.35	5.25	5.40	5.17	5.67	7.95	8.10	8.65	9.30		16.27	6.92
02/20/2023	3.75	3.02		4.60	4.00	3.50	5.65	5.40	5.30	5.40	5.15	5.70	7.95	8.10	8.65	9.30		16.15	6.80
02/27/2023	3.75	3.05		4.60	4.00	3.65		5.40	5.30	5.40	5.15		7.95	8.10	8.65	9.30		16.02	6.45
03/06/2023	3.75	3.15		4.65	3.92	3.65		5.40	5.30	5.40	5.15		7.95	7.95	8.70			15.82	6.28
03/13/2023	3.75	3.15		4.67	3.90	3.65		5.40		5.40	5.15			7.95	8.75			15.75	6.08
03/20/2023	3.67	3.15		4.70	3.83	3.65		5.40		5.40	5.15			7.95	8.75			15.20	5.95
03/27/2023	3.62	3.15		4.70	3.80	3.65				5.40	5.10			7.95	8.75			14.25	5.80
04/03/2023	3.60			4.70	3.50					5.40	5.10			7.95	8.75			12.62	5.58
04/10/2023	3.60				3.35					5.40	5.00			7.95	8.75			12.00	5.50
04/17/2023	3.45										4.92				8.65			12.00	4.90
04/24/2023	3.42										4.85	5.80			8.50			11.68	4.72
05/01/2023	3.40		4.00	4.10	3.20		5.95	4.70			4.80	5.80			8.40		12.45	11.12	4.65
05/08/2023		2.90	3.98	4.05	3.15	3.80	5.85	4.70	4.60		4.80	5.80	7.10	8.68	8.05		12.82	10.62	4.65
05/15/2023		2.90	3.92	4.00	3.15	3.80	5.85	4.70	4.60	5.10	4.75	5.88	7.20	8.80	7.95		13.43	10.20	4.65
05/22/2023		2.90	3.92	4.00	3.17	3.85	5.85	4.75	4.60	5.10	4.78	5.97	7.20	8.88	7.95		13.75	9.97	4.65
05/29/2023		2.90	3.95	4.00	3.20	3.88	5.85	4.75	4.62	5.10	4.85	6.12	7.20	9.00	8.07	6.90	14.03	9.80	4.85
06/05/2023	3.20	2.95	4.08	4.08	3.20	3.90	5.85	4.75	4.65	5.10	4.90	6.30	7.25	9.10	8.18	6.95	14.50	9.10	4.85
06/12/2023	3.20	3.00	4.15	4.15	3.20	3.92	5.85	4.75	4.65	5.10	4.90	6.55	7.40	9.10	8.28	7.38	15.05	8.25	4.97
06/19/2023	3.20	3.00	4.17	4.22	3.20	4.00	5.85	4.75	4.70	5.10	4.90	6.60	7.50	9.10	8.32	8.00	15.47	7.97	5.05
06/26/2023	3.20	3.00	4.30	4.30	3.20	4.30	5.85	4.75	4.75	5.15	4.92	6.60	7.60	9.10	8.35	8.45	15.95	7.95	5.05
07/03/2023	3.25	3.02	4.30	4.30	3.20	4.38	5.85	4.75	4.80	5.20	4.95	6.60	7.65	9.10	8.40	8.97	16.15	7.95	5.10
07/10/2023	3.25	3.10	4.30	4.30	3.20	4.47	5.85	4.75	4.83	5.20	4.95	6.60	7.75	9.10	8.40	9.20	16.25	7.70	5.28

Appendix F	UB Crab, Snow, Newfoundland, Cluster, 5-8 oz US$ lb *																		
Period	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
07/17/2023	3.25	3.12	4.50	4.30	3.10	4.55	5.85	4.70	4.90	5.20	4.95	6.62	8.00	9.10	8.40	9.25	16.30	7.33	5.40
07/24/2023	3.25	3.20	4.58	4.30	3.10	4.67	5.85	4.70	5.00	5.25	4.95	6.80	8.10	9.05	8.40	9.25	16.35	7.15	5.40
07/31/2023	3.25	3.20	4.60	4.30	3.10	4.83	5.80	4.65	5.15	5.25	4.95	6.85	8.10	8.95	8.40	9.25	16.40	7.05	5.67
08/07/2023	3.25	3.33	4.60	4.30	3.10	5.00	5.80	4.65	5.15	5.25	4.92	6.85	8.10	8.90	8.40	9.25	16.40	7.05	5.75
08/14/2023	3.25	3.40	4.62	4.30	3.10	5.05	5.80	4.65	5.15	5.25	4.90	6.85	8.10	8.75	8.45	9.25	16.40	7.05	5.75
08/21/2023	3.25	3.42	4.65	4.30	3.10	5.05	5.80	4.65	5.15	5.25	4.90	6.85	8.10	8.75	8.45	9.28	16.40	7.05	5.75
08/28/2023	3.27	3.48	4.65	4.28	3.10	5.05	5.75	4.65	5.17	5.25	4.90	6.88	8.10	8.75	8.45	9.35	16.40	7.08	5.75
09/04/2023	3.30	3.50	4.65	4.25	3.10	5.10	5.75	4.67	5.20	5.25	4.90	6.95	8.10	8.75	8.50	9.45	16.40	7.12	5.75
09/11/2023	3.35	3.50	4.65	4.25	3.10	5.10	5.75	4.75	5.20	5.25	4.90	7.08	8.10	8.75	8.50	9.55	16.40	7.17	5.75
09/18/2023	3.35	3.55	4.65	4.22	3.10	5.10	5.75	4.75	5.20	5.25	4.90	7.22	8.10	8.75	8.60	9.65	16.40	7.28	5.75
09/25/2023	3.35	3.55	4.65	4.20	3.10	5.20	5.75	4.78	5.20	5.25	4.90	7.35	8.10	8.75	8.65	9.65	16.40	7.55	5.75
10/02/2023	3.35	3.55	4.65	4.20	3.10	5.25	5.75	4.85	5.20	5.25	4.92	7.40	8.10	8.75	8.68	9.65	16.40	7.80	
10/09/2023	3.35	3.55	4.65	4.17	3.10	5.30	5.75	4.92	5.20	5.25	4.95	7.45	8.10	8.75	8.78	9.65	16.43	7.85	
10/16/2023	3.27	3.55	4.65	4.12	3.10	5.30	5.72	4.95	5.20	5.25	4.95	7.60	8.10	8.75	8.85	9.72	16.68	7.85	
10/23/2023	3.25	3.60	4.65	4.10	3.10	5.40	5.65	5.00	5.20	5.25	5.00	7.72	8.10	8.75	8.85	9.85	16.75	7.88	
10/30/2023	3.25	3.65	4.65	4.10	3.12	5.50	5.60	5.00	5.20	5.25	5.05	7.85	8.10	8.75	8.85	9.90	16.77	7.90	
11/06/2023	3.25	3.67	4.65	4.10	3.17	5.50	5.60	5.05	5.20	5.25	5.05	7.95	8.10	8.75	8.88	9.90	16.80	7.90	
11/13/2023	3.25	3.77	4.65	4.05	3.20	5.50	5.55	5.05	5.25	5.25	5.05	7.95	8.10	8.75	9.00	9.90	16.80	7.90	
11/20/2023	3.20	3.90	4.65	4.00	3.25	5.50	5.45	5.05	5.25	5.25	5.10	7.95	8.10	8.75	9.00	9.90	16.80	7.90	
11/27/2023	3.20	3.98	4.65	4.00	3.25	5.50	5.38	5.05	5.25	5.25	5.10	7.95	8.10	8.75	9.00	9.90	16.80	7.90	
12/04/2023	3.20	4.00	4.60	3.95	3.25	5.50	5.28	5.05	5.25	5.25	5.15	7.95	8.10	8.75	9.05	9.90	16.80	7.90	
12/11/2023	3.05	4.08	4.55	3.90	3.30	5.50	5.10	5.05	5.25	5.25	5.20	7.95	8.10	8.75	9.15	9.90	16.80	7.80	
12/18/2023	3.00	4.15	4.55	3.90	3.30	5.50	5.08	5.00	5.25	5.25	5.20	7.95	8.10	8.75	9.25	9.90	16.80	7.70	
12/25/2023	3.00	4.17	4.55	3.90	3.35	5.50	5.05	4.95	5.25	5.25	5.20	7.95	8.10	8.75	9.25	9.90	16.80	7.62	
53rd Week				3.90						5.25						9.90			

* when a range of price is quoted the low is used, as reported and averaged for each week by DFFA

Appendix G

NAFO	Area	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
2HJ	2HJ	2HJ Communal	0	0	0	0	0	0	0	0	100	100	100
	2J	2J North of 54o 40' N	450	450	490	450	270	216	216	238	362	362	362
	2J Inshore	2J South Inshore	525	525	525	315	315	252	180	200	359	359	325
	2J Offshore	2J South Offshore (full time, supps)	2,436	2,365	2,366	1,420	1,195	957	1,029	1,132	1,645	1,645	1,440
	Total 2HJ	**Total**	**3,411**	**3,340**	**3,381**	**2,185**	**1,780**	**1,425**	**1,425**	**1,570**	**2,466**	**2,466**	**2,227**
3K	3A	Canada Bay	265	265	295	350	350	350	350	350	385	425	425
	3B	White Bay	435	435	200	375	460	560	520	520	500	500	520
	3C	Green Bay	600	450	600	750	780	750	700	650	700	740	700
	3BC	Fogo/Twillingate	6375	6,375	400	250	290	230	150	200	300	300	250
	3D	Inshore 3K	975	1,325	1,850	1,700	1,530	1,225	915	1,100	1,570	1,730	1,500
	4	Nearshore/Offshore 3K	4843	4,843	12,033	12,183	12,183	9,745	7,795	8,930	11,620	12,780	11,045
	Total 3K		**13,493**	**13,693**	**15,378**	**15,608**	**15,593**	**12,860**	**10,430**	**11,750**	**15,075**	**16,475**	**14,440**
3Linshore	5A	Bonavista Bay	983	1,105	1,200	1,200	1,200	1,200	1,200	1,200	1,598	1,598	1,637
	6A	Trinity Bay	860	960	1,095	1,195	1,095	1,095	1,095	1,095	1,208	1,026	1,230
	6B	Conception Bay	1,052	1,305	1,450	1,450	1,100	1,100	1,100	1,100	1,282	1,282	1,320
	6C	Eastern Avalon (inside 25)	1,066	1,325	1,600	1,664	1,566	1,445	1,445	1,445	1,463	1,563	1,576
	8A	Southern Shore (inside 25)	516	690	830	864	864	755	755	755	905	1,046	1,060
	9A	St. Mary's Bay	193	230	365	400	430	450	500	510	577	626	626
	Total 3L Inshore		**4,670**	**5,615**	**6,540**	**6,773**	**6,255**	**6,045**	**6,095**	**6,105**	**7,033**	**7,141**	**7,449**
3LNO Offshore	8B	Southern Avalon (offshore)	1,110	1,110	1,110	680	680	680	680	680	680	680	650
	8Bx	Southern Avalon	0	0	1,005	1,435	1,005	1,005	1,005	1,005	2,291	2,620	2,775
	8Bx North	Northern portion of Southern Avalon	0	0	0	0	0	0	0	0	0	0	0
	8Bx South	Southern portion of Southern Avalon	0	0	0	0	0	0	0	0	0	0	0
	NS	Near Shore	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,690
	MS	Midshore	4,335	4,335	4,658	4,658	5,088	5,088	5,088	5,088	5,132	4,100	4,883
	MS/EX	Mid-shore extended	2,635	2,635	2,635	3,125	3,125	3,125	3,125	3,125	3,125	2,500	3,288
	3L EX	Between 170 and 200 miles	1,785	1,785	2,325	2,695	2,695	2,695	2,695	2,695	2,695	2,170	2,822
	3L 200	3L Fulltime	2,675	2,675	2,675	2,940	2,940	2,940	1,550	1,550	2,476	2,476	1,307
	3N 200	3L Supplementary (>40 grt)	1,650	1,650	1,650	1,815	1,815	1,815	3,205	3,205	0	0	2,700
	3NO 200	Fixed gear vessels >65' and Offshore Coop	775	775	775	855	855	855	855	855	2,249	1,795	720
	Total 3LNO Offshore		**20,465**	**20,465**	**22,333**	**23,703**	**23,703**	**23,703**	**23,703**	**23,703**	**24,148**	**21,841**	**24,835**
3Ps	10A	Placentia Bay north of 46o30'N	2,400	2,400	2,400	2,040	1,630	1,300	975	975	1,128	1,500	1,900
	10BCD	CFA 10 from 46o30'N to 45o35'N	3,700	3,700	3,700	3,145	2,515	2,550	1,885	2,070	2,545	2,900	3,300
	11SX	CFA 11 S of 46'30"	700	700	700	420	250	250	185	200	685	880	590
	11E	East of Western Head	900	800	800	480	0	0	0	0	0	0	285
	11W	West of Western Hare Bay	0	0	0	0	0	0	0	0	0	0	130
	Total 3Ps		**7,700**	**7,600**	**7,600**	**6,085**	**4,395**	**4,100**	**3,045**	**3,245**	**4,358**	**5,280**	**6,205**
4R 3Pn	South of Table Pt, 3Pn (outside 8)	South of Table Pt, 3Pn (outside 8)	747	808	845	895	838	845	675	540	540	418	418
	Bay of Islands	Bay of Islands	80	80	80	80	80	80	80	80	80	64	64
	Bay St. George	Bay St. George	40	40	35	30	30	30	25	20	20	15	15
	12A	Lapoile Bay	15	26	28	28	28	28	-	-	-	8	8
	12B	Cape Ray to Johnson's Cove	20	20	26	29	32	29	25	20	20	18	18
	12C	Johnson's Cove to Cp St. George	180	185	248	280	287	280	225	175	175	143	143
	12D	Cape St. George to Bear Head	70	85	119	136	146	136	110	80	80	76	76
	12E	Bear Head to Cape St. Gregory	60	60	67	91	70	91	90	90	90	56	56
	12F	Inner Bay of Islands	10	30	36	45	68	45	45	45	45	54	54
	12G	Cape St. Gregory to Broom Point	140	140	154	171	172	171	170	170	120	0	0
	12H	Broom Point to Table Point	68	80	111	110	113	110	90	70	70	56	56
	Total 4R3Pn	**Total**	**1,430**	**1,554**	**1,749**	**1,895**	**1,864**	**1,845**	**1,535**	**1,290**	**1,240**	**908**	**908**
GRAND TOTAL			**51,169**	**52,267**	**56,981**	**56,249**	**53,590**	**49,978**	**46,233**	**47,663**	**54,320**	**54,111**	**56,064**

NAFO	Area	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2HJ	2HJ	2HJ Communal	70	0	0	0	0	100	100	100	100	100	100	100	100
	2J North	2J North of 54o 40' N	362	367	310	310	310	310	310	310	310	264	198	109	109
	2J Inshore	2J South Inshore	325	290	290	290	0	290	290	290	290	247	792	594	594
	2J Offshore	2J South Offshore (full time, supps)	1,440	1,295	1,165	1,165	1,455	1,165	1,165	1,165	1,165	990	197	148	148
	Total 2HJ	**Total**	**2,197**	**1,952**	**1,765**	**1,765**	**1,765**	**1,865**	**1,865**	**1,865**	**1,865**	**1,600**	**1,287**	**951**	**951**
3K	3A	Canada Bay	361	330	330	365	365	292	292	292	292	292	321	385	405
	3B	White Bay	460	460	460	500	525	473	378	378	302	332	365	391	411
	3C	Green Bay	680	560	495	470	423	338	338	406	406	447	500	550	589
	3BC	Fogo/Twillingate	1,300	1,100	968	972	207	166	166	166	770	847	974	1,169	1,403
	3D	Inshore 3K	232	196	196	230	875	700	700	770	166	183	205	221	236
	4	Nearshore/Offshore 3K	9,020	6,792	6,000	5,443	4,895	3,920	3,920	3,920	3,920	4,312	5,088	7,123	8,548
	Total 3K		**12,053**	**9,438**	**8,449**	**7,980**	**7,294**	**5,889**	**5,794**	**5,932**	**5,856**	**6,412**	**7,454**	**9,840**	**11,591**
3LNO Offshore	5A	Bonavista Bay	1,310	1,310	1,390	1,390	1,390	1,112	945	662	596	685	891	980	1,097
	6A	Trinity Bay	1,230	1,230	1,290	1,360	1,490	1,496	1,197	957	861	947	1,089	1,089	1,089
	6B	Conception Bay	1,320	1,400	1,550	1,740	2,000	2,000	1,500	1,050	525	446	576	720	828
	6C	Eastern Avalon (inside 25)	1,576	1,599	1,599	1,740	1,861	1,809	1,357	950	475	380	475	594	950
	8A	Southern Shore (inside 25)	1,060	1,197	1,197	1,230	1,082	866	736	515	309	309	417	563	1,014
	9A	St. Mary's Bay	626	682	682	710	745	596	477	280	200	200	250	313	531
	Total 3L Inshore		**7,122**	**7,418**	**7,708**	**8,170**	**8,574**	**7,879**	**6,212**	**4,420**	**2,966**	**2,968**	**3,698**	**4,258**	**5,508**
	8B	Southern Avalon (offshore)	650	650	650	800	800	800	640	448	403	484	629	786	786
	8Bx	Southern Avalon	2,775	2,775	2,326	2,326	191	134	80	56	45	68	88	110	110
	8Bx North	Northern portion of Southern Avalon	0	0	0	0	631	480	288	202	141	212	360	521	521
	8Bx South	Southern portion of Southern Avalon	0	0	0	0	873	664	398	279	195	293	497	622	622
	NS	Near Shore	5,975	5,975	6,424	6,424	7,156	7,156	5,367	3,757	2,818	2,818	3,804	5,326	5,326
	MS	Midshore	5,371	5,371	5,371	5,371	5,371	5,371	4,297	3,652	3,652	4,382	5,916	7,099	7,099
	MS/EX	Mid-shore extended	3,780	3,780	3,780	3,780	3,780	3,780	3,024	2,570	2,570	2,956	4,138	5,793	5,793
	3L EX	Between 170 and 200 miles	2,822	2,822	2,822	2,822	2,822	2,822	2,117	1,799	1,799	2,069	2,896	3,910	3,910
	3L 200	3L Fulltime	1,307	1,402	1,439	2,053	2,053	1,642	985	690	552	662	927	1,298	1,298
	3N 200	3L Supplementary (>40 grt)	2,700	2,890	2,965	2,527	2,527	2,022	1,011	708	496	496	496	868	868
	3NO 200	Fixed gear vessels >65'	720	825	866	920	920	736	368	258	181	181	199	348	383
	Total 3LNO Offshore		**26,100**	**26,490**	**26,643**	**27,023**	**27,124**	**25,607**	**18,575**	**14,419**	**12,852**	**14,619**	**19,950**	**26,682**	**26,716**
	Total 3LNO Inshore and Offshore				**34,351**	**35,193**	**35,698**	**33,486**	**24,787**	**18,839**	**15,818**	**17,587**	**23,648**	**30,940**	**32,225**
3Ps	10A	Placentia Bay north of 46o30'N	2,212	2,212	2,212	2,000	1,600	1,120	560	672	1,008	1,260	2,016	3,226	3,871
	10B	CFA 10 from 46o30'N to 45o35'N	3,500	3,000	3,000	2,400	1,800	1,260	803	898	1,347	1,684	2,526	3,788	4,167
	11SX	CFA 11 south of 46o30'N (>35' fleet)	1,015	925	925	847	635	445	50	126	189	236	354	532	638
	11E	East of Western Head	0	0	280	280	224	157	79	79	79	79	119	190	190
	11W	West of Western Hare Bay	0	0	50	50	40	28	14	17	26	33	33	33	33
	Total 3Ps		**6,727**	**6,137**	**6,467**	**5,577**	**4,299**	**3,010**	**1,506**	**1,792**	**2,649**	**3,292**	**5,047**	**7,768**	**8,898**
4R 3Pn	South of Table Pt, 3Pn (outside 8) Group 1	South of Table Pt, 3Pn (outside 8) Group 1	38	38	38	38	38	38	38	19	10	8	8	10	10
	South of Table Pt, 3Pn (outside 8) Group 2	South of Table Pt, 3Pn (outside 8) Group 2	307	307	307	307	307	307	307	154	77	58	58	73	73
	South of Table Pt, 3Pn (outside 8) Group 3	South of Table Pt, 3Pn (outside 8) Group 3	73	73	73	73	73	73	73	37	18	14	14	18	18
	Bay of Islands	Bay of Islands	64	64	64	64	64	64	51	26	20	25	38	47	54
	Bay St. George	Bay St. George	15	23	23	23	23	23	20	10	8	10	18	26	34
	12A	Lapoile Bay	8	8	8	8	8	8	8	4	2	2	2	2	2
	12B	Cape Ray to Johnson's Cove	18	18	18	18	18	18	18	9	4	4	4	4	4
	12C	Johnson's Cove to Cp St. George	143	164	164	164	164	164	139	70	53	66	116	174	226
	12D	Cape St. George to Bear Head	76	76	76	76	76	76	76	38	19	19	19	29	40
	12E	Bear Head to Cape St. Gregory	56	56	56	56	56	56	45	22	17	21	32	40	46
	12F	Inner Bay of Islands	54	54	54	54	54	54	43	22	17	21	32	40	46
	12G	Cape St. Gregory to Broom Point	130	130	130	130	130	130	130	65	49	N/A	N/A	49	49
	12H	Broom Point to Table Point	56	56	56	56	56	56	50	25	12	12	12	12	12
	Total 4R3Pn	**Total**	**1,038**	**1,067**	**1,067**	**1,067**	**1,067**	**1,067**	**998**	**501**	**306**	**261**	**350**	**522**	**613**
GRAND TOTAL			**55,237**	**52,502**	**52,099**	**51,582**	**50,123**	**45,317**	**34,950**	**28,929**	**26,494**	**29,152**	**37,786**	**50,020**	**54,277**

Snow Crab Landings NL	**Harvest weight**
Year	(Kgs)
2006	47,281,048
2007	50,207,341
2008	52,768,623
2009	53,461,305
2010	52,218,046
2011	52,950,053
2012	50,511,986
2013	50,817,330
2014	49,910,899
2015	47,314,884
2016	41,727,160
2017	33,604,718
2018	28,078,941
2019	26,856,565
2020	29,372,200
2021	38,385,531
2022	49,974,245
2023	51,633,583

Appendix H

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, May 13, 2006	1.10456	2.90	3.20	0.94
Saturday, May 20, 2006	1.11662	2.90	3.24	0.92
Saturday, May 27, 2006	1.11606	2.90	3.24	0.92
Saturday, June 3, 2006	1.100175	2.90	3.19	0.92
Saturday, June 10, 2006	1.11256	2.95	3.28	0.92
Saturday, June 17, 2006	1.11282	3.00	3.34	0.92
Saturday, June 24, 2006	1.11762	3.00	3.35	0.92
Saturday, July 1, 2006	1.11952	3.00	3.36	0.92
Saturday, July 8, 2006	1.11108	3.02	3.36	0.98
Saturday, July 15, 2006	1.13132	3.10	3.51	0.98
Saturday, July 22, 2006	1.13424	3.12	3.54	1.01
Saturday, July 29, 2006	1.13712	3.20	3.64	1.01
Saturday, August 5, 2006	1.12886	3.20	3.61	1.01
Saturday, August 12, 2006	1.12104	3.33	3.73	1.01
Saturday, May 5, 2007	1.108325	4.00	4.43	1.57
Saturday, May 12, 2007	1.10708	3.98	4.41	1.57
Saturday, May 19, 2007	1.09958	3.92	4.31	1.50
Saturday, May 26, 2007	1.08305	3.92	4.25	1.50
Saturday, June 2, 2007	1.07172	3.95	4.23	1.50
Saturday, June 9, 2007	1.06064	4.08	4.33	1.50
Saturday, June 16, 2007	1.06618	4.15	4.42	1.50
Saturday, June 23, 2007	1.0692	4.17	4.46	1.50
Saturday, June 30, 2007	1.06704	4.30	4.59	1.50
Saturday, July 7, 2007	1.0562	4.30	4.54	1.57
Saturday, July 14, 2007	1.04978	4.30	4.51	1.57
Saturday, July 21, 2007	1.0446	4.50	4.70	1.59
Saturday, July 28, 2007	1.04818	4.58	4.80	1.59
Saturday, August 4, 2007	1.06012	4.60	4.88	1.63
Saturday, August 11, 2007	1.05305	4.60	4.84	1.63
Saturday, August 18, 2007	1.06688	4.62	4.93	1.63
Saturday, August 25, 2007	1.05772	4.65	4.92	1.63
Saturday, September 1, 2007	1.05894	4.65	4.92	1.63
Saturday, April 5, 2008	1.0151	4.70	4.77	1.61
Saturday, May 3, 2008	1.01408	4.10	4.16	1.50
Saturday, May 10, 2008	1.00922	4.05	4.09	1.50
Saturday, May 17, 2008	1.00226	4.00	4.01	1.50
Saturday, May 24, 2008	0.9875	4.00	3.95	1.50

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, May 31, 2008	0.99146	4.00	3.97	1.50
Saturday, June 7, 2008	1.01304	4.08	4.13	1.50
Saturday, June 14, 2008	1.02328	4.15	4.25	1.50
Saturday, June 21, 2008	1.01798	4.22	4.30	1.50
Saturday, June 28, 2008	1.01234	4.30	4.35	1.50
Saturday, July 5, 2008	1.017975	4.30	4.38	1.50
Saturday, July 12, 2008	1.01352	4.30	4.36	1.50
Saturday, July 19, 2008	1.00444	4.30	4.32	1.50
Saturday, July 26, 2008	1.0106	4.30	4.35	1.50
Saturday, August 2, 2008	1.02414	4.30	4.40	1.50
Saturday, August 9, 2008	1.0525	4.30	4.53	1.50
Saturday, August 16, 2008	1.06338	4.30	4.57	1.50
Saturday, August 23, 2008	1.05582	4.30	4.54	1.50
Saturday, August 30, 2008	1.052	4.28	4.50	1.50
Saturday, April 4, 2009	1.25108	3.50	4.38	1.55
Saturday, April 11, 2009	1.2347	3.35	4.14	1.55
Saturday, May 2, 2009	1.20438	3.20	3.85	1.55
Saturday, May 9, 2009	1.16752	3.15	3.68	1.40
Saturday, May 16, 2009	1.17076	3.15	3.69	1.40
Saturday, May 23, 2009	1.13875	3.18	3.62	1.40
Saturday, May 30, 2009	1.11346	3.20	3.56	1.40
Saturday, June 6, 2009	1.09924	3.20	3.52	1.35
Saturday, June 13, 2009	1.10982	3.20	3.55	1.40
Saturday, June 20, 2009	1.13328	3.20	3.63	1.40
Saturday, June 27, 2009	1.1531	3.20	3.69	1.40
Saturday, July 4, 2009	1.160925	3.20	3.71	1.40
Saturday, July 11, 2009	1.16396	3.20	3.72	1.40
Saturday, July 18, 2009	1.12708	3.10	3.49	1.40
Saturday, July 25, 2009	1.09636	3.10	3.40	1.35
Saturday, August 1, 2009	1.08332	3.10	3.36	1.35
Saturday, August 8, 2009	1.0759	3.10	3.34	1.35
Saturday, August 15, 2009	1.09348	3.10	3.39	1.35
Saturday, August 22, 2009	1.09476	3.10	3.39	1.35
Saturday, August 29, 2009	1.08762	3.10	3.37	1.35
Saturday, May 8, 2010	1.03228	3.80	3.92	1.35
Saturday, May 15, 2010	1.02362	3.80	3.89	1.35
Saturday, May 22, 2010	1.0484	3.85	4.04	1.35

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, May 29, 2010	1.06015	3.88	4.11	1.35
Saturday, June 5, 2010	1.04756	3.90	4.09	1.35
Saturday, June 12, 2010	1.0436	3.93	4.10	1.35
Saturday, June 19, 2010	1.02624	4.00	4.10	1.35
Saturday, June 26, 2010	1.0343	4.30	4.45	1.35
Saturday, July 3, 2010	1.054525	4.38	4.62	1.35
Saturday, July 10, 2010	1.04924	4.48	4.70	1.35
Saturday, July 17, 2010	1.03974	4.55	4.73	1.35
Saturday, July 24, 2010	1.04456	4.68	4.89	1.35
Saturday, July 31, 2010	1.03432	4.83	5.00	1.35
Saturday, August 7, 2010	1.0215	5.00	5.11	1.35
Saturday, August 14, 2010	1.03772	5.05	5.24	1.35
Saturday, August 21, 2010	1.03884	5.05	5.25	1.35
Saturday, August 28, 2010	1.0565	5.05	5.34	1.35
Saturday, April 30, 2011	0.95084	5.95	5.66	2.15
Saturday, May 7, 2011	0.95942	5.85	5.61	2.15
Saturday, May 14, 2011	0.96268	5.85	5.63	2.15
Saturday, May 21, 2011	0.97172	5.85	5.68	2.15
Saturday, May 28, 2011	0.9775	5.85	5.72	2.15
Saturday, June 4, 2011	0.97506	5.85	5.70	2.15
Saturday, June 11, 2011	0.97748	5.85	5.72	2.15
Saturday, June 18, 2011	0.97762	5.85	5.72	2.15
Saturday, June 25, 2011	0.97814	5.85	5.72	2.15
Saturday, July 2, 2011	0.976125	5.85	5.71	2.15
Saturday, July 9, 2011	0.9618	5.85	5.63	2.15
Saturday, July 16, 2011	0.96204	5.85	5.63	2.15
Saturday, July 23, 2011	0.95032	5.85	5.56	2.15
Saturday, July 30, 2011	0.94892	5.80	5.50	2.15
Saturday, August 6, 2011	0.9701	5.80	5.63	2.15
Saturday, August 13, 2011	0.98872	5.80	5.73	2.15
Saturday, August 20, 2011	0.98374	5.80	5.71	2.15
Saturday, August 27, 2011	0.9869	5.75	5.67	2.15
Saturday, September 3, 2011	0.97888	5.75	5.63	2.15
Saturday, May 5, 2012	0.98892	4.70	4.65	1.95
Saturday, May 12, 2012	0.99896	4.70	4.70	1.95
Saturday, May 19, 2012	1.01246	4.70	4.76	1.95
Saturday, May 26, 2012	1.02565	4.75	4.87	1.95

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, June 2, 2012	1.02964	4.75	4.89	1.95
Saturday, June 9, 2012	1.0321	4.75	4.90	1.95
Saturday, June 16, 2012	1.02662	4.75	4.88	1.95
Saturday, June 23, 2012	1.02308	4.75	4.86	1.95
Saturday, June 30, 2012	1.02592	4.75	4.87	1.95
Saturday, July 7, 2012	1.014675	4.75	4.82	1.95
Saturday, July 14, 2012	1.019	4.75	4.84	1.95
Saturday, July 21, 2012	1.0117	4.70	4.75	1.95
Saturday, July 28, 2012	1.01328	4.70	4.76	1.95
Saturday, August 4, 2012	1.0038	4.65	4.67	1.95
Saturday, August 11, 2012	0.993775	4.65	4.62	1.95
Saturday, August 18, 2012	0.98984	4.65	4.60	1.95
Saturday, August 25, 2012	0.99094	4.65	4.61	1.95
Saturday, September 1, 2012	0.98922	4.65	4.60	1.95
Saturday, May 11, 2013	1.00664	4.60	4.63	1.83
Saturday, May 18, 2013	1.0187	4.60	4.69	1.83
Saturday, May 25, 2013	1.031375	4.60	4.74	1.83
Saturday, June 1, 2013	1.03504	4.63	4.79	1.83
Saturday, June 8, 2013	1.02852	4.65	4.78	1.83
Saturday, June 15, 2013	1.01852	4.65	4.74	1.83
Saturday, June 22, 2013	1.02978	4.70	4.84	1.83
Saturday, June 29, 2013	1.04934	4.75	4.98	1.83
Saturday, July 6, 2013	1.053675	4.80	5.06	1.83
Saturday, July 13, 2013	1.0477	4.83	5.06	1.83
Saturday, July 20, 2013	1.03876	4.90	5.09	1.83
Saturday, July 27, 2013	1.02964	5.00	5.15	1.83
Saturday, August 3, 2013	1.03144	5.15	5.31	1.83
Saturday, August 10, 2013	1.035425	5.15	5.33	1.83
Saturday, August 17, 2013	1.03234	5.15	5.32	1.83
Saturday, August 24, 2013	1.04442	5.15	5.38	1.83
Saturday, August 31, 2013	1.05044	5.18	5.44	1.83
Saturday, April 5, 2014	1.10284	5.40	5.96	2.30
Saturday, May 10, 2014	1.08888	5.10	5.55	2.30
Saturday, May 17, 2014	1.08846	5.10	5.55	2.30
Saturday, May 24, 2014	1.089425	5.10	5.56	2.30
Saturday, May 31, 2014	1.08548	5.10	5.54	2.30
Saturday, June 7, 2014	1.09212	5.10	5.57	2.30

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, June 14, 2014	1.0878	5.10	5.55	2.30
Saturday, June 21, 2014	1.0826	5.15	5.58	2.30
Saturday, June 28, 2014	1.07092	5.20	5.57	2.30
Saturday, July 5, 2014	1.065825	5.20	5.54	2.30
Saturday, July 12, 2014	1.0679	5.20	5.55	2.30
Saturday, July 19, 2014	1.07426	5.25	5.64	2.30
Saturday, July 26, 2014	1.07508	5.25	5.64	2.30
Saturday, August 2, 2014	1.0878	5.25	5.71	2.30
Saturday, August 9, 2014	1.094125	5.25	5.74	2.30
Saturday, August 16, 2014	1.091	5.25	5.73	2.30
Saturday, August 23, 2014	1.0938	5.25	5.74	2.30
Saturday, August 30, 2014	1.09016	5.25	5.72	2.30
Saturday, April 4, 2015	1.263725	5.10	6.44	2.33
Saturday, April 11, 2015	1.25384	5.00	6.27	2.33
Saturday, April 18, 2015	1.23582	4.93	6.09	2.33
Saturday, April 25, 2015	1.2211	4.85	5.92	2.33
Saturday, May 2, 2015	1.2075	4.80	5.80	2.33
Saturday, May 9, 2015	1.20828	4.80	5.80	2.33
Saturday, May 16, 2015	1.20232	4.75	5.71	2.45
Saturday, May 23, 2015	1.223425	4.78	5.85	2.45
Saturday, May 30, 2015	1.24142	4.85	6.02	2.45
Saturday, June 6, 2015	1.24678	4.90	6.11	2.45
Saturday, June 13, 2015	1.23184	4.90	6.04	2.45
Saturday, June 20, 2015	1.22716	4.90	6.01	2.45
Saturday, June 27, 2015	1.23394	4.93	6.08	2.45
Saturday, July 4, 2015	1.249675	4.95	6.19	2.45
Saturday, July 11, 2015	1.2698	4.95	6.29	2.45
Saturday, July 18, 2015	1.28714	4.95	6.37	2.45
Saturday, July 25, 2015	1.30112	4.95	6.44	2.45
Saturday, August 1, 2015	1.30012	4.95	6.44	2.45
Saturday, August 8, 2015	1.315225	4.93	6.48	2.45
Saturday, August 15, 2015	1.30468	4.90	6.39	2.45
Saturday, August 22, 2015	1.31002	4.90	6.42	2.45
Saturday, August 29, 2015	1.32726	4.90	6.50	2.45
Saturday, April 23, 2016	1.2701	5.80	7.37	3.00
Saturday, April 30, 2016	1.26046	5.80	7.31	2.93
Saturday, May 7, 2016	1.27812	5.80	7.41	2.93

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, May 14, 2016	1.28998	5.88	7.59	2.93
Saturday, May 21, 2016	1.30102	5.98	7.78	3.00
Saturday, May 28, 2016	1.3044	6.13	8.00	3.00
Saturday, June 4, 2016	1.30552	6.30	8.22	3.00
Saturday, June 11, 2016	1.27488	6.55	8.35	3.00
Saturday, June 18, 2016	1.2885	6.60	8.50	2.93
Saturday, June 25, 2016	1.2846	6.60	8.48	3.00
Saturday, July 2, 2016	1.3	6.60	8.58	3.00
Saturday, July 9, 2016	1.29748	6.60	8.56	3.00
Saturday, July 16, 2016	1.29944	6.63	8.62	3.00
Saturday, July 23, 2016	1.30504	6.80	8.87	3.00
Saturday, July 30, 2016	1.31634	6.85	9.02	3.00
Saturday, August 6, 2016	1.308975	6.85	8.97	3.00
Saturday, August 13, 2016	1.30584	6.85	8.95	3.00
Saturday, August 20, 2016	1.285	6.85	8.80	3.00
Saturday, August 27, 2016	1.29432	6.88	8.90	3.00
Saturday, September 3, 2016	1.3062	6.95	9.08	3.00
Saturday, May 13, 2017	1.37052	7.10	9.73	4.46
Saturday, May 20, 2017	1.36012	7.20	9.79	4.46
Saturday, May 27, 2017	1.346475	7.20	9.69	4.46
Saturday, June 3, 2017	1.34838	7.20	9.71	4.39
Saturday, June 10, 2017	1.34784	7.25	9.77	4.39
Saturday, June 17, 2017	1.32754	7.40	9.82	4.39
Saturday, June 24, 2017	1.32612	7.50	9.95	4.39
Saturday, July 1, 2017	1.30956	7.60	9.95	4.39
Saturday, July 8, 2017	1.2939	7.65	9.90	4.39
Saturday, July 15, 2017	1.28034	7.75	9.92	4.32
Saturday, July 22, 2017	1.26052	8.00	10.08	4.25
Saturday, July 29, 2017	1.24982	8.10	10.12	4.25
Saturday, August 5, 2017	1.2555	8.10	10.17	4.18
Saturday, August 12, 2017	1.269325	8.10	10.28	4.18
Saturday, August 19, 2017	1.26784	8.10	10.27	4.18
Saturday, August 26, 2017	1.25424	8.10	10.16	4.18
Saturday, September 2, 2017	1.25056	8.10	10.13	4.18
Saturday, September 9, 2017	1.222875	8.10	9.91	4.18
Saturday, September 16, 2017	1.21708	8.10	9.86	4.18
Saturday, September 23, 2017	1.22888	8.10	9.95	4.18

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, September 30, 2017	1.24106	8.10	10.05	4.18
Saturday, April 7, 2018	1.28138	7.95	10.19	4.55
Saturday, April 14, 2018	1.26248	7.95	10.04	4.55
Saturday, May 12, 2018	1.28474	8.68	11.15	4.55
Saturday, May 19, 2018	1.2808	8.80	11.27	4.90
Saturday, May 26, 2018	1.288175	8.88	11.44	4.90
Saturday, June 2, 2018	1.2966	9.00	11.67	4.90
Saturday, June 9, 2018	1.29536	9.10	11.79	4.90
Saturday, June 16, 2018	1.30428	9.10	11.87	4.90
Saturday, June 23, 2018	1.32806	9.10	12.09	4.90
Saturday, June 30, 2018	1.32702	9.10	12.08	4.97
Saturday, July 7, 2018	1.313275	9.10	11.95	4.90
Saturday, July 14, 2018	1.3142	9.10	11.96	4.90
Saturday, July 21, 2018	1.3185	9.10	12.00	4.90
Saturday, July 28, 2018	1.31056	9.05	11.86	4.90
Saturday, August 4, 2018	1.3004	8.95	11.64	4.90
Saturday, August 11, 2018	1.3057	8.90	11.62	4.90
Saturday, August 18, 2018	1.31145	8.75	11.48	4.90
Saturday, August 25, 2018	1.303775	8.75	11.41	4.90
Saturday, September 1, 2018	1.297075	8.75	11.35	4.90
Saturday, September 8, 2018	1.317975	8.75	11.53	4.90
Saturday, September 15, 2018	1.304625	8.75	11.42	4.90
Saturday, September 22, 2018	1.294	8.75	11.32	4.90
Saturday, September 29, 2018	1.297825	8.75	11.36	4.90
Saturday, April 6, 2019	1.33496	8.75	11.68	5.38
Saturday, April 13, 2019	1.33348	8.75	11.67	5.38
Saturday, April 20, 2019	1.335725	8.65	11.55	5.38
Saturday, April 27, 2019	1.34404	8.50	11.42	5.38
Saturday, May 4, 2019	1.34372	8.40	11.29	5.38
Saturday, May 11, 2019	1.34598	8.05	10.84	5.38
Saturday, May 18, 2019	1.345675	7.95	10.70	5.38
Saturday, May 25, 2019	1.3437	7.95	10.68	4.90
Saturday, June 1, 2019	1.350475	8.07	10.90	4.90
Saturday, June 8, 2019	1.3369	8.18	10.94	4.90
Saturday, June 15, 2019	1.33225	8.28	11.03	5.07
Saturday, June 22, 2019	1.3285	8.32	11.05	5.07
Saturday, June 29, 2019	1.31255	8.35	10.96	5.07

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, July 6, 2019	1.308625	8.40	10.99	5.07
Saturday, July 13, 2019	1.3082	8.40	10.99	5.07
Saturday, July 20, 2019	1.306125	8.40	10.97	5.07
Saturday, July 27, 2019	1.315175	8.40	11.05	5.07
Saturday, August 3, 2019	1.31895	8.40	11.08	5.07
Saturday, August 10, 2019	1.326325	8.40	11.14	5.07
Saturday, August 17, 2019	1.32895	8.45	11.23	5.07
Saturday, August 24, 2019	1.3301	8.45	11.24	5.07
Saturday, August 31, 2019	1.328975	8.45	11.23	5.07
Saturday, September 7, 2019	1.3252	8.50	11.26	5.07
Saturday, September 14, 2019	1.3199	8.50	11.22	5.07
Saturday, September 21, 2019	1.32655	8.60	11.41	5.07
Saturday, September 28, 2019	1.3257	8.65	11.47	5.07
Saturday, May 30, 2020	1.38238	6.90	9.54	3.50
Saturday, June 6, 2020	1.35172	6.95	9.39	3.50
Saturday, June 13, 2020	1.3469	7.38	9.94	3.43
Saturday, June 20, 2020	1.35786	8.00	10.86	3.36
Saturday, June 27, 2020	1.35946	8.45	11.49	3.43
Saturday, July 4, 2020	1.361525	8.97	12.21	3.43
Saturday, July 11, 2020	1.35626	9.20	12.48	3.43
Saturday, July 18, 2020	1.35668	9.25	12.55	3.43
Saturday, July 25, 2020	1.34444	9.25	12.44	3.43
Saturday, August 1, 2020	1.33894	9.25	12.39	3.43
Saturday, August 8, 2020	1.332575	9.25	12.33	3.43
Saturday, August 15, 2020	1.32732	9.25	12.28	3.43
Saturday, August 22, 2020	1.31896	9.28	12.24	3.43
Saturday, May 1, 2021	1.23498	12.45	15.38	7.60
Saturday, May 8, 2021	1.22444	12.82	15.70	7.60
Saturday, May 15, 2021	1.21092	13.43	16.26	7.53
Saturday, May 22, 2021	1.20726	13.75	16.60	7.53
Saturday, May 29, 2021	1.20815	14.03	16.95	7.46
Saturday, June 5, 2021	1.20702	14.50	17.50	7.46
Saturday, June 12, 2021	1.21014	15.05	18.21	7.46
Saturday, June 19, 2021	1.22562	15.47	18.96	7.53
Saturday, June 26, 2021	1.2326	15.95	19.66	7.53
Saturday, July 3, 2021	1.23665	16.15	19.97	7.53
Saturday, July 10, 2021	1.24816	16.25	20.28	7.53

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, July 17, 2021	1.2587	16.30	20.52	7.60
Saturday, July 24, 2021	1.2602	16.35	20.60	7.60
Saturday, July 31, 2021	1.2514	16.40	20.52	7.60
Saturday, August 7, 2021	1.25202	16.40	20.53	7.60
Saturday, April 2, 2022	1.25056	12.62	15.78	7.60
Saturday, April 9, 2022	1.25246	12.00	15.03	7.60
Saturday, April 16, 2022	1.26115	12.00	15.13	7.60
Saturday, April 23, 2022	1.2595	11.68	14.71	7.60
Saturday, April 30, 2022	1.28008	11.12	14.23	7.60
Saturday, May 7, 2022	1.28512	10.62	13.65	7.67
Saturday, May 14, 2022	1.29876	10.20	13.25	7.67
Saturday, May 21, 2022	1.28402	9.97	12.80	6.22
Saturday, May 28, 2022	1.279825	9.80	12.54	6.22
Saturday, June 4, 2022	1.2625	9.10	11.49	6.22
Saturday, June 11, 2022	1.2616	8.25	10.41	6.15
Saturday, June 18, 2022	1.2942	7.97	10.31	6.15
Saturday, June 25, 2022	1.2956	7.95	10.30	6.22
Saturday, July 2, 2022	1.287875	7.95	10.24	6.22
Saturday, July 9, 2022	1.29812	7.70	10.00	6.22
Saturday, July 16, 2022	1.30334	7.33	9.55	6.22
Saturday, July 23, 2022	1.29014	7.15	9.22	6.22
Saturday, July 30, 2022	1.28532	7.05	9.06	6.22
Saturday, April 8, 2023	1.3455	5.58	7.51	2.20
Saturday, April 15, 2023	1.34356	5.50	7.39	2.20
Saturday, April 22, 2023	1.34476	4.90	6.59	2.20
Saturday, April 29, 2023	1.3596	4.72	6.42	2.20
Saturday, May 6, 2023	1.35546	4.65	6.30	2.20
Saturday, May 13, 2023	1.3426	4.65	6.24	2.20
Saturday, May 20, 2023	1.34818	4.65	6.27	2.20
Saturday, May 27, 2023	1.358425	4.65	6.32	2.20
Saturday, June 3, 2023	1.35422	4.85	6.57	2.20
Saturday, June 10, 2023	1.33856	4.85	6.49	2.25
Saturday, June 17, 2023	1.32846	4.97	6.60	2.25
Saturday, June 24, 2023	1.31978	5.05	6.66	2.30
Saturday, July 1, 2023	1.3215	5.05	6.67	2.23
Saturday, July 8, 2023	1.328325	5.10	6.77	2.23
Saturday, July 15, 2023	1.32086	5.28	6.97	2.30

Weekly average market prices, exchange rates, and harvester prices (2006-2023)				
Date Week Ended	**Average FX CDN/US**	**Average UB 5-8 US$/LB**	**Average UB 5-8 CDN$/LB**	**Harvester Price/LB**
Saturday, July 22, 2023	1.3186	5.40	7.12	2.23
Saturday, July 29, 2023	1.32018	5.40	7.13	2.23
Saturday, August 5, 2023	1.33018	5.67	7.54	2.23
Saturday, August 12, 2023	1.343475	5.75	7.72	2.60
Saturday, August 19, 2023	1.35074	5.75	7.77	2.60
Saturday, August 26, 2023	1.3563	5.75	7.80	2.60
Saturday, September 2, 2023	1.3567	5.75	7.80	2.60

Sources: Bank of Canada averaged weekly end of day exchange rates, UB average weekly prices as reported by DFFA, harvester weekly prices from Price Setting Panel, FFAW and pricing formula in 2006-07

Appendix I

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 4.50	$ 1.60
$ 4.51	$ 1.61
$ 4.52	$ 1.61
$ 4.53	$ 1.61
$ 4.54	$ 1.62
$ 4.55	$ 1.62
$ 4.56	$ 1.62
$ 4.57	$ 1.63
$ 4.58	$ 1.63
$ 4.59	$ 1.64
$ 4.60	$ 1.64
$ 4.61	$ 1.64
$ 4.62	$ 1.65
$ 4.63	$ 1.65
$ 4.64	$ 1.66
$ 4.65	$ 1.66
$ 4.66	$ 1.66
$ 4.67	$ 1.67
$ 4.68	$ 1.67
$ 4.69	$ 1.68
$ 4.70	$ 1.68
$ 4.71	$ 1.68
$ 4.72	$ 1.69
$ 4.73	$ 1.69
$ 4.74	$ 1.70
$ 4.75	$ 1.70
$ 4.76	$ 1.70
$ 4.77	$ 1.71
$ 4.78	$ 1.71
$ 4.79	$ 1.71
$ 4.80	$ 1.72
$ 4.81	$ 1.72
$ 4.82	$ 1.73
$ 4.83	$ 1.73
$ 4.84	$ 1.73
$ 4.85	$ 1.74

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 4.86	$ 1.74
$ 4.87	$ 1.75
$ 4.88	$ 1.75
$ 4.89	$ 1.75
$ 4.90	$ 1.76
$ 4.91	$ 1.76
$ 4.92	$ 1.77
$ 4.93	$ 1.77
$ 4.94	$ 1.77
$ 4.95	$ 1.78
$ 4.96	$ 1.78
$ 4.97	$ 1.79
$ 4.98	$ 1.79
$ 4.99	$ 1.79
$ 5.00	$ 1.80
$ 5.01	$ 1.80
$ 5.02	$ 1.81
$ 5.03	$ 1.81
$ 5.04	$ 1.81
$ 5.05	$ 1.82
$ 5.06	$ 1.82
$ 5.07	$ 1.83
$ 5.08	$ 1.83
$ 5.09	$ 1.83
$ 5.10	$ 1.84
$ 5.11	$ 1.84
$ 5.12	$ 1.85
$ 5.13	$ 1.85
$ 5.14	$ 1.85
$ 5.15	$ 1.86
$ 5.16	$ 1.86
$ 5.17	$ 1.87
$ 5.18	$ 1.87
$ 5.19	$ 1.88
$ 5.20	$ 1.88
$ 5.21	$ 1.88

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 5.22	$ 1.89
$ 5.23	$ 1.89
$ 5.24	$ 1.90
$ 5.25	$ 1.90
$ 5.26	$ 1.90
$ 5.27	$ 1.91
$ 5.28	$ 1.91
$ 5.29	$ 1.92
$ 5.30	$ 1.92
$ 5.31	$ 1.92
$ 5.32	$ 1.93
$ 5.33	$ 1.93
$ 5.34	$ 1.94
$ 5.35	$ 1.94
$ 5.36	$ 1.94
$ 5.37	$ 1.95
$ 5.38	$ 1.95
$ 5.39	$ 1.96
$ 5.40	$ 1.96
$ 5.41	$ 1.97
$ 5.42	$ 1.97
$ 5.43	$ 1.97
$ 5.44	$ 1.98
$ 5.45	$ 1.98
$ 5.46	$ 1.99
$ 5.47	$ 1.99
$ 5.48	$ 1.99
$ 5.49	$ 2.00
$ 5.50	$ 2.00
$ 5.51	$ 2.01
$ 5.52	$ 2.01
$ 5.53	$ 2.02
$ 5.54	$ 2.02
$ 5.55	$ 2.02
$ 5.56	$ 2.03
$ 5.57	$ 2.03

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 5.58	$ 2.04
$ 5.59	$ 2.04
$ 5.60	$ 2.04
$ 5.61	$ 2.05
$ 5.62	$ 2.05
$ 5.63	$ 2.06
$ 5.64	$ 2.06
$ 5.65	$ 2.07
$ 5.66	$ 2.07
$ 5.67	$ 2.07
$ 5.68	$ 2.08
$ 5.69	$ 2.08
$ 5.70	$ 2.09
$ 5.71	$ 2.09
$ 5.72	$ 2.09
$ 5.73	$ 2.10
$ 5.74	$ 2.10
$ 5.75	$ 2.11
$ 5.76	$ 2.11
$ 5.77	$ 2.12
$ 5.78	$ 2.12
$ 5.79	$ 2.12
$ 5.80	$ 2.13
$ 5.81	$ 2.13
$ 5.82	$ 2.14
$ 5.83	$ 2.14
$ 5.84	$ 2.15
$ 5.85	$ 2.15
$ 5.86	$ 2.15
$ 5.87	$ 2.16
$ 5.88	$ 2.16
$ 5.89	$ 2.17
$ 5.90	$ 2.17
$ 5.91	$ 2.18
$ 5.92	$ 2.18
$ 5.93	$ 2.18

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 5.94	$ 2.19
$ 5.95	$ 2.19
$ 5.96	$ 2.20
$ 5.97	$ 2.20
$ 5.98	$ 2.21
$ 5.99	$ 2.21
$ 6.00	$ 2.21
$ 6.01	$ 2.22
$ 6.02	$ 2.22
$ 6.03	$ 2.23
$ 6.04	$ 2.23
$ 6.05	$ 2.24
$ 6.06	$ 2.24
$ 6.07	$ 2.24
$ 6.08	$ 2.25
$ 6.09	$ 2.25
$ 6.10	$ 2.26
$ 6.11	$ 2.26
$ 6.12	$ 2.27
$ 6.13	$ 2.27
$ 6.14	$ 2.28
$ 6.15	$ 2.28
$ 6.16	$ 2.28
$ 6.17	$ 2.29
$ 6.18	$ 2.29
$ 6.19	$ 2.30
$ 6.20	$ 2.30
$ 6.21	$ 2.31
$ 6.22	$ 2.31
$ 6.23	$ 2.31
$ 6.24	$ 2.32
$ 6.25	$ 2.32
$ 6.26	$ 2.33
$ 6.27	$ 2.33
$ 6.28	$ 2.34
$ 6.29	$ 2.34

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 6.30	$ 2.35
$ 6.31	$ 2.35
$ 6.32	$ 2.35
$ 6.33	$ 2.36
$ 6.34	$ 2.36
$ 6.35	$ 2.37
$ 6.36	$ 2.37
$ 6.37	$ 2.38
$ 6.38	$ 2.38
$ 6.39	$ 2.38
$ 6.40	$ 2.39
$ 6.41	$ 2.39
$ 6.42	$ 2.40
$ 6.43	$ 2.40
$ 6.44	$ 2.41
$ 6.45	$ 2.41
$ 6.46	$ 2.42
$ 6.47	$ 2.42
$ 6.48	$ 2.42
$ 6.49	$ 2.43
$ 6.50	$ 2.43
$ 6.51	$ 2.44
$ 6.52	$ 2.44
$ 6.53	$ 2.45
$ 6.54	$ 2.45
$ 6.55	$ 2.46
$ 6.56	$ 2.46
$ 6.57	$ 2.47
$ 6.58	$ 2.47
$ 6.59	$ 2.47
$ 6.60	$ 2.48
$ 6.61	$ 2.48
$ 6.62	$ 2.49
$ 6.63	$ 2.49
$ 6.64	$ 2.50
$ 6.65	$ 2.50

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 6.66	$ 2.51
$ 6.67	$ 2.51
$ 6.68	$ 2.51
$ 6.69	$ 2.52
$ 6.70	$ 2.52
$ 6.71	$ 2.53
$ 6.72	$ 2.53
$ 6.73	$ 2.54
$ 6.74	$ 2.54
$ 6.75	$ 2.55
$ 6.76	$ 2.55
$ 6.77	$ 2.56
$ 6.78	$ 2.56
$ 6.79	$ 2.56
$ 6.80	$ 2.57
$ 6.81	$ 2.57
$ 6.82	$ 2.58
$ 6.83	$ 2.58
$ 6.84	$ 2.59
$ 6.85	$ 2.59
$ 6.86	$ 2.60
$ 6.87	$ 2.60
$ 6.88	$ 2.61
$ 6.89	$ 2.61
$ 6.90	$ 2.61
$ 6.91	$ 2.62
$ 6.92	$ 2.62
$ 6.93	$ 2.63
$ 6.94	$ 2.63
$ 6.95	$ 2.64
$ 6.96	$ 2.64
$ 6.97	$ 2.65
$ 6.98	$ 2.65
$ 6.99	$ 2.66
$ 7.00	$ 2.66
$ 7.01	$ 2.67

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 7.02	$ 2.67
$ 7.03	$ 2.67
$ 7.04	$ 2.68
$ 7.05	$ 2.68
$ 7.06	$ 2.69
$ 7.07	$ 2.69
$ 7.08	$ 2.70
$ 7.09	$ 2.70
$ 7.10	$ 2.71
$ 7.11	$ 2.71
$ 7.12	$ 2.72
$ 7.13	$ 2.72
$ 7.14	$ 2.73
$ 7.15	$ 2.73
$ 7.16	$ 2.73
$ 7.17	$ 2.74
$ 7.18	$ 2.74
$ 7.19	$ 2.75
$ 7.20	$ 2.75
$ 7.21	$ 2.76
$ 7.22	$ 2.76
$ 7.23	$ 2.77
$ 7.24	$ 2.77
$ 7.25	$ 2.78
$ 7.26	$ 2.78
$ 7.27	$ 2.79
$ 7.28	$ 2.79
$ 7.29	$ 2.80
$ 7.30	$ 2.80
$ 7.31	$ 2.81
$ 7.32	$ 2.81
$ 7.33	$ 2.81
$ 7.34	$ 2.82
$ 7.35	$ 2.82
$ 7.36	$ 2.83
$ 7.37	$ 2.83

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 7.38	$ 2.84
$ 7.39	$ 2.84
$ 7.40	$ 2.85
$ 7.41	$ 2.85
$ 7.42	$ 2.86
$ 7.43	$ 2.86
$ 7.44	$ 2.87
$ 7.45	$ 2.87
$ 7.46	$ 2.88
$ 7.47	$ 2.88
$ 7.48	$ 2.89
$ 7.49	$ 2.89
$ 7.50	$ 2.90
$ 7.51	$ 2.90
$ 7.52	$ 2.90
$ 7.53	$ 2.91
$ 7.54	$ 2.91
$ 7.55	$ 2.92
$ 7.56	$ 2.92
$ 7.57	$ 2.93
$ 7.58	$ 2.93
$ 7.59	$ 2.94
$ 7.60	$ 2.94
$ 7.61	$ 2.95
$ 7.62	$ 2.95
$ 7.63	$ 2.96
$ 7.64	$ 2.96
$ 7.65	$ 2.97
$ 7.66	$ 2.97
$ 7.67	$ 2.98
$ 7.68	$ 2.98
$ 7.69	$ 2.99
$ 7.70	$ 2.99
$ 7.71	$ 3.00
$ 7.72	$ 3.00
$ 7.73	$ 3.01

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 7.74	$ 3.01
$ 7.75	$ 3.02
$ 7.76	$ 3.02
$ 7.77	$ 3.02
$ 7.78	$ 3.03
$ 7.79	$ 3.03
$ 7.80	$ 3.04
$ 7.81	$ 3.04
$ 7.82	$ 3.05
$ 7.83	$ 3.05
$ 7.84	$ 3.06
$ 7.85	$ 3.06
$ 7.86	$ 3.07
$ 7.87	$ 3.07
$ 7.88	$ 3.08
$ 7.89	$ 3.08
$ 7.90	$ 3.09
$ 7.91	$ 3.09
$ 7.92	$ 3.10
$ 7.93	$ 3.10
$ 7.94	$ 3.11
$ 7.95	$ 3.11
$ 7.96	$ 3.12
$ 7.97	$ 3.12
$ 7.98	$ 3.13
$ 7.99	$ 3.13
$ 8.00	$ 3.14
$ 8.01	$ 3.14
$ 8.02	$ 3.15
$ 8.03	$ 3.15
$ 8.04	$ 3.16
$ 8.05	$ 3.16
$ 8.06	$ 3.17
$ 8.07	$ 3.17
$ 8.08	$ 3.18
$ 8.09	$ 3.18

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 8.10	$ 3.19
$ 8.11	$ 3.19
$ 8.12	$ 3.20
$ 8.13	$ 3.20
$ 8.14	$ 3.21
$ 8.15	$ 3.21
$ 8.16	$ 3.22
$ 8.17	$ 3.22
$ 8.18	$ 3.23
$ 8.19	$ 3.23
$ 8.20	$ 3.24
$ 8.21	$ 3.24
$ 8.22	$ 3.25
$ 8.23	$ 3.25
$ 8.24	$ 3.26
$ 8.25	$ 3.26
$ 8.26	$ 3.27
$ 8.27	$ 3.27
$ 8.28	$ 3.28
$ 8.29	$ 3.28
$ 8.30	$ 3.29
$ 8.31	$ 3.29
$ 8.32	$ 3.30
$ 8.33	$ 3.30
$ 8.34	$ 3.31
$ 8.35	$ 3.31
$ 8.36	$ 3.32
$ 8.37	$ 3.32
$ 8.38	$ 3.33
$ 8.39	$ 3.33
$ 8.40	$ 3.34
$ 8.41	$ 3.34
$ 8.42	$ 3.35
$ 8.43	$ 3.35
$ 8.44	$ 3.36
$ 8.45	$ 3.36

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 8.46	$ 3.37
$ 8.47	$ 3.37
$ 8.48	$ 3.38
$ 8.49	$ 3.38
$ 8.50	$ 3.39
$ 8.51	$ 3.39
$ 8.52	$ 3.40
$ 8.53	$ 3.40
$ 8.54	$ 3.41
$ 8.55	$ 3.41
$ 8.56	$ 3.42
$ 8.57	$ 3.42
$ 8.58	$ 3.43
$ 8.59	$ 3.43
$ 8.60	$ 3.44
$ 8.61	$ 3.44
$ 8.62	$ 3.45
$ 8.63	$ 3.45
$ 8.64	$ 3.46
$ 8.65	$ 3.46
$ 8.66	$ 3.47
$ 8.67	$ 3.47
$ 8.68	$ 3.48
$ 8.69	$ 3.48
$ 8.70	$ 3.49
$ 8.71	$ 3.49
$ 8.72	$ 3.50
$ 8.73	$ 3.50
$ 8.74	$ 3.51
$ 8.75	$ 3.51
$ 8.76	$ 3.52
$ 8.77	$ 3.52
$ 8.78	$ 3.53
$ 8.79	$ 3.53
$ 8.80	$ 3.54
$ 8.81	$ 3.55

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 8.82	$ 3.55
$ 8.83	$ 3.56
$ 8.84	$ 3.56
$ 8.85	$ 3.57
$ 8.86	$ 3.57
$ 8.87	$ 3.58
$ 8.88	$ 3.58
$ 8.89	$ 3.59
$ 8.90	$ 3.59
$ 8.91	$ 3.60
$ 8.92	$ 3.60
$ 8.93	$ 3.61
$ 8.94	$ 3.61
$ 8.95	$ 3.62
$ 8.96	$ 3.62
$ 8.97	$ 3.63
$ 8.98	$ 3.63
$ 8.99	$ 3.64
$ 9.00	$ 3.64
$ 9.01	$ 3.65
$ 9.02	$ 3.65
$ 9.03	$ 3.66
$ 9.04	$ 3.66
$ 9.05	$ 3.67
$ 9.06	$ 3.67
$ 9.07	$ 3.68
$ 9.08	$ 3.69
$ 9.09	$ 3.69
$ 9.10	$ 3.70
$ 9.11	$ 3.70
$ 9.12	$ 3.71
$ 9.13	$ 3.71
$ 9.14	$ 3.72
$ 9.15	$ 3.72
$ 9.16	$ 3.73
$ 9.17	$ 3.73

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 9.18	$ 3.74
$ 9.19	$ 3.74
$ 9.20	$ 3.75
$ 9.21	$ 3.75
$ 9.22	$ 3.76
$ 9.23	$ 3.76
$ 9.24	$ 3.77
$ 9.25	$ 3.77
$ 9.26	$ 3.78
$ 9.27	$ 3.79
$ 9.28	$ 3.79
$ 9.29	$ 3.80
$ 9.30	$ 3.80
$ 9.31	$ 3.81
$ 9.32	$ 3.81
$ 9.33	$ 3.82
$ 9.34	$ 3.82
$ 9.35	$ 3.83
$ 9.36	$ 3.83
$ 9.37	$ 3.84
$ 9.38	$ 3.84
$ 9.39	$ 3.85
$ 9.40	$ 3.85
$ 9.41	$ 3.86
$ 9.42	$ 3.87
$ 9.43	$ 3.87
$ 9.44	$ 3.88
$ 9.45	$ 3.88
$ 9.46	$ 3.89
$ 9.47	$ 3.89
$ 9.48	$ 3.90
$ 9.49	$ 3.90
$ 9.50	$ 3.91
$ 9.51	$ 3.91
$ 9.52	$ 3.92
$ 9.53	$ 3.92

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 9.54	$ 3.93
$ 9.55	$ 3.94
$ 9.56	$ 3.94
$ 9.57	$ 3.95
$ 9.58	$ 3.95
$ 9.59	$ 3.96
$ 9.60	$ 3.96
$ 9.61	$ 3.97
$ 9.62	$ 3.97
$ 9.63	$ 3.98
$ 9.64	$ 3.98
$ 9.65	$ 3.99
$ 9.66	$ 3.99
$ 9.67	$ 4.00
$ 9.68	$ 4.01
$ 9.69	$ 4.01
$ 9.70	$ 4.02
$ 9.71	$ 4.02
$ 9.72	$ 4.03
$ 9.73	$ 4.03
$ 9.74	$ 4.04
$ 9.75	$ 4.04
$ 9.76	$ 4.05
$ 9.77	$ 4.05
$ 9.78	$ 4.06
$ 9.79	$ 4.07
$ 9.80	$ 4.07
$ 9.81	$ 4.08
$ 9.82	$ 4.08
$ 9.83	$ 4.09
$ 9.84	$ 4.09
$ 9.85	$ 4.10
$ 9.86	$ 4.10
$ 9.87	$ 4.11
$ 9.88	$ 4.11
$ 9.89	$ 4.12

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 9.90	$ 4.13
$ 9.91	$ 4.13
$ 9.92	$ 4.14
$ 9.93	$ 4.14
$ 9.94	$ 4.15
$ 9.95	$ 4.15
$ 9.96	$ 4.16
$ 9.97	$ 4.16
$ 9.98	$ 4.17
$ 9.99	$ 4.17
$ 10.00	$ 4.18
$ 10.01	$ 4.19
$ 10.02	$ 4.19
$ 10.03	$ 4.20
$ 10.04	$ 4.20
$ 10.05	$ 4.21
$ 10.06	$ 4.21
$ 10.07	$ 4.22
$ 10.08	$ 4.22
$ 10.09	$ 4.23
$ 10.10	$ 4.24
$ 10.11	$ 4.24
$ 10.12	$ 4.25
$ 10.13	$ 4.25
$ 10.14	$ 4.26
$ 10.15	$ 4.26
$ 10.16	$ 4.27
$ 10.17	$ 4.27
$ 10.18	$ 4.28
$ 10.19	$ 4.29
$ 10.20	$ 4.29
$ 10.21	$ 4.30
$ 10.22	$ 4.30
$ 10.23	$ 4.31
$ 10.24	$ 4.31
$ 10.25	$ 4.32

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 10.26	$ 4.32
$ 10.27	$ 4.33
$ 10.28	$ 4.34
$ 10.29	$ 4.34
$ 10.30	$ 4.35
$ 10.31	$ 4.35
$ 10.32	$ 4.36
$ 10.33	$ 4.36
$ 10.34	$ 4.37
$ 10.35	$ 4.38
$ 10.36	$ 4.38
$ 10.37	$ 4.39
$ 10.38	$ 4.39
$ 10.39	$ 4.40
$ 10.40	$ 4.40
$ 10.41	$ 4.41
$ 10.42	$ 4.41
$ 10.43	$ 4.42
$ 10.44	$ 4.43
$ 10.45	$ 4.43
$ 10.46	$ 4.44
$ 10.47	$ 4.44
$ 10.48	$ 4.45
$ 10.49	$ 4.45
$ 10.50	$ 4.46
$ 10.51	$ 4.47
$ 10.52	$ 4.47
$ 10.53	$ 4.48
$ 10.54	$ 4.48
$ 10.55	$ 4.49
$ 10.56	$ 4.49
$ 10.57	$ 4.50
$ 10.58	$ 4.51
$ 10.59	$ 4.51
$ 10.60	$ 4.52
$ 10.61	$ 4.52

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 10.62	$ 4.53
$ 10.63	$ 4.53
$ 10.64	$ 4.54
$ 10.65	$ 4.55
$ 10.66	$ 4.55
$ 10.67	$ 4.56
$ 10.68	$ 4.56
$ 10.69	$ 4.57
$ 10.70	$ 4.57
$ 10.71	$ 4.58
$ 10.72	$ 4.59
$ 10.73	$ 4.59
$ 10.74	$ 4.60
$ 10.75	$ 4.60
$ 10.76	$ 4.61
$ 10.77	$ 4.61
$ 10.78	$ 4.62
$ 10.79	$ 4.63
$ 10.80	$ 4.63
$ 10.81	$ 4.64
$ 10.82	$ 4.64
$ 10.83	$ 4.65
$ 10.84	$ 4.65
$ 10.85	$ 4.66
$ 10.86	$ 4.67
$ 10.87	$ 4.67
$ 10.88	$ 4.68
$ 10.89	$ 4.68
$ 10.90	$ 4.69
$ 10.91	$ 4.70
$ 10.92	$ 4.70
$ 10.93	$ 4.71
$ 10.94	$ 4.71
$ 10.95	$ 4.72
$ 10.96	$ 4.72
$ 10.97	$ 4.73

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 10.98	$ 4.74
$ 10.99	$ 4.74
$ 11.00	$ 4.75
$ 11.01	$ 4.75
$ 11.02	$ 4.76
$ 11.03	$ 4.76
$ 11.04	$ 4.77
$ 11.05	$ 4.78
$ 11.06	$ 4.78
$ 11.07	$ 4.79
$ 11.08	$ 4.79
$ 11.09	$ 4.80
$ 11.10	$ 4.81
$ 11.11	$ 4.81
$ 11.12	$ 4.82
$ 11.13	$ 4.82
$ 11.14	$ 4.83
$ 11.15	$ 4.84
$ 11.16	$ 4.84
$ 11.17	$ 4.85
$ 11.18	$ 4.85
$ 11.19	$ 4.86
$ 11.20	$ 4.86
$ 11.21	$ 4.87
$ 11.22	$ 4.88
$ 11.23	$ 4.88
$ 11.24	$ 4.89
$ 11.25	$ 4.89
$ 11.26	$ 4.90
$ 11.27	$ 4.91
$ 11.28	$ 4.91
$ 11.29	$ 4.92
$ 11.30	$ 4.92
$ 11.31	$ 4.93
$ 11.32	$ 4.94
$ 11.33	$ 4.94

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 11.34	$ 4.95
$ 11.35	$ 4.95
$ 11.36	$ 4.96
$ 11.37	$ 4.96
$ 11.38	$ 4.97
$ 11.39	$ 4.98
$ 11.40	$ 4.98
$ 11.41	$ 4.99
$ 11.42	$ 4.99
$ 11.43	$ 5.00
$ 11.44	$ 5.01
$ 11.45	$ 5.01
$ 11.46	$ 5.02
$ 11.47	$ 5.02
$ 11.48	$ 5.03
$ 11.49	$ 5.04
$ 11.50	$ 5.04
$ 11.51	$ 5.05
$ 11.52	$ 5.05
$ 11.53	$ 5.06
$ 11.54	$ 5.07
$ 11.55	$ 5.07
$ 11.56	$ 5.08
$ 11.57	$ 5.08
$ 11.58	$ 5.09
$ 11.59	$ 5.10
$ 11.60	$ 5.10
$ 11.61	$ 5.11
$ 11.62	$ 5.11
$ 11.63	$ 5.12
$ 11.64	$ 5.13
$ 11.65	$ 5.13
$ 11.66	$ 5.14
$ 11.67	$ 5.14
$ 11.68	$ 5.15
$ 11.69	$ 5.16

Average Market and Harvester price @ 1 Cent increments as derived from Review Team crab formula	
Average UB 5-8 CDN$/LB	**Harvester Price/LB**
$ 11.70	$ 5.16
$ 11.71	$ 5.17
$ 11.72	$ 5.17
$ 11.73	$ 5.18
$ 11.74	$ 5.19
$ 11.75	$ 5.19
$ 11.76	$ 5.20
$ 11.77	$ 5.20
$ 11.78	$ 5.21
$ 11.79	$ 5.22
$ 11.80	$ 5.22
$ 11.81	$ 5.23
$ 11.82	$ 5.23
$ 11.83	$ 5.24
$ 11.84	$ 5.25
$ 11.85	$ 5.25
$ 11.86	$ 5.26
$ 11.87	$ 5.27
$ 11.88	$ 5.27
$ 11.89	$ 5.28
$ 11.90	$ 5.28
$ 11.91	$ 5.29
$ 11.92	$ 5.30
$ 11.93	$ 5.30
$ 11.94	$ 5.31
$ 11.95	$ 5.31
$ 11.96	$ 5.32
$ 11.97	$ 5.33
$ 11.98	$ 5.33
$ 11.99	$ 5.34
$ 12.00	$ 5.34