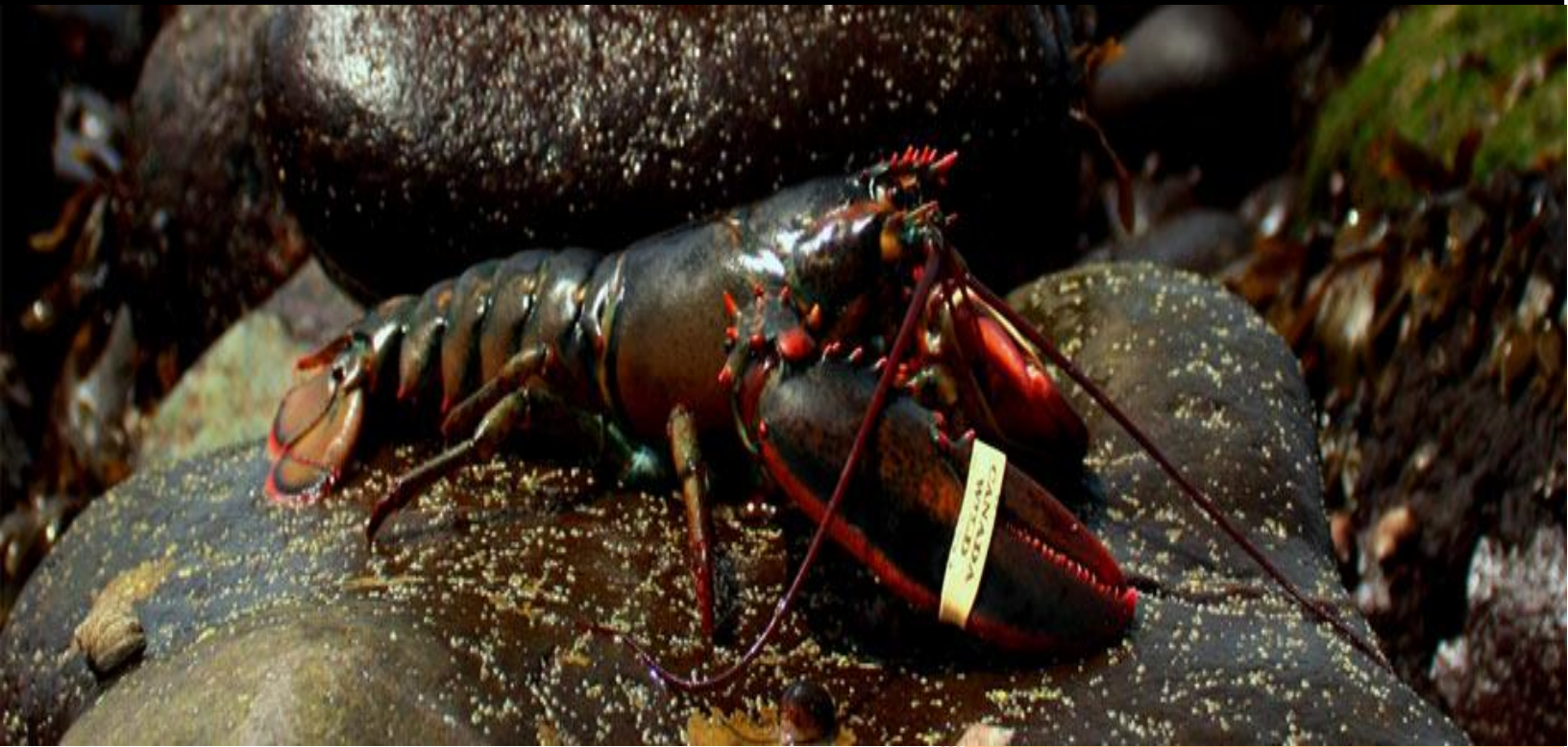




Canada – Quality Live Lobster



Hany Y Kamal

Quality Live Lobster

Hard Shell premium Lobsters (*Homarus Americanus*) are a healthier and stronger species because of their migration areas in the cold waters of Bay of Fundy and Saint Mary's Bay - Nova Scotia. It is ranked the highest quality lobster in the world.



In Canada, the lobster industry is regulated. The department of Fisheries and Oceans is responsible for the governance of fisheries under the authority of the Fisheries Act. The governance structure also includes various acts, regulations, orders and policies. American Lobster is fished in Canada by lobster licence holders hailing from ports located in provinces on Canada's east coast. Lobster is Canada's most valuable seafood export, worth over CAD\$ 4 billion.

Measuring Lobster Size

Every lobster fisher is required to use a lobster gauge to measure the distance from the lobster's eye socket to the end of its carapace. If the lobster is less than 3.25 inches (83 mm) long, it is too young to be caught and must be released back to the sea. There is also a legal maximum size of 5 inches (130 mm) in Nova Scotia, meant to ensure the survival of a healthy breeding stock of adult males.



To protect known breeding females, lobsters caught carrying eggs are to be notched on a tail flipper (second from the right, if the lobster is right-side up and the tail is fully extended). Following this, the female cannot be kept or sold,



and is commonly referred to as “punch-tail” or as “v-notched”. The notch remains for two molts of the lobster exoskeleton, providing harvest protection and continued breeding availability for up to five years.

Grading Lobster for Quality

Grading a lobster is a way of determining its value and quality. It enables the consumer to know how much lobster meat and the quality of the meat that they are purchasing.

No matter the time of year, lobsters are graded to weed out damaged and weak lobsters. The lower the grade, the softer the shell and less hardier the lobster. Lobsters undergoing molting have softer shells and are generally weaker with lower meat content than a hard-shell lobster.

Soft Shell Lobsters

Soft shell lobsters are not shipped due to their weak and fragile nature. Plus, meat yield is about 10% less than a good Hard-shell Lobster.

The only way lobsters can grow is by shedding their shells and growing a new, larger shell. Lobsters shed (*or molt*) several times each year. Soft shell lobsters (*called shedders*) are lobsters which have recently shed their shell. While lobsters don't shed according to a set schedule, it tends to happen in early July and in September. The lobster first forms a new shell, complete in every detail, underneath its old one. Just before molting, the lobster drinks in water, which causes the new shell to swell, lifting the top of the midsection of the old shell. They synthesize a harder and larger shell with each molt using calcium carbonate from the ocean seawater they inhabit.

Soft shell lobster meat has a brighter red color, a softer texture, and more water content than hard shell lobster meat. Although soft shell lobsters are easier to crack, you will pay more for their water weight, which will cook off.

The new shells are soft and take several months to harden, which is why so many soft-shell lobsters are available in the summer and fall. The shell hardens as the lobster feeds, which also adds meat. The hard-shell acts as the lobster's natural armor protecting it from prey.

Hard Shell Lobster

Hard shell lobster remains popular due to the quantity and quality of the meat. When cooked, its shell turns bright red to orange color. Its white flesh is firm and dense with a sweet flavor. Hard shell lobsters are the industry standard for quality with a higher ratio of meat to shell which means better value. Typically, the meat only makes up about 20% of the lobster by weight. You'll want a good hard-shell lobster because it will be full of meat from claws to tail.



Grade "A" Lobsters

The best lobsters are Grade A. The highest grade is given to those with hard shells. They have the most meat. The shells are hard because time has passed since the molting of the old shell. These Grade A lobsters fetch the highest price.

Grade "B" Lobsters

The next is Grade B. These are generally lobsters that are caught in the summer, their shells are firm or medium hard. The molting process was not very recent, but the hard shell is still forming. The meat in these lobsters are not as robust as in Grade A, but they are still delectable!

Finally, the next grade is divided into two industrial grades. The first is grade is Market. This means that these lobsters can be sold at local markets

and to local customers. The next grade is called Cannery. These are low quality lobsters that are cooked for meat at processing plants.

Soft Shell versus Hard Shell Lobsters


TAIL OF THE TAPE

HARD SHELL VS SOFT SHELL LOBSTERS

**DON'T GET PINCHED BY A CHEAP LOBSTER
(BUY THE BEST LOBSTER ONLINE OR ON DRY LAND)**

HARD SHELL

SOFT SHELL



01

20%

Hard shell lobsters have about 20% more meat in proportion to total body weight.

02

HARD SHELL MEAT IS FIRMER, WITH BETTER TEXTURE.

With its thick, solid shell you'll need kitchen shears or crackers to extract the meat.

03

04OVERNIGHT SHIPPING

Hard shell lobsters can be shipped overnight and arrive in great condition.

05

05

Hard Shell lobsters are typically fished from late fall through spring.

01

Soft shells are too delicate to grill.

02

SOFT SHELL MEAT HAS A BRIGHTER RED COLOR, A SOFTER TEXTURE AND A HIGHER WATER WEIGHT

Soft shell lobsters are weaker and suffer a high mortality when shipped even under ideal conditions.

03

FACT:

You'll find soft shell lobsters in the late summer months or early in the fall, when all the lobsters have recently molted.

04

04

If you squeeze the sides of the lobster's body, the soft shell lobster will yield to pressure, while the hard shell lobster will be firm and tightly packed.

When choosing your next lobsters for that special event, make sure you are getting what you paid for.

How Much Lobster Meat in a Lobster?

On average live lobster contains about 30% meat, with the remaining 70% being made up of shell and waste. Here's an estimated meat yield broken down by different lobster parts.

- 15% Lobster Tail
- 10% Claw Meat
- 3% Knuckle Meat
- 2% Leg Meat

We are dedicated to sustainability. We directly deal with facilities that are hold strict quality control measures that ensure only the best lobsters reach our customers. The facilities are close to the supply and are normally located on the shore of Nova Scotia that guarantees naturally cold pristine ocean water and a year-round supply. The facility(ies) will hold approximately 800,000 pounds of live lobster – at varying sizes – in a temperature controlled, oxygen, ammonia and salinity monitored environment.

The facilities complete daily blood protein analysis on lobsters to measure the blood protein levels that show biological maturity ensuring that lobsters will live well in the facilities and live long and well for our customers after international shipments. This applied lobster science confirms that our lobsters are the highest quality with the highest blood protein levels in the industry.

A healthier stronger lobster stays alive longer. With extremely low mortality rates you will always receive better value. A healthier lobster has a higher ratio of meat-to-shell which means better value. Our exported hard-shell lobster can have up to 50% more meat than a non hard-shell lobster.

When do Lobsters Shed or Molt?

The shell of a lobster, called the “exoskeleton”, provides the lobster’s shape as well as an excellent armor protection from enemies. As the lobster grows, it must periodically shed its old hard shell and grow a new one.

The process is known as molting. It takes about 20 molts over 5-7 years for a lobster to become an adult.

Before shedding its old shell, a new soft shell is formed under the old shell. To get out of its old shell, the body splits and the skin between the tail and body shell opens. Next the lobster rolls over on its side and bends itself almost in half to pull itself out of its old shell.

The new shell lobster then pumps itself with fluid to enlarge the very soft shell. The new shell is paper thin, and the lobster is very vulnerable to predators at this time. There is less meat in a new shell lobster. In time, more muscle (meat) grows until it’s time to molt again. After molting and before the lobster’s shell becomes “hard” again is when the terms “soft shell”, and “new shell” are used to describe the lobster.

Lobster Molting Facts

- A lobster increases in size by about 20% with each molt.
- It takes a lobster about 30 minutes to molt.
- Most lobsters shed every year but less frequently as they grow older and larger.
- Lobsters take about 5-7 years to mature (*called chickens*) and will weigh about 1 pound each. A chicken lobster will measure about 3.25 inches in length from the eye to the top of the tail.

When are Hard Shell Lobsters Available?

Spring and late fall is the best time. By the middle of April, as the Nova Scotia winter has loosened its grip, lobsters move closer to shore. Boats go

out, traps begin to fill, and high supply demand starts. Unlike summer lobsters, spring and late fall lobsters are swimming in cold water, their sweet meat firm and bursting with concentrated flavors under a hard winter shell.

Our dedicated facilities are normally buying directly from fishermen who have a long history of properly handling lobster and assure to maintain the supply all year round.

Sizes and Grades of Lobster

Lobster Name & Size	Weight (lb.)	Weight (gram)
Canners	0.67 - 0.88	300 - 400
Chix	0.88 - 1.32	400 - 600
Small Chix	0.88 - 1.10	400 - 500
Large Chix	1.10 - 1.32	500 - 600
Quarters	1.32 - 1.54	600 - 700
Halves	1.54 - 1.76	700 - 800
Selects	1.76 - 2.98	800 - 1350
Small Selects	1.76 - 1.98	800 - 900
Medium Selects	1.98 - 2.43	900 - 1100
Large Selects	2.43 - 2.98	1100 - 1350
Jumbo	2.98 - 7.94+	1350 - 3600+
Small Jumbo	2.98 - 3.97	1350 - 1800
Medium Jumbo	3.97 - 5.95	1800 - 2700
Large Jumbo	5.95 - 7.94	2700 - 3600
Super Jumbo	7.94+	3600+
Market Grade	0.99 - 1.98	450 - 900
Culls	0.99 - 5.96+	450 - 2700+
Small Culls	0.99 - 1.54	450 - 700
Medium Culls	1.54 - 5.95	700 - 2700
Large Culls	5.96+	2700+

Lobster Sizes



Under 1lb. Cannery

Cannery get their name from the mid 1800's when lobsters were a canned product. It takes a lobster about 5-7 years to reach 1 lb.



1 - 1 1/8 lb. Chickens

A minimum size lobster will weigh around 1 lb. Not much meat in these little "bugs" as two might not be enough for the real lobster lover.



1 1/4 lb. Quarters

The most plentiful size of Maine Lobsters are 1 1/4 pound each, making them a great size for a lobster bake party!



1 - 1 1/2 lb. Halves

"Halves" are NOT lobsters cut in half; they are whole, live lobsters! Halves are a large enough lobster for a "Maine" course lobster dinner.



2 - 2 1/2 lb. Deuces

This a nice hefty lobster size which is perfect for a special occasion like a birthday or an anniversary.



2 1/2 - 3 1/2 lb. Large Selects

Select grade lobsters are a popular size reflected in the price. High end restaurants and steak house will charge a premium for them.



Over 3 1/2 lb. Jumbos

Jumbo lobsters fetch higher prices since they are in high demand and hard to find. Jumbos make an impressive Father's Day gift or New Year's celebration dinner .



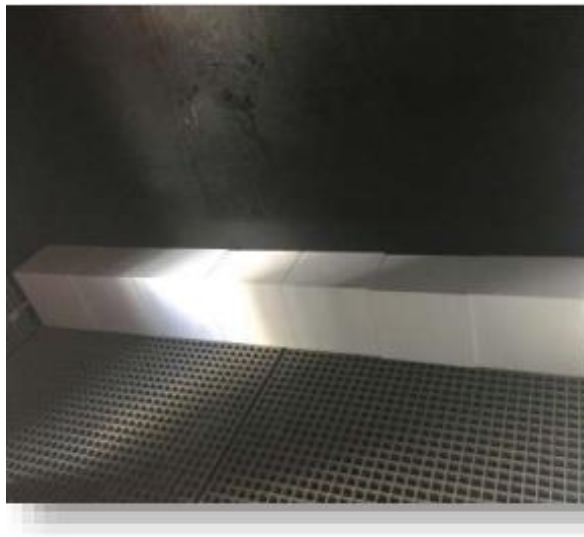
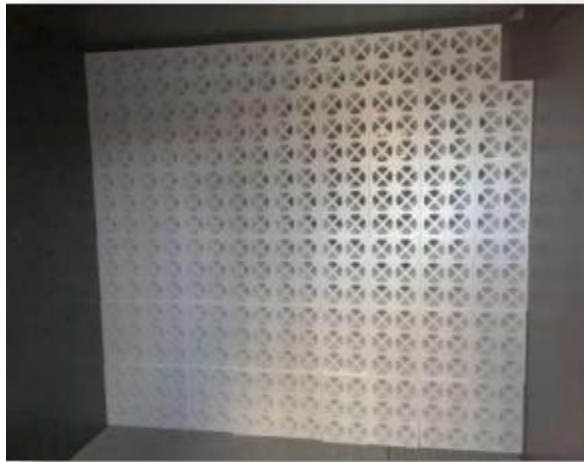
6 - 10 lb. Large Jumbos

Large jumbos are too big to cook in a standard lobster pot. They are most often caught by offshore lobster boats fishing as far as 200 miles from the coastline.

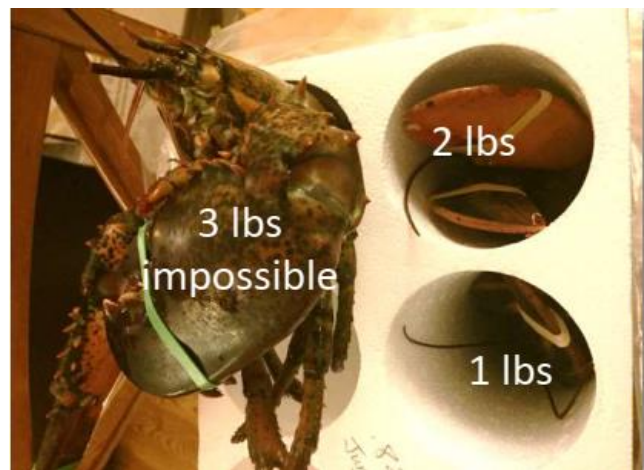
EMYG Innovation Technology “AQUAWAY®”

Shipping in an environment as close to the lobster’s natural surroundings will lower the mortality rate and the taste quality of the product intact.

WALL = 51 R&H



LENGTH = 8 R&H



408 R&H x 6 holes = 2448 lobsters

Different Lobster Sizes in AQUAWAY®

Lobster Name	Weight (lb.)	Weight (gm)
Chix	0.90 - 1.21	400 - 550
Quarters	1.21 - 1.45	550 - 660
Halves	1.45 - 1.75	660 - 800
Small Select	1.75 - 2.00	800 - 900

Total Maximum Weight in AQUAWAY®

= 2448 lobsters X 2LBS (907g)

= 4896 lbs = 2200kg

The Living Seafood Chain – Before & After

BEFORE THE LIVING SEAFOOD CHAIN®

WITH THE LIVING SEAFOOD CHAIN®

90% of products transported frozen or deep frozen by sea ◀

▶ Products kept live in their original water, from sea to plate

10% of products transported live, out of water by air ◀

▶ Physical storage conditions mimicking those of their natural environment

High mortality rate ◀

▶ Low ammonia-related mortality rate

Short lead times and dependence on market prices ◀

▶ It is possible to anticipate market prices thanks to the ability to hold products for several months

Product taste properties reduction depreciated quality for imported or exported products ◀

▶ Taste properties and qualities recognised by a Michelin-starred chef!