Lobster Quality
Preseason Sampling Program
Southwest Nova Scotia LFA33 & LFA34

Preseason Summary Report

November 2025

Submitted by:

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2025 LFA 33 & 34 Lobster Quality Sampling Summary

HIGHLIGHTS FOR 2025

A total of 3,900 lobsters were sampled on. 44 preseason sampling dates. (See also Google map of the 2025 Lobster Preseason Survey Areas.)

BRIX levels declined over preseason sampling in most locations in both Inside and Outside areas resulting in an overall low average BRIX level of 7.98 mg/mL (the lowest overall average in the time series).

Legal-sized counts per sample rose on average in the November samples compared to past years in all Inside and Outside areas. 2025 average legal-sized counts per trap were 8.6 counts/trap, up 25% compared to 2024 values of 6.9 counts/trap.

Bottom temperatures observed in most Inside and Outside areas were approximately +2 degrees Celsius warmer compared to 2024.

%Weaks and %Soft lobsters have declined considerably in all areas in the 2025 preseason samples compared to 2024.

There is no evidence that the proportion of sublegals ("shorts") have declined in recent years.

The presence of Jonah Crab declined as the commercial season approached.

Introduction

This report summarizes results of preseason at-sea sampling in 8 locations within LFA33 and LFA34 from September 1 to November 14, 2025. This sampling program represents a continuation of the longstanding Atlantic Lobster Moult and Quality Project (ALMQ) 20-year longitudinal database that has continued uninterrupted since 2006. Preseason sampling was conducted by Coldwater Lobster Association in 8 different locations – the designated 'Inside' and 'Outside' areas of Lobster Bay, St. Mary's Bay, Yarmouth in LFA34, and Port La Tour in LFA33.

Data were collected for lobster sex, carapace length, blood protein (BRIX), hardness, moult stage, and egg-bearing status. This report focuses on BRIX trends over preseason samples as a key indicator of start of season lobster quality. Data analyses were carried out with the cooperation of the Lobster Quality Centre, Marine Research Centre, Université Sainte-Anne, Petit de Grat Campus. We acknowledge this opportunity to maintain the ALMQ longitudinal database and to develop it for the future use by the Nova Scotia lobster industry and researchers.

From 2020 to 2025 financing for this project was provided by the Atlantic Fisheries Fund (AFF) with continuing support of Fisheries and Oceans, Canada, the Nova Scotia Department of Fisheries and Aquaculture, and our industry partners.

It has been made very clear to the ALMQ partners – Coldwater Lobster Association, and the Lobster Quality Centre of the Université Sainte-Anne – that new sources of financing from the lobster industry sector are required if the ALMQ database and analysis is to be continued and maintained into the future. As has been the case in the past, it is the ongoing objective of the partners to seek out new financing sources from the lobster industry – for whom the sampling and reports are prepared – toward maintaining the ALMQ database and its research legacy for the sustainability and benefit of the valuable lobster resource.

2025 Sampling Protocols

As in previous years, individual lobster data on blood protein level (measured via a refractometer as the BRIX Index (mg/mL) – Figure 1), manual shell hardness (soft, medium or hard scale), moult stage (from 40 selected lobsters' pleopods per sampling point examined under a microscope), carapace length, and sex (male, female, berried female) data were collected manually for 3,900 individual lobster samples over each of 44 sample location-dates (100 lobsters/sample) across all 8 sampling locations. These lobster data, collected manually on-board survey vessels by the Coldwater data collection technician and recorded electronically (Figure 2), represent determinants of lobster quality. Quality lobsters are suitable for live storage and shipping, and have high meat content for a superior dining experience. Lobster data analysed in this report are provided as indicators to the Nova Scotia lobster industry about the early season status of the post-moult lobster harvest in the eight designated sampling subareas.

Figure 1. Lobster blood sample used in refractometer to determine lobster blood protein (BRIX) level.

Figure 2. Lobster preseason sampling equipment.

The results presented in this report focus on the distribution of the recorded BRIX levels for 2025 compared to past years' samples from the same preseason time and sampling locations over the full ALMQ database period 2006-2025. This information enables the industry to compare the 2025 sample results to known past years of observed preseason and subsequent in-season lobster quality and status.

In 2025, as in the past, BRIX index values below 6.0 mg/mL in a sampled lobster provide a probable indication of "Poor" quality lobster that is less than fully-meated, and is also less suitable for the live market for storage and shipping and for presentation at the dining table. BRIX index values between 6.0–7.99 are deemed as "Moderate" quality and indicate that lobsters may still be recovering from a prior moult, and are of concern with respect to quality. BRIX levels at 8 or above are indicative of "Good" quality, are more fully-meated lobsters, and more suitable for live product storage and shipping and presentation for consumption. Table 1 below summarizes the assignment of lobster quality and BRIX level indicator categories used in this report.

Table 1. Lobster Quality Indicators and BRIX Index Categories

Quality Indicator:	**"Poor"**	**"Moderate"**	**"Good"**
Meat Content:	**Most likely low**	**Not likely fully-meated**	**Likely fully-meated**
Storage/Shipping:	**Not ideal**	**Concerns**	**Likely suitable**
Observed Lobster Quality Indicators:			
Blood Protein Level, BRIX index (mg/mL)	Less than 6.0	6.0 to 7.99	8.0 or greater
Shell Hardness	Potentially "Soft" (2)	Potentially "Moderate" (4), recovering from previous moult	Likely "Hard" (5)
Appearance	Pale colour, evidence of carapace abnormalities, and/or shell disease	Acceptable colour, little evidence of carapace abnormalities or shell disease	Spring black-bodied, few carapace abnormalities
Shape/size	Culls, misshapen claws, damage to carapace	Small size, misshapen claws, limited damage to carapace	Commercial size, good body shape

The manual (carapace squeeze test) assessment of lobster shell hardness is a subjective indicator of lobster quality. Guidelines are in place for manual estimates of shell hardness on a subjective scale of 2 ("Soft"), 4 ("Moderate"), and 5 ("Hard"). "Soft" lobsters are of poor quality, "Moderate" lobsters are generally of mediocre quality, and "Hard" lobster are generally acceptable for further consideration with regard to quality. In 2025, as in previous years, shell hardness measures are not well-correlated with continuous measures of lobster BRIX levels. Shell hardness measures are effective when used together with other information, e.g., lobster appearance, shape/size, weak status, and including information on when and where lobsters are harvested. Individual subjective indicators of quality, including shell hardness, are generally not considered as a sole determining factor in lobster quality prediction but may be used in conjunction with other indicators, e.g., BRIX, to assign quality to an individual lobster.

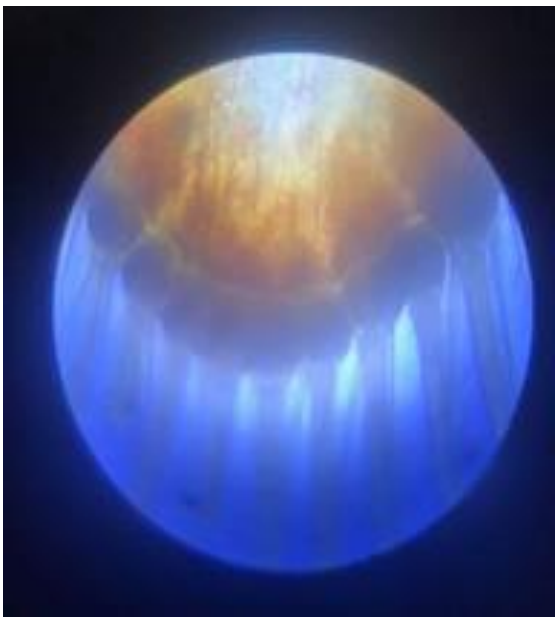


Figure 3. Lobster pleopod under microscope.

In 2025 preseason sampling, 40 lobsters were selected for further pleopod analysis from a full set of 100 lobsters sampled by location-date for their biological characteristics including BRIX values at harvest, etc. Each lobster's moult status is determined by microscopic analysis of the lobster pleopod (swimmeret). Moult stage levels of zero (0) indicate no moult activity is occurring; advanced moult stages (3+) indicate the moult is approaching and imminent. Pleopod analysis in female lobsters may also indicate the onset of the egg bearing cycle and the presence of cement glands. Figure 3 illustrates a lobster pleopod view for interpretation of moult stage by the technician-reader. Analyses of pleopod data and lobster moult staging are presented in the annual report released in the Spring of 2026.

Overview of the 2025 Preseason Survey

In 2025, a total of 3,900 preseason lobster samples were taken over the 11-week period from September 1 to November 14, 2025 over 44 sample location-dates, or 5-6 samples for each of the 8 locations. The 2025 sampling protocols were adjusted in 2024, to accommodate the shift to a reduced financing operation and, to record a reduced number of sampling dates. The 2025 program saw the arrival of a new lobster data collection technician, Courtney Thomas, who replaced 2024-2025 technician Naomi Martineau. (Naomi had replaced Kark Mattock who was technician for the 5 previous years from 2020 to 2024.) We take this opportunity to thank Karl and Naomi for their valuable contributions to the lobster sampling program in southwest Nova since 2020, including Naomi's mentoring of Courtney into the data collection role that has ensured a smooth transition to the ongoing integrity of the lobster quality database.

2025 Survey Sites. Figure 4 below illustrates the Google map for southwest Nova Scotia survey sites in 2025. The inserted map table in Figure 4 illustrates a survey location in Port La Tour (Inside) that took place on September 2-3, 2025. The interactive map[1] is freely available to review and enables users to examine in detail each of the survey points including identification of the starting string longitude and latitude, depth, bait used, weather conditions at haul, count of lobsters landed, average BRIX value of the sampled lobsters, and numbers of designated weak lobsters as a percentage of the total sample.

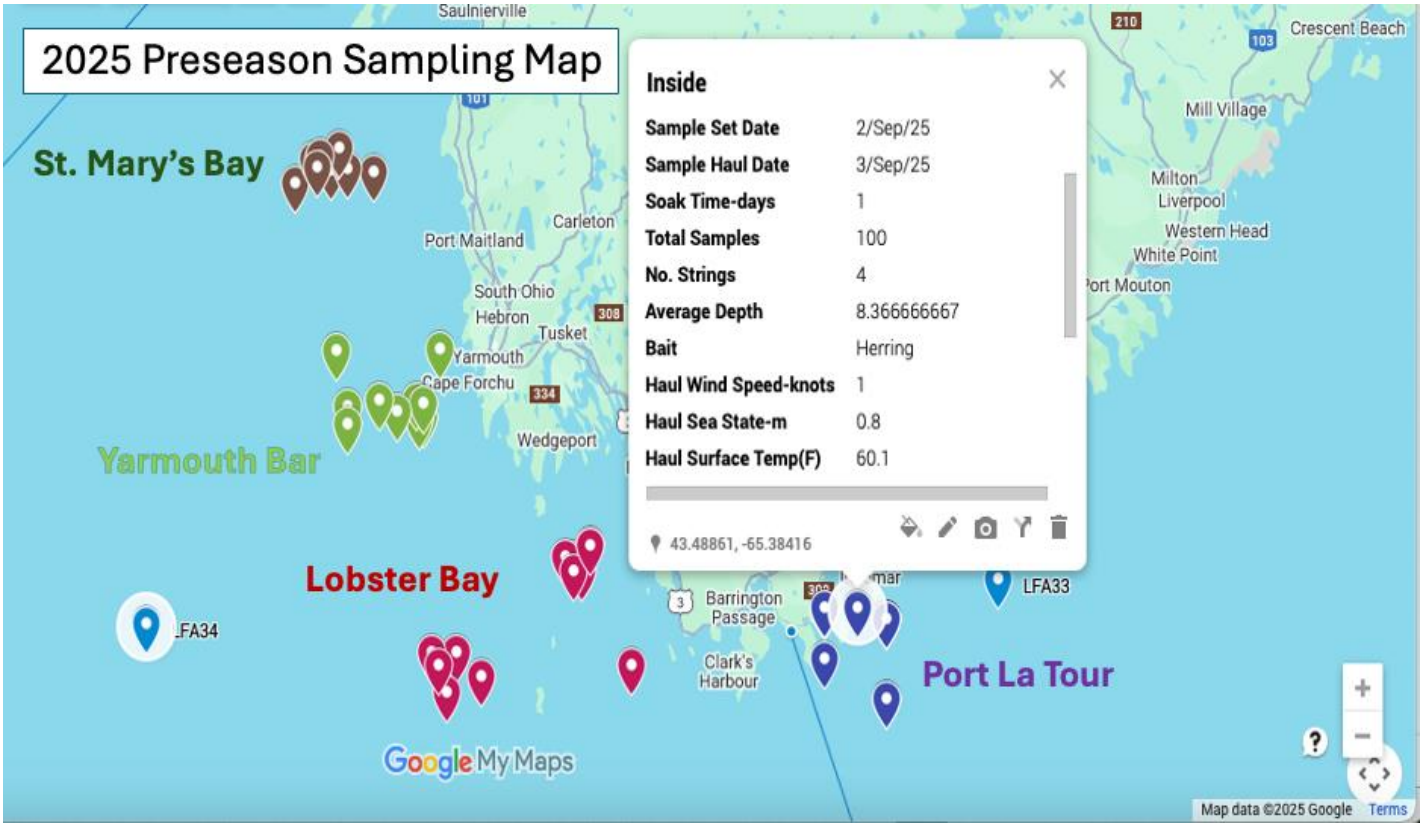


Figure 4. Map of 2025 Preseason Lobster Sampling Locations

[1] Readers of this report may access the Google Map of the 2025 Lobster Preseason Survey by clicking the underlined designated hyperlink. The map displays the sites of the 2025 preseason surveys as well as sites of each of the 2020 through 2024 surveys. For further information on accessing this map, contact: Daniel.Lane@uSainteAnne.ca.

2025 Program Participation. Sampling on the survey sites was executed with the assistance of southwest Nova lobster harvesters. These members (Table 2) used their fishing vessels to carry out the protocols of the ALMQ program with the assistance of the Coldwater Lobster Association data collection technician. We acknowledge – with gratitude – their expertise and invaluable contribution to the ongoing work of the preseason lobster survey program in LFAs 33&34.

Table 2. Vessels Participating in the 2025 Lobster Quality Preseason Sampling Program

LOCATION	CAPTAIN	VESSEL NAME
St. Mary's Bay	E. Deveau	*Lady D. I*
Yarmouth Bar	K. Penney	*Betty Ann & Brats*
Lobster Bay	T. d'Entremont	*Jane Rose*
Port La Tour	W. Smith	*Little Lady I*

2025 Weather Conditions. Weather conditions during the 2025 pre-season ALMQ survey were favourable throughout September and October, with consistently warm days, calm seas, and smooth sailing. These conditions allowed all scheduled survey sets to be completed on time with no weather-related delays. November, however, presented a different set of challenges. Increasing winds and deteriorating marine conditions required captains to adjust their hauling days in accordance with the shifting forecasts. With LFA 33 and 34 opening days approaching, this added understandable pressure to the planned schedule of surveys. Despite this, captains remained patient, flexible, and cooperative, working together to ensure the survey continued safely and efficiently.

A special acknowledgement is extended to Troy d'Entremont and Wilford Smith for their exceptional efforts. Both captains pushed their time limits and collaborated closely with Coldwater Data Collection Technician to determine the safest and most effective plan to complete the remaining sets.

2025 Bycatch. Jonah Crab continued to be a major concern (as in 2024) throughout the 2025 preseason sampling period, particularly in all outside locations with the exception of Port La Tour Outside. Early in the preseason (September), significant numbers of Jonah Crab were observed. However, their presence declined noticeably as the season approached. Fishermen commonly note that higher Jonah Crab abundance can correlate with lower lobster catch rates, and the early-season numbers were monitored closely for this reason. Occasional cod and spiny dogfish were observed across some sampling locations. However, their presence was minimal and not considered a notable concern during the 2025 preseason survey.

2025 Shell Disease Observations. As in past years, the recorded database assigns codes in the event of observations of lobster shell disease observations also known as epizootic shell disease. In 2025, as in the past preseason sampling periods, there have been minimal observations of shell disease in captured lobster. In 2024, and for the first time since the 2020 sampling survey, a single observation of shell disease was confirmed by the Marine Research Centre, Petit de Grat. In 2025, during the first preseason survey in Lobster Bay (September 1-2, 2025), 3 lobsters were observed that showed evidence of epizootic shell disease (see also Figure 5 below). No other shell disease cases were reported in the remainder of the preseason surveys. Industry members are asked to report any and all such evidence to the Marine Research Centre, Petit de Grat at their convenience.

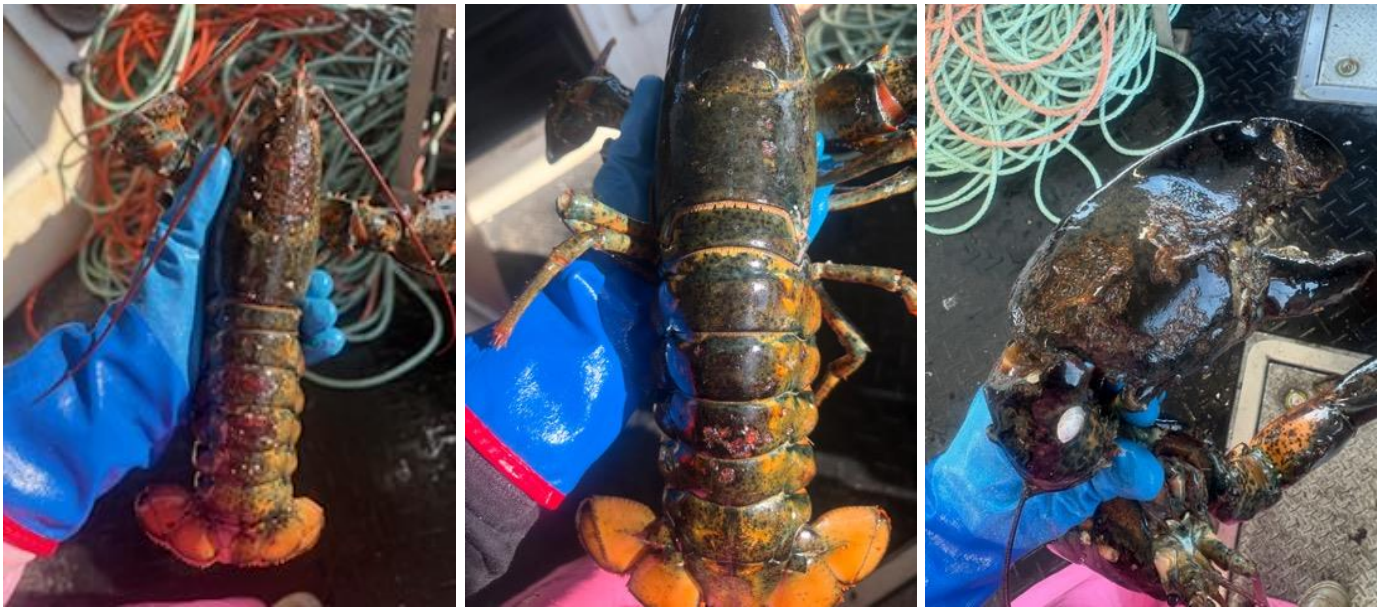


Figure 5. Lobsters (3) captured in Lobster Bay, September 1 and 2, 2025 with evidence of shell disease. Source: Courtney Thomas.

Temperature Observations. This summary report provides feedback on available temperature information at sampling site locations. This information includes set and haul water surface temperatures compiled by captains and the data collection technician, as well as soak times and soak time bottom temperature data downloaded from attached HOBO temperature loggers on sampling traps. Bottom temperature data recorded at regular intervals (1 to 3 hours) are downloaded and summarized as average, maximum, and minimum bottom temperatures during sampling soak time periods as reported in Table 2a below.

Bottom temperature data are presented for observational input and reader feedback. Bottom temperature data have long been considered to be important to understanding lobster dynamics and catchability. This information is meant to be compiled annually during the preseason sampling period and compared year-over-year to note any interannual differences. Data collected between October and November in the 2024 preseason sampling period is compared to the current 2025 data reported in Table 2a below.

Table 2a. 2025 Preseason Sampling Temperature Data Summary

LFA Subarea 2025	Site Location	Set Date/ Time*	Set Surface Temp (˚C)	Haul Date/ Time*	Haul Surface Temp (˚C)	Soak Time (Hrs:Mins)	Soak Time Ave Bottom Temp (˚C)	Soak Time Max Bottom Temp (˚C)	Soak Time Min Bottom Temp (˚C)
Lobster Bay	Inside	09-01 12:40	15.8	09-02 7:51	16.1	19:11	14.8	15.1	14.6
LFA 34		09-15 12:38	16.0	09-16 9:15	16.1	20:37	15.5	16.3	15.0
		09-29 12:25	16.7	09-30 8:55	-	20:30	16.3	18.7	15.8
		10-12 16:25	15.3	10-14 0:00	-	31:35	14.4	14.6	14.1
		10-27 12:35	14.5	10-28 0:00	-	11:25	13.7	13.7	13.6
		11-09 8:00	12.7	11-11 0:00	-	40:00	11.7	12.0	10.6
	Outside	08-31 9:50	14.9	09-01 7:41	15.2	21:51	11.9	15.7	10.7
		09-14 9:29	12.9	09-15 11:00	14.2	25:31	12.6	13.0	11.9
		09-28 9:10	14.2	09-29 9:25	-	24:15	11.1	11.5	10.9
		10-14 11:10	12.6	10-15 15:10	-	28:00	11.8	12.0	11.7
		10-26 9:20	14.5	10-27 9:20	-	24:00	13.6	14.0	13.0
		11-11 10:40	11.0	11-12 0:00	-	13:20	9.7	10.5	8.9
Port La Tour	Inside	09-02 0:00	-	09-03 0:00	-	24:00	-	-	-
LFA 33		09-16 16:00	19.0	09-17 7:30	18.8	15:30	18.3	26.8	13.6
		09-30 15:00	17.4	10-01 7:26	-	16:26	12.3	12.8	9.1
		10-15 10:00	14.6	10-16 0:00	-	14:00	13.9	14.0	13.7
		10-28 15:30	11.7	10-29 7:40	-	16:10	13.3	14.1	10.6
		11-13 8:30	8.4	11-14 8:00	-	23:30	7.9	8.5	6.3
	Outside	09-01 8:00	18.5	09-02 0:00	19.9	16:00	N/A	N/A	N/A
		09-15 8:30	17.9	09-16 14:15	20.6	29:45	15.8	23.4	11.0
		09-29 10:00	19.1	09-30 13:00	-	27:00	13.6	13.6	13.6
		10-14 14:39	15.8	10-15 8:10	-	17:31	5.4	6.3	5.1
		10-27 8:00	14.0	10-28 0:00	-	16:00	5.1	5.7	4.6
		11-09 6:15	8.9	11-13 10:00	-	99:45	5.2	5.6	4.9
St. Mary's Bay	Inside	09-09 15:30	-	09-10 9:15	-	17:45	10.8	11.1	10.3
LFA 34		09-21 8:30	-	09-22 15:45	-	31:15	11.2	13.2	10.8
		10-06 16:21	-	10-07 14:15	-	21:54	11.5	11.9	11.2
		10-20 16:40	-	10-21 10:30	-	17:50	11.6	11.9	11.4
		11-07 18:55	-	11-09 11:20	-	40:25	10.4	10.7	10.1
	Outside	09-08 10:30	-	09-09 0:00	-	13:30	N/A	N/A	N/A
		09-22 16:08	-	09-23 13:45	-	21:37	10.8	10.8	10.7
		10-05 8:45	-	10-06 15:15	-	30:30	10.4	10.7	9.9
		10-19 8:38	-	10-20 16:00	-	31:22	10.5	10.7	10.3
		11-02 10:20	-	11-07 19:10	-	128:50	9.9	10.8	9.3
Yarmouth	Inside	09-08 10:25	-	09-09 8:20	-	21:55	11.8	12.2	11.5
LFA 34		09-22 10:50	-	09-23 6:40	-	19:50	14.1	14.2	14.0
		10-06 10:00	-	10-07 9:15	-	23:15	13.4	13.9	13.1
		10-20 10:30	-	10-21 13:15	-	26:45	13.0	13.3	12.7
		11-07 12:00	-	11-09 7:10	-	43:10	11.7	11.9	11.5
	Outside	09-07 8:00	-	09-08 0:00	-	16:00	N/A	N/A	N/A
		09-21 8:40	-	09-22 9:15	-	24:35	10.4	10.9	10.0
		10-05 8:00	-	10-06 9:15	-	25:15	10.8	11.0	10.7
		10-19 8:25	-	10-20 9:20	-	24:55	11.0	11.2	10.8
		11-02 8:45	-	11-07 10:36	-	121:51	9.3	10.4	3.8

N/A - Temperature logger data not available/not recorded.

*Times for set and haul refer to String 1 where available.

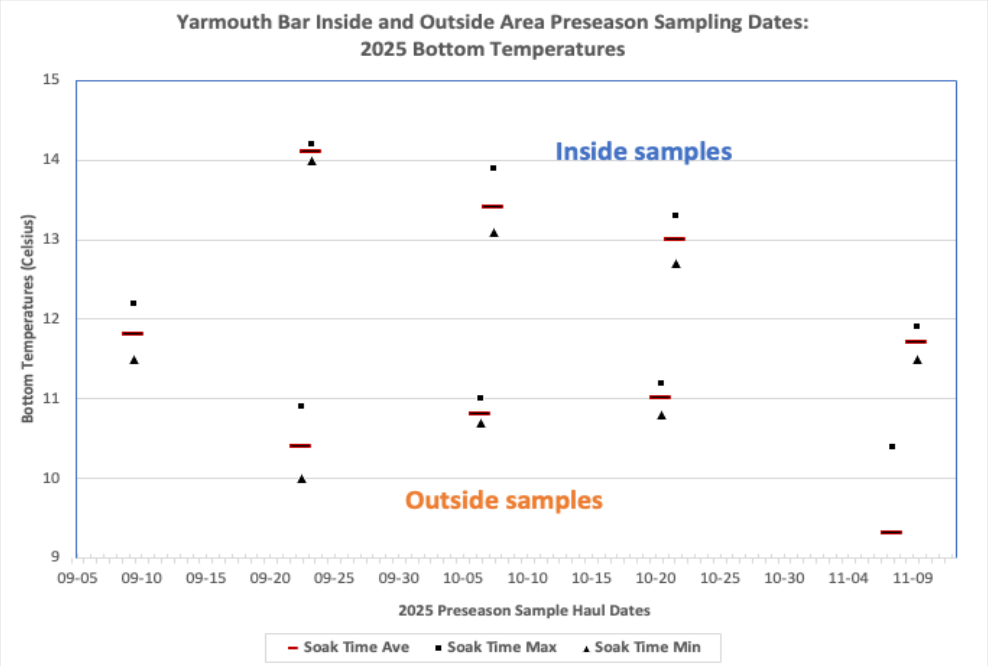


Figure 6. Yarmouth Bar Samples Bottom Temperature Information

Table 2a, Figure 6 show bottom temperature information from the 2025 sampling program. The observational data provide a snapshot of the status of the bottom ecosystem that undoubtedly impact lobster status and catchability. It is recognized that the date and location of sampling, and the depth of sample traps impact our observations of temperature data. For example, it is noted in Table 2a that for all sampling locations, bottom temperatures for Inside areas generally exceed those for Outside areas (see also Figure 6 for Yarmouth Bar). This is attributable to shallower Inside and deeper Outside bottom depths for similar dates.

In all areas–with the exception of Yarmouth Bar (Figure 6)–2025 average bottom temperatures are warmer over all Inside and Outside sites for comparable dates. On average, Lobster Bay and Port La Tour areas are over +2 degrees Celsius warmer whereas St. Mary's Bay are only warmer by +0.3 degrees Celsius warmer. In Yarmouth Bar, 2025 bottom average temperatures (Figure 6) on comparable dates vary between -1.8 and +1.1 degrees Celsius different from the 2024 bottom temperature averages. Overall, Yarmouth Bar bottom temperature averages are +0.1 degrees different between 2025 and 2024. It is notable that Yarmouth Bar temperatures in 2024, especially in the Outside sites, were considered by industry sources to be colder than normal. It appears that this may be continuing for Yarmouth Bar (only) in 2025.

Legal-Sublegal Proportions Observations. Inspired by the recent concerns raised in the Gulf of Maine by our American lobster sector colleagues, preseason survey data on the proportion sublegals in sample catch counts is being analysed for 2025 and compared to the past data for years 2020 to 2024. The analysis examines the occurrence of juvenile ("sublegal" or "shorts") lobsters in sample catches across the sampling locations. American scientists have argued that a drop in juvenile catches indicates that lobster recruitment to the commercial fishery in future years is at risk, and may be an indicator of an overall drop in future lobster abundance.

Highlights of the 2025 preseason sampling period and comparisons are presented in Section 3 below. Table 3 below presents a summary of the survey results for each of the 24 location-date samples in the survey program. Table 3 also reports soft and weak lobster percentages by sample and overall, as well as average BRIX per sample and overall.

Table 3. 2025 Preseason Sampling Survey Program

Sampling Location	Area	2025 Sampling Date	Total Harvested Lobster Count	Lobsters Sampled	Sample Ave BRIX level (mg/mL)	Sample %Soft/ %Weak
Yarmouth Bar LFA34	Inside	09-Sep	353	100	8.93	1%/0%
		23-Sep	249	100	9.91	1%/0%
		07-Oct	396	100	8.91	0%/0%
		21-Oct	493	100	8.36	1%/0%
		09-Nov	625	100	8.01	0%/0%
	Outside	08-Sep	33	15	9.48	0%/0%
		22-Sep	47	19	8.81	0%/0%
		06-Oct	407	100	7.94	1%/2%
		20-Oct	342	100	7.96	1%/0%
		07-Nov	783	100	6.74	0%/1%
Lobster Bay LFA34	Inside	02-Sep	922	100	9.11	3%/2%
		16-Sep	1303	100	9.53	1%/4%
		30-Sep	1328	100	8.98	5%/0%
		14-Oct	1321	100	8.20	14%/1%
		28-Oct	947	100	8.38	4%/0%
		11-Nov	1308	100	8.65	3%/0%
	Outside	01-Sep	528	100	10.11	7%/4%
		15-Sep	613	100	7.90	2%/2%
		29-Sep	727	100	8.29	1%/0%
		15-Oct	920	100	7.83	1%/0%
		27-Oct	738	100	8.16	2%/1%
		12-Nov	719	100	8.91	1%/0%
Port La Tour LFA33	Inside	03-Sep	413	100	7.76	1%/0%
		17-Sep	495	100	8.57	0%/0%
		01-Oct	365	100	7.50	5%/0%
		16-Oct	432	100	8.57	1%/0%
		29-Oct	337	100	7.81	2%/0%
		14-Nov	218	100	8.74	1%/0%
	Outside	02-Sep	22	6	7.73	0%/0%
		16-Sep	242	100	6.45	5%/2%
		30-Sep	195	100	6.50	4%/1%
		15-Oct	314	100	6.78	0%/0%
		28-Oct	667	100	6.48	3%/0%
		13-Nov	582	100	6.32	1%/0%
St. Mary's Bay LFA34	Inside	10-Sep	93	63	5.35	3.2%/1.6%
		22-Sep	306	100	8.24	1%/1%
		07-Oct	252	100	7.54	0%/1%
		21-Oct	484	100	7.27	2%/1%
		09-Nov	697	100	7.21	2%/1%
	Outside	09-Sep	13	2	12.40	0%/0%
		23-Sep	38	17	9.34	0%/0%
		06-Oct	92	78	7.66	2.6%/0%
		20-Oct	703	100	7.28	0%/0%
		07-Nov	788	100	6.73	0%/2%
TOTALS	**8 location-areas**	**44 sample location-dates**	**22,850 lobsters landed**	**3,900 lobsters sampled**	**Overall Ave BRIX 7.98mg/mL**	**Overall % Soft/Weak 2.08%/0.69%**

Review of the 2024 Preseason Survey Results

In 2024, a total of 2,400 preseason lobster samples were taken over the 6-week period from October 7 to November 13, 2024 over 24 sample location-dates, or 3 samples per each of the 8 locations. In 2024, total landings (legal and sublegal lobsters) were 10,851 lobsters. These values, the lowest in the time series since data collection began in 2006, are the consequence of funding, and a late start to the preseason data collection period in 2024.

2024 preseason results indicated that lobsters landed at the start of the 2024-2025 season were of marginally good quality with average overall BRIX at the moderate level of 8.10 mg/mL., a 17% decline in the overall BRIX average per sample for compared to 2023 (9.78 mg/mL). Average BRIX levels observed throughout the preseason sampling period declined compared to past years (2020-2023) for both Inside and Outside of all locations reversing the continued preseason average BRIX improvement observed from 2020 to 2023.

While average BRIX levels per sample in 2024 remained "Good", there was clear indication of a decline. For St. Mary's Bay, overall average BRIX values were rising from 2020 to 2023 followed by an approximate 25% drop for the 6 samples of 2024. Similarly for Yarmouth Bar in 2024, overall average BRIX values per sample show a rising trend from 2020 to 2023. In 2024, however, Yarmouth Bar average BRIX values were below 9 in both the Inside and Outside areas representing a reversal of the increasing trend since 2020. As for St. Mary's Bay, Yarmouth Bar average BRIX values per sample place Yarmouth Bar back in the lower BRIX level averages of the 2014+ period.

In 2024, lobster total counts (legals plus sublegals) in each location typically decrease in Inside samples, and rise in Outside samples. Lobster counts in Port La Tour samples were stable compared to past years (2020-2023), however, counts were lower in Lobster Bay including a pattern of falling counts in Lobster Bay Outside. In 2024, counts in St. Mary's Bay Inside were higher than in 2023 (at 2022 levels) but decreasing into November, whereas counts in Yarmouth Inside were lower than in past years (contrasting the increasing trend from 2021 to 2023) and continuing to decrease into November.

Counts in the Outside areas of St. Mary's Bay and Yarmouth were low (at 2023 levels) but increasing into November 2024. In St. Mary's Bay, counts for 2024 samples were comparable in the Inside area and represented the overall highest counts per sample across all locations. For Yarmouth Bar Inside and Outside, catch counts showed a sharp year-over-year decline (-40% to -60% respectively) in landings per sample. For the cases of Port La Tour and Lobster Bay Inside and Outside areas, counts per sample did not change appreciably from past years 2020 to 2023.

The percentage "weak" lobsters observed in 2024 was 5.38% weaks over all samples representing an overall decline in the numbers of sampled weak lobsters compared to past years 2020 to 2023.

Detailled information on the 2024 Preseason Survey can be found in the Lobster Quality Preseason Sampling Summary Report for 2024 (November 2024) and the Lobster Quality Preseason and In-season Sampling Final Report (April 2025).

2025 Preseason Summary Highlights

2025 Preseason Summary highlights are summarized below for: (1) BRIX level values; (2) lobster counts per trap; (3) lobster carapace hardness values; (4) lobster sublegal counts proportions and (5) percent weak lobsters in the samples.

1) BRIX Level Values

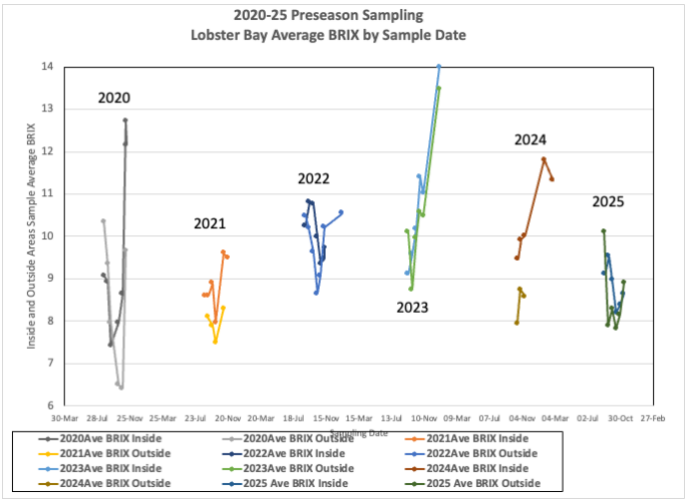
In 2025, average BRIX levels observed over the preseason samples (September to November) fell for both Inside and Outside areas across all locations. In past years (2020-2024), early preseason surveys tended to fall through September and then continue to rise from mid-October to the end of preseason sampling in early to mid-November with Inside areas relatively stable and Outside areas increasing. This typical rise in BRIX did not happen as usual in 2025. Rather, samples' average BRIX levels declined in both the Inside and Outside areas over the preseason resulting in an overall low average BRIX level of 7.98 mg/mL (Table 3) – the lowest average overall BRIX value in the time series since 2020.

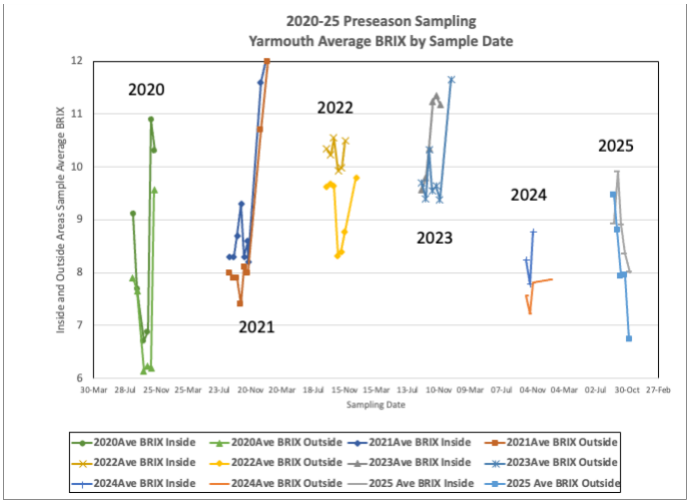
In 2024, average BRIX values reversed the 202 to 2023 trend over all locations that showed a rise in averages In preseason 2025 samples, average BRIX levels per sample were similar by location to the 2024 averages. In the Inside areas, overall samples average BRIX levels per sample vary between a low of 7.26 mg/mL (St. Mary's Bay) to a high of 8.82 mg/mL (Yarmouth Bar). In Outside areas, overall average BRIX per sample vary between low levels of 6.52 mg/mL (Port La Tour) to a maximum of only 8.53 mg/mL (Lobster Bay).

In the figures below, average BRIX values are shown for Lobster Bay and Yarmouth Bar and include samples for both Inside and Outside areas and for each of the indicated years 2020 to 2025. For Lobster Bay, overall average BRIX values tend to rise from 2020 to 2023 and then fall in 2024 and 2025. The 2025 BRIX values are similar to the lower BRIX level averages of 2021.

For Yarmouth Bar in 2025, overall average BRIX values per sample show a rising trend from 2020 to 2023 and then fall in 2024. In 2025, Yarmouth Bar average BRIX values appear above the 2024 values but below the 2023 higher average BRIX.

2025 preseason sampling results in LFAs 33 and 34 indicate that lobsters landed at the start of the 2025-2026 season in southwest Nova Scotia, appear to be of overall moderate-low (ML) quality by comparison with the entire 2006 to 2023 preseason database. For all locations in 2025, average BRIX values per sample are consistent with the lower level averages for BRIX since the 2014+ period.





2) Lobster Total Counts Per Trap

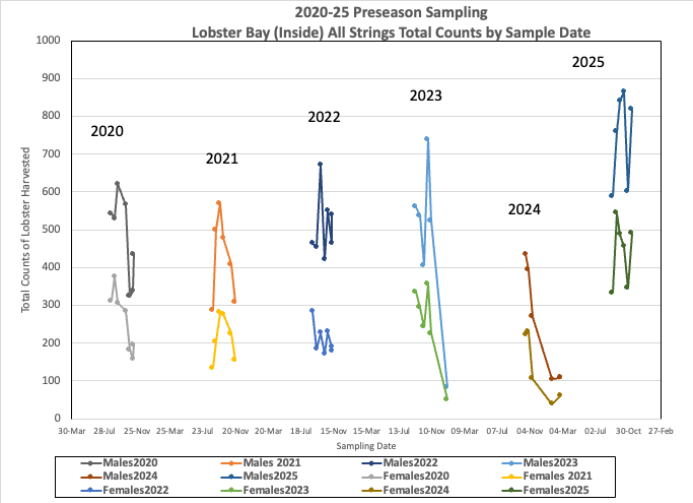
In 2025, total landings counts of legal and sublegal, and male and female lobsters were 22,850 lobsters or 13.06 lobster counts per trap (for 1,750 total traps in 2025). This represents an increase of +55% over the 2024 value of 8.44 lobster counts per trap (1,425 traps in 2024).

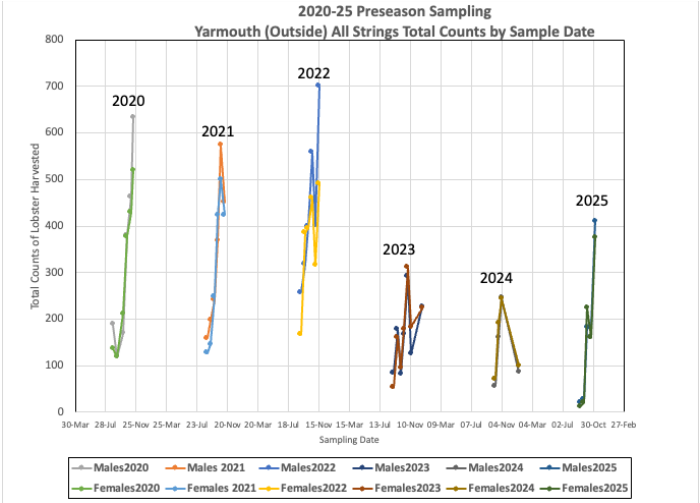
Lobster total counts (legals plus sublegals) in each location typically fall (2020, 2024) or are stable (2021, 2022) over the preseason period in Inside samples, and rise over the period of Outside samples (2020-2024). This is consistent with the expected Inside to Outside movement of lobsters to deeper waters in LFAs 33&34 as the commercial season and winter nears.

In 2025, this pattern was repeated in the Inside areas with relatively stable lobster counts in Lobster Bay exceeding other areas by a factor of 2 (20 average total lobster counts per trap versus 5-15 counts per trap in other areas). In 2025, Port La Tour Inside total average counts per sample declined while Yarmouth Bar and St. Mary's Bay Inside counts increased over the preseason period. In the Outside areas, average total lobster counts increased in all Outside areas with amounts rising by the end of the preseason period to the higher Lobster Bay levels of 15 to 20 average total lobster counts (legals plus sublegals) per trap. To examine comparable yearly differences in sampling total counts of lobster, the measure of total (legal and sublegal) lobsters landed per preseason sample are illustrated for selected locations in the figures below.

Lobster Bay Inside total (legal and sublegal) counts are illustrated annually for each preseason sample over the years 2020 to 2025 and by males and females. Total lobster counts per 40-trap (on 4 strings) samples in Lobster Bay counts for 2025 represent the overall highest counts of males plus females across all years 2020-2025. As is typical of Lobster Bay Inside catches in the past, 2025 catches of males exceed that of females. These results for Lobster Bay Inside counts suggest that the commercial catches (legal plus sublegal) at the start of the season in this area are expected to be higher than past years.

With respect to legal-sized lobster counts per trap, Lobster Bay counts for 40 traps per sample for 2025 average 18.5 legal lobsters/trap in the Inside area and 12.6 legal lobsters/trap in the Outside area and represent the overall highest legal counts per trap across all locations in 2025 by a factor of more than 2.





The figure above for Yarmouth Bar Outside total counts per sample for 2020 to 2025 males and females illustrate that this area is improving relative to the 2023 and 2024 when counts were 60% below those compared to 2020 to 2022. The expectation is that catches in the commercial fishery in 2025 will improve relative to 2024 in the Outside area of Yarmouth Bar based on the total counts per trap in the November sample (20 legal and sublegal lobsters per trap and 15 legal lobsters per trap).

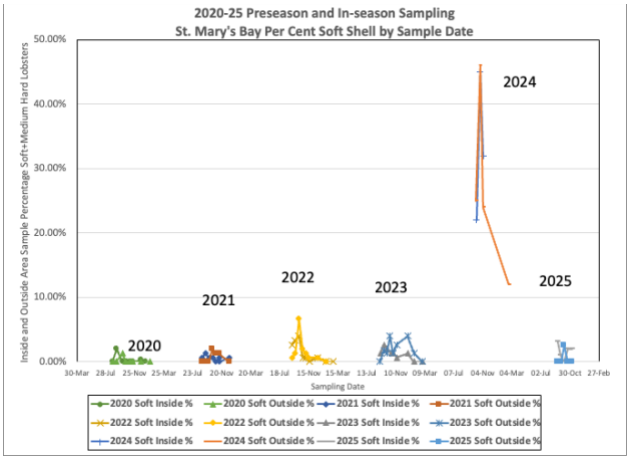
For the cases of Port La Tour and St. Mary's Bay Inside and Outside areas in 2025, total counts per sample do not change appreciably over past years 2020 to 2024. Average legal counts per trap in both areas in 2025 are approximately 6 lobsters per trap. Expectations are that commercial catches at the start of the season in these locations should be comparable to the past year's catches of 2024.

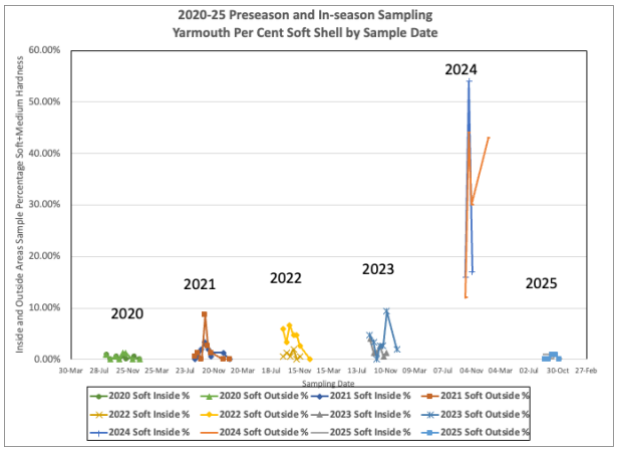
In terms of legal counts per trap over all 8 locations, average legal counts per trap in 2025 (8.6 legal-sized counts per trap) are up by 25% compared to the 2024 values of 6.9 legal-sized counts per trap.

3) Lobster Shell Hardness in Samples

In the 2024 preseason, measures of the percentage of Soft lobster shells in samples shifted dramatically in comparison to the 2020 to 2023 past preseason survey results. In 2025, these measures shifted once again to return to pre-2024 results. These shifts are illustrated in the graphs below for the Inside and Outside areas of St. Mary's Bay and Yarmouth Bar. These graphs illustrate the percentage of the samples of the counts for "Soft" for the preseason survey dates over the 5-year reporting period, 2020 to 2025.

Counts of Soft lobster spiked from negligible amounts (less than 10%) in 2020 through 2023 to near 30% in St. Mary's Bay and 40% in Yarmouth Bar in their respective sampling dates for 2024. In 2025 however, there has been a return to negligible levels of Soft lobsters in these two areas. These dramatic shifts in 2025 are also evident in Port La Tour and Lobster Bay Inside and Outside areas.





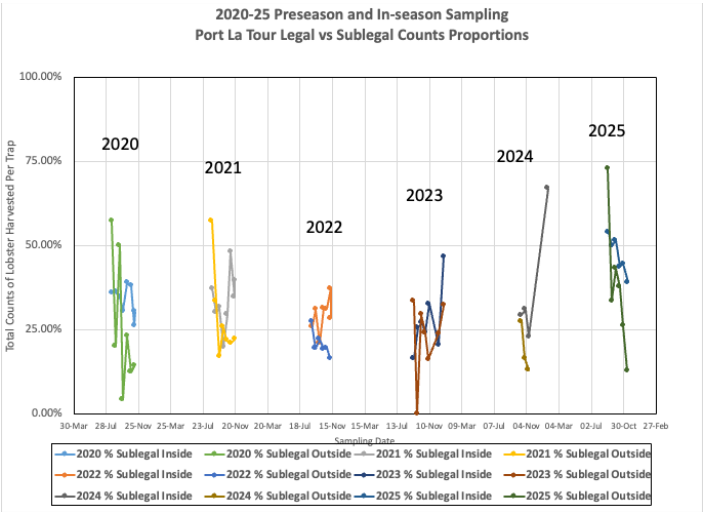
As noted in the past, it is understood that subjective measures of hardness are but one characteristic of determining lobster quality. While the 2024 elevated Soft measures were concerning, they could be associated with: (1) a change in the interpretation of "Soft" carapace by the technician. We reserve judgment on the overall significance of the 2024 shift until a wider and longer time frame of hardness sampling is completed. In the interim, we acknowledge that the interpretation of the 2025 data on carapace hardness is not likely to impact the quality of lobster for the 2025-26 commercial season as indicated by the preseason samples across all areas.

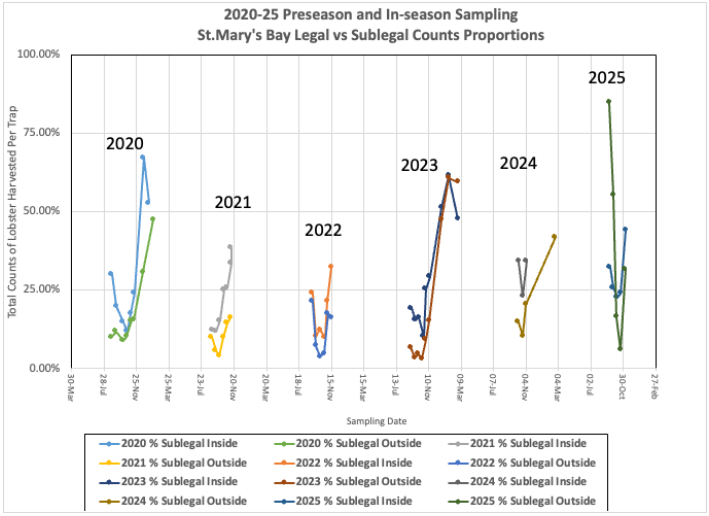
4) *Lobster Legal-Sublegal Counts Proportions*

The 2024 survey was carried out under the assumption that the United States would be establishing new conditions for the allowable minimum size of lobster for importation to American markets. The proposed changes had been initiated due to a rule-based model that was triggered by observed U.S. catches of sublegal lobster that were below expectations. The changes were designed to protect perceived declining abundance of recruiting lobster to the commercial fisheries. Although the U.S. measures were not applied, it was decided that this report would analyse the observed catches of sublegal lobsters in this sampling program of LFAs33 &34 in southwest Nova Scotia.

The graphs below illustrate the proportion of sublegal catches in the survey over the period from 2020 to 2025. The graphs provided for the Inside and Outside area of Port La Tour and St. Mary's Bay are also indicative of similar results for Lobster Bay and Yarmouth Bar as illustrated.

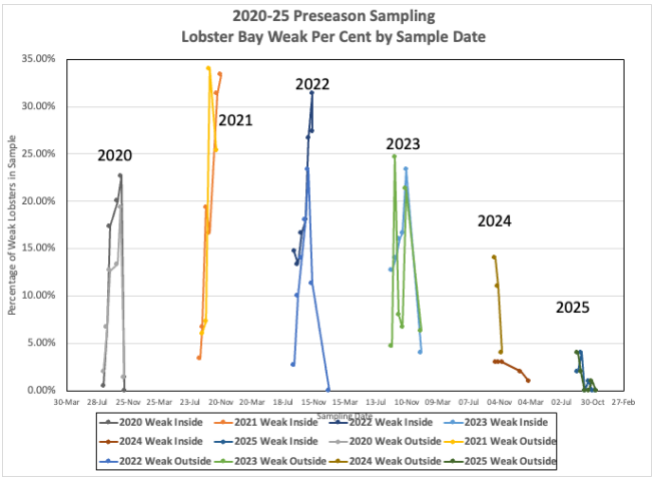
It is noted that the range of sublegal catch counts percentages varies over a wide range from near zero sublegal catches to 75% and more over the time period. Moreover, catch counts in Inside areas vary similarly with Outside areas. Finally, 2025 results are similar to results for prior years 2020 to 2024. Consequently, we observe and conclude that the catch of sublegals as a proportion of total catch counts do not appear to exhibit a trend over the observed time frame in LFAs33&34.





5) Percent Weak Lobsters in Samples

The percentage of "weak" lobsters observed in 2025 preseason sampling over all areas and samples was estimated to be at historical low levels below 1% (Table 4). These observations represent an overall decline in the numbers of sampled weak lobsters compared to past years 2020 to 2024. The charts below provide the percent of weak lobsters recorded for the Inside and Outside areas of Lobster Bay and St. Mary's Bay. The evidence shows the decline in weak counts in these areas relative to past years. These results are indicative of reduced weak counts in all areas.



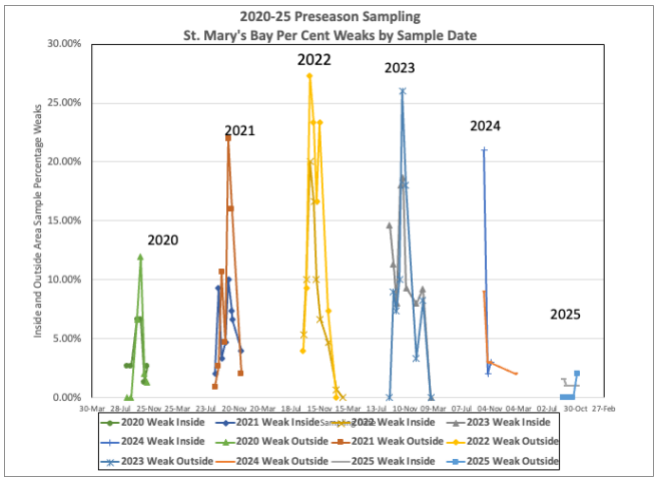


Table 4 below summarizes the 2025 preseason samples results for:

(1) average BRIX level values over all preseason samples by location; (2) average legal-sized lobster counts per trap; (3) average lobster carapace 'Soft' percentage values in location's samples; (4) percent weak lobsters in the samples by location; (5) estimated overall lobster quality category; (6) numbers of samples by location, and (7) each location's 2025 most closely comparable historical year(s) from the historical 2006-2024 database.

Table 4. 2025 Preseason Sampling Summary Results

Locations: / 2025 Presea Samples	Yarmouth Inside	Yarmouth Outside	Lobster Bay Inside	Lobster Bay Outside	Port La Tour Inside	Port La Tour Outside	St.Mary's Bay Inside	St.Mary's Bay Outside	Overall Locations
Average BRIX (units/ml)	8.82	7.71	8.81	8.53	8.16	6.52	7.26	7.35	7.98
Ave Legal Counts Per Trap	6.40	5.94	18.52	12.60	5.18	6.15	6.22	6.49	8.63
%Soft	0.60%	0.40%	5.00%	2.33%	1.67%	2.17%	1.63%	0.51%	1.68%
%Weaks	0.00%	0.60%	1.17%	1.17%	0.00%	0.50%	1.15%	0.40%	0.62%
Estimated Overall Lobster Quality Category	ML	ML	ML	ML	ML	ML	ML	ML	ML
No. of Location-dates	5	5	6	6	6	6	5	5	44
Comparable Years	2012, 2021	2014, 2015	2015, 2022	2019, 2024	2014, 2019	2016, 2018	2024	2019, 2024	2014-2024

6) Berried Females Observations

Berried (egg-bearing) females were examined in considerable detail again in the 2025 preseason surveys. Of the 44-sample location-date combinations, 28 (64%) captured at least 1 berried female ("seed") lobster and as many as 37 (maximum observation – Lobster Bay Inside, September 16 sample). The average observed was approximately 5.5 berried females per sample date or 2.5% (242) of all legal and sublegal female lobsters captured (9,587) during the 2025 preseason survey dates. In 2020 through 2024, those figures were 2.5% (270 berried females on 10,851 female lobsters captured in 2020), 1.6% (165 on 10,435 in 2021), 2% (245 on 12,434 in 2022), 3.6% (350 on 9,711 in 2023), and 7.3% (339 on 4,649 in 2024) respectively. Berried female data also recorded for carapace size, clutch fullness, egg stage and condition.

Analyses of these and other berried female data are provided in further detail in the full report of the 2025-2026 Preseason and In-season Lobster Quality Sampling Program scheduled to be released in the Spring of 2026.

Summary of 2025 Predictors

Predictors for the start of the commercial season (end-November through December 2025) are provided for the following lobster quality indicators based on the 2025 preseason sampling program results:

(1) Expected average BRIX level values by 8 locations;
(2) Expected average legal-sized lobster counts per trap by 8 locations; and
(3) Expected average percent weak lobsters by location.

The logic for establishing the list of predictors is based on the extension of the observed 2025 preseason samples' results into the start of the commercial season for 2025-2026. From the start of the commercial season (scheduled for Monday, November 24, 2025), lobsters are preparing to move from the post moult stage to the premoult stage over the winter of 2025-2026. The premoult stage is characterized by hardening of lobster shells and lower incidence of lobsters with soft and medium scale carapaces, and lower incidences of otherwise weak lobsters. Estimates of these predictors into the mid-December period anticipate the rate of improvement of lobster quality status overall. Finally, the estimate of counts per trap takes into account the increased catchability of lobsters as well as the draw-down in catchable lobster abundance in each location following the initial start of season fishing effort intensity. As evidenced from the data, the participation of the commercial fleet immediately after the season opens results in fishing effort that leads to a precipitous decline in catch counts of lobster per trap in all locations into January 2026. Table 5 below presents the estimated predictor values based on the above assumptions through December 2025.

Table 5. 2025 Preseason Sampling Predictors through December 2025

Locations: / Predictors	Yarmouth Inside	Yarmouth Outside	Lobster Bay Inside	Lobster Bay Outside	Port La Tour Inside	Port La Tour Outside	St. Mary's Bay Inside	St. Mary's Bay Outside
Average BRIX (mg/mL)	9	8	9	10	9	8	8	8
Ave Legal Counts Per Trap	10	16	17	15	4	13	10	16
Ave % Weaks	1%	1%	<1%	<1%	1%	<1%	<1%	<1%

The predictor values in Table 5 are presented here to test the ability of this report in mirroring the results at the start of the commercial fishery. Feedback from industry about the viability of these predictors will assist in improving these predictor results based on the preseason sampling program observations. The results of indicator predictability will be reported in the Spring 2026 report release.

Overall in 2025, average BRIX levels across all locations are expected to remain at the margin of "Good" (8 mg/mL) as lobster proceed from post-moult to premoult status and taking into account the decline in most area of samples' average BRIX into the late preseason (November) samples. However, BRIX are lower in 2025 compared to past years with overall average BRIX at 7.98 mg/mL, the lowest value in the time series.

In 2025, legal catch counts per trap have risen compared to past years, especially in the Outside areas across all locations as evidenced by the late preseason samples taken in November in the areas. It is therefore expected that legal catch counts per trap at the start of the commercial fishery will increase compared to past years. This is especially the case in Yarmouth Bar Outside where catches may be expected to increase relative to previous years. Overall it appears that falling BRIX levels are coincident with rising catch counts across most areas into the November preseason samples. This is an apparent, but not necessarily statistically evident occurrence in lobster preseason sampling.

The percent of weak lobster is expected to fall over all locations into December 2025 and remain at low rates near 1%.

2025 Preseason Survey Results by Subarea

In the information on the 2025 survey which follows, sample results by BRIX category are shown for each of the 8 sampling locations. The results present:

(A) BRIX category series trend for the 2025 samples; (B) comparable BRIX category preseason sampling 3-4 weeks before the start of the commercial season for years 2012 to 2025; (C) lobster (legal-sized) counts per trap for each sample in 2025 compared to comparable results in 2020 to 2024. The trends are described and summary predictions for the 2025 start-of-season are presented for each location.

(A) **Blood Protein (BRIX) Categories**. Results are provided for the BRIX indicator values ("Good", "Moderate", "Poor") for each location's sequence of 2025 preseason sampling dates.

(B) Annual graphics compare past years (2012 to 2024) to the current year (2025) for the sample mean BRIX, and BRIX distribution by category at the end of the **annual survey 3 to 4 weeks prior to the start of the commercial season**. Knowledge of BRIX values and lobster moult dynamics at the end of the survey period are used to provide a prediction of expected average BRIX values provided for each of the 8 sampling locations at the start of the commercial season scheduled for November 24, 2025.

(C) In 2025, the accumulated (male and female lobsters) results of **legal-sized total counts per trap** that occurred in the survey dates are highlighted and compared to past year's preseason sampling data, 2020-2024. These survey values provide an indication of the potential catch counts per trap for the start of the commercial season and are also used in this report as an approximate predictor of commercial catch rates for each of the 8 sampling areas as noted in the summaries by location.

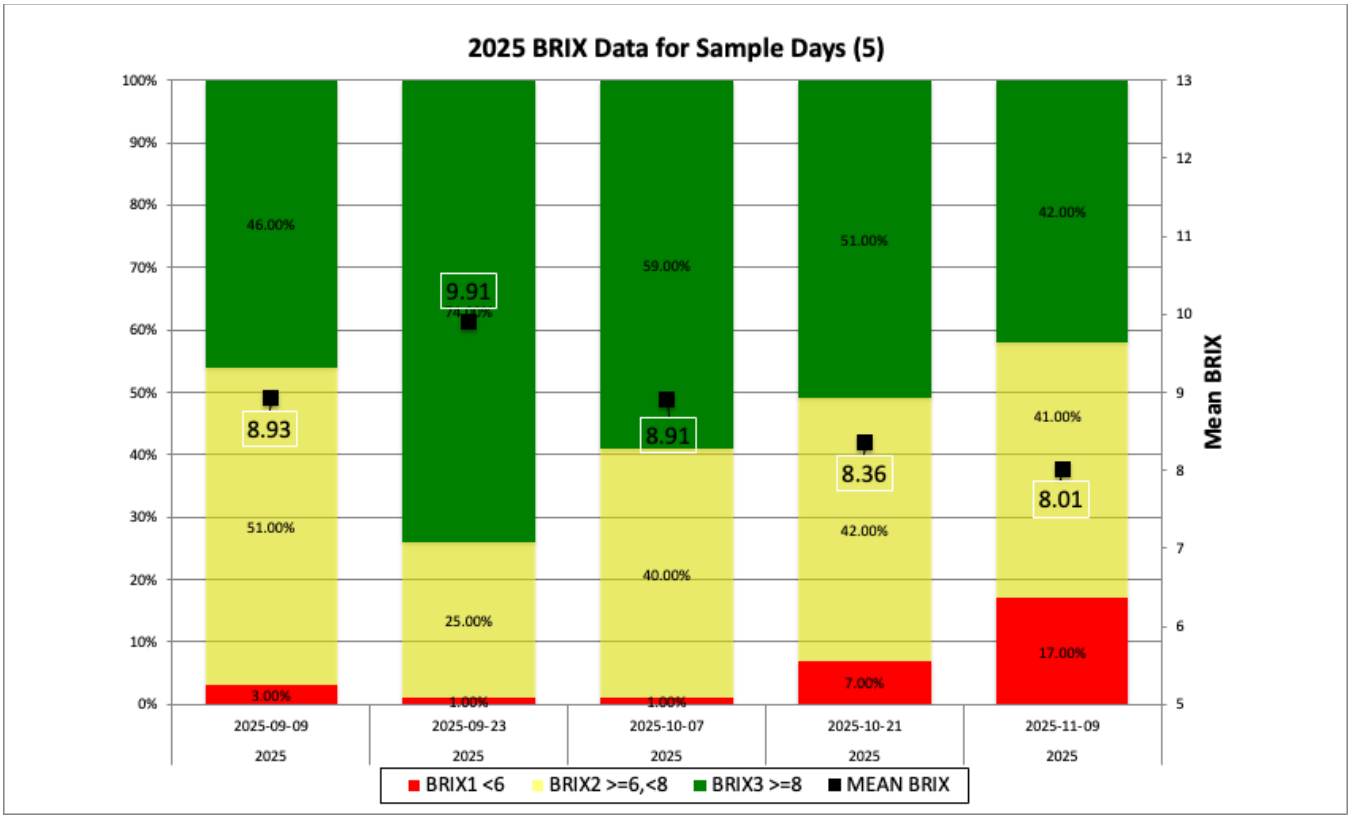
YARMOUTH INSIDE

2025 SUMMARY OF RESULTS

(A) Blood Protein (BRIX) Categories–2025 Samples

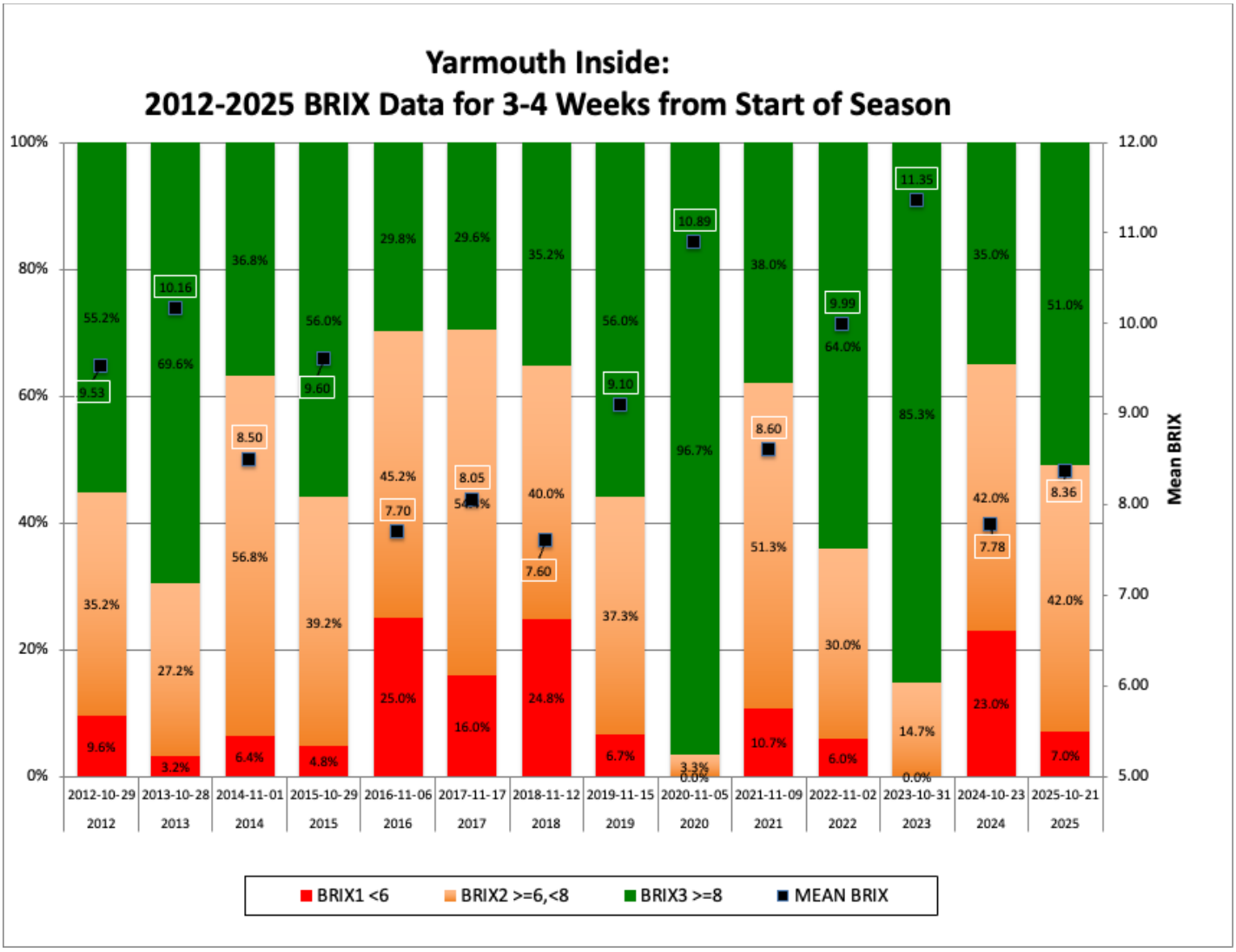
In the figure below, 2025 preseason results for 5 sample sites in Yarmouth Inside show relatively steady average BRIX from early-September to mid-November samples. More than 40% of each sample attained "Good" levels of BRIX (≥8 mg/mL). The proportion of "Poor" lobsters (BRIX<6 mg/mL) sampled in Yarmouth Inside remains below 17% of all 5 samples in 2025.

Average BRIX level values for samples in 2025 varied slightly from a low of 8.01 mg/mL in November to a high of 9.91 mg/mL at end September. Overall average BRIX values for 2025 (7.98 mg/mL) are 10% below average BRIX in 2025 samples for Yarmouth Inside (8.82 mg/mL). The trend since September is observed to be a declining average BRIX into the start of the commercial season.



(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

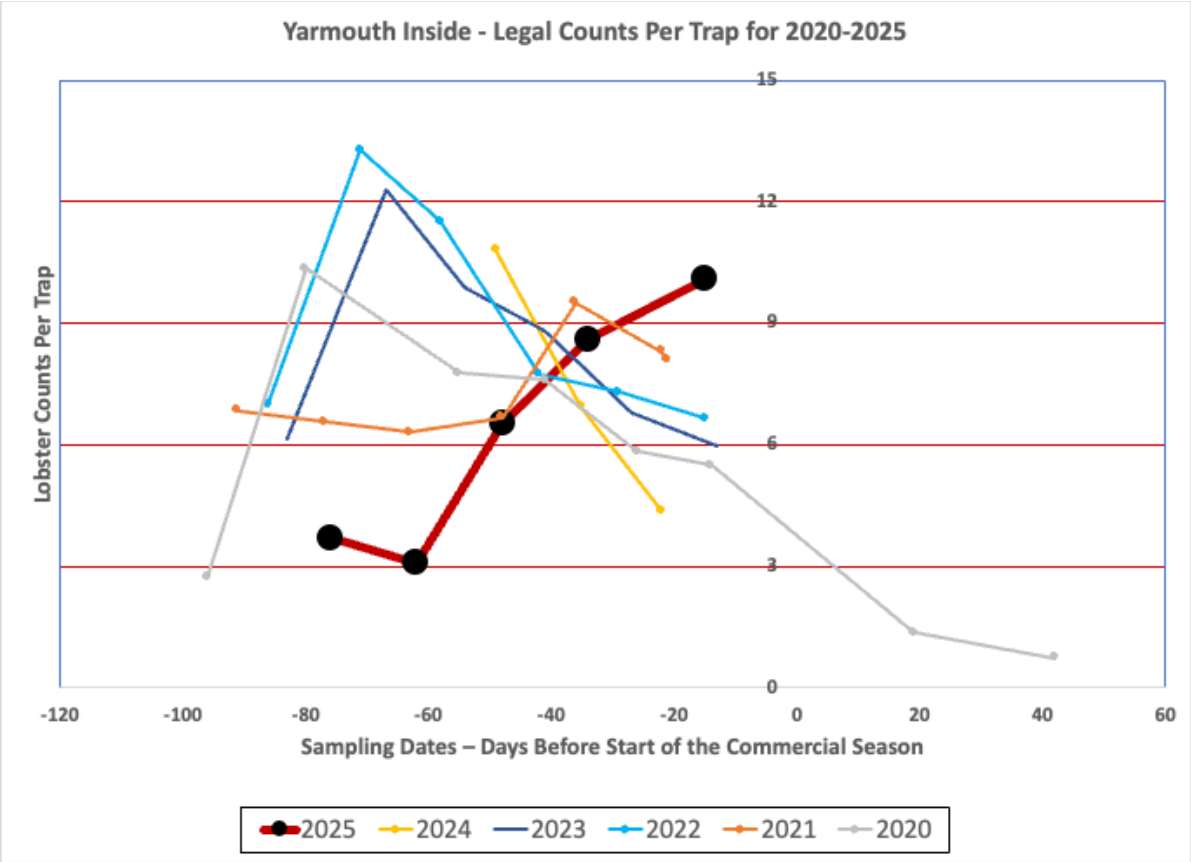
From the figure below, annual samples 3-4 weeks from the start of each commercial harvest season opening are variable across the series from 2012 to 2025 for Yarmouth Inside. The 2025 sample (October 21) has an intermediate BRIX average (8.36 mg/mL) in the series. The October 21, 2025 sample is comparable to the November 9, 2021 sample, with comparable BRIX category values.



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) lobsters that occurred in the preseason samples dates in 2025 (thick red line) are compared to past years' samples (2020-2024). The counts for Yarmouth Inside are initially below past years' counts/trap for the early samples in September and October dates. However, by mid-October 2025, counts/trap rise above past years' counts and continue increasing into the November sample date when legal counts per trap exceed all past years sampling in this area.

This trend is positive heading into the commercial season and expectation is for good catches (approximating 10 legal counts per trap) in Yarmouth Inside through December 2025. As evidenced by the 2020 in-season sampling in the figure below, commercial catch rates in 2025 are expected to fall precipitously after the beginning of the commercial season through to January 2025 as legal-sized lobster abundance is extracted from Yarmouth Inside.



YARMOUTH INSIDE – Summary

1) Yarmouth Inside shows a marginally declining average BRIX from early-October to mid-November samples toward 8 mg/mL. More than 40% of each sample attained "Good" levels of BRIX (≥8 mg/mL) in 2025 preseason sampling.

2) Yarmouth Inside Lobster Quality Category for 2025 samples are classified as "Moderate-Low" (ML). It is expected that "Good" BRIX levels (8 mg/mL) will be maintained into December 2025 as lobster move from post moult to premoult status over the winter. The 2025 sample is most comparable to 2021 during the period of relatively lower quality lobster in the commercial fisheries.

3) Yarmouth Inside legal counts per trap exhibit an increasing trend towards the end of preseason sampling. It is anticipated that Yarmouth Inside initial commercial catch rates in 2025-2026 will be higher in 2025 compared to the recent past.

4) Yarmouth Inside Weaks samples are near negligible in 2025 preseason sampling.

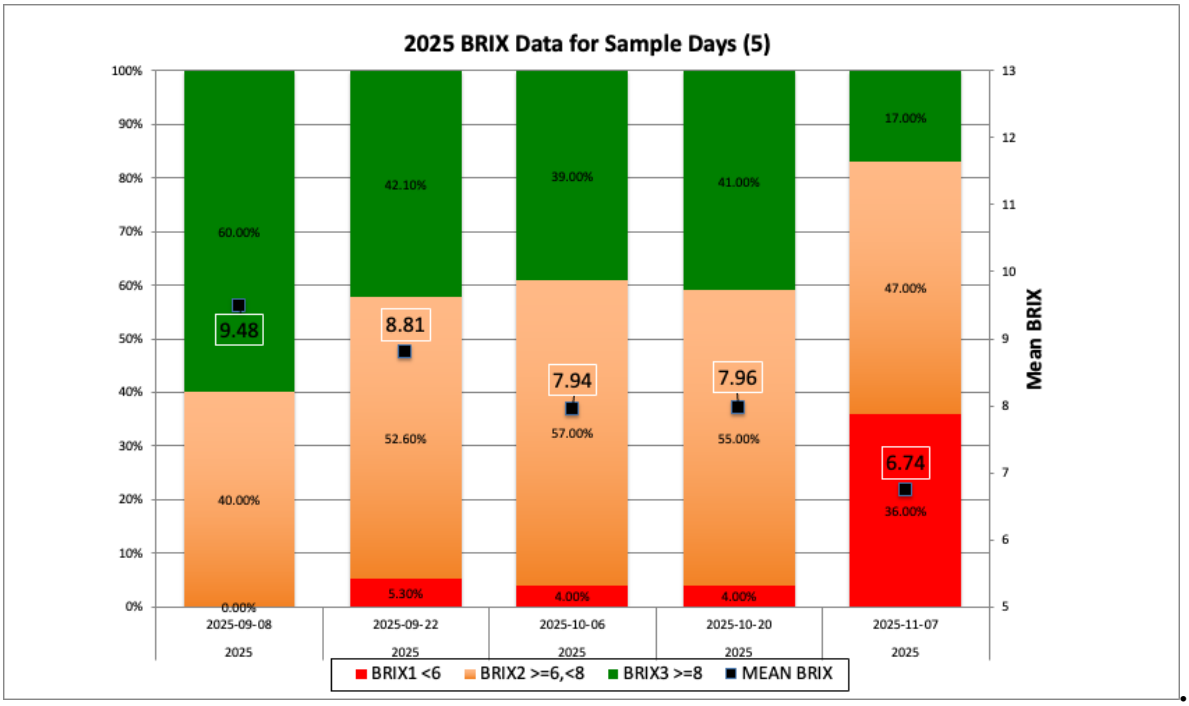
YARMOUTH OUTSIDE

2025 SUMMARY OF RESULTS

(A) Blood Protein (BRIX) Categories–2025 Samples

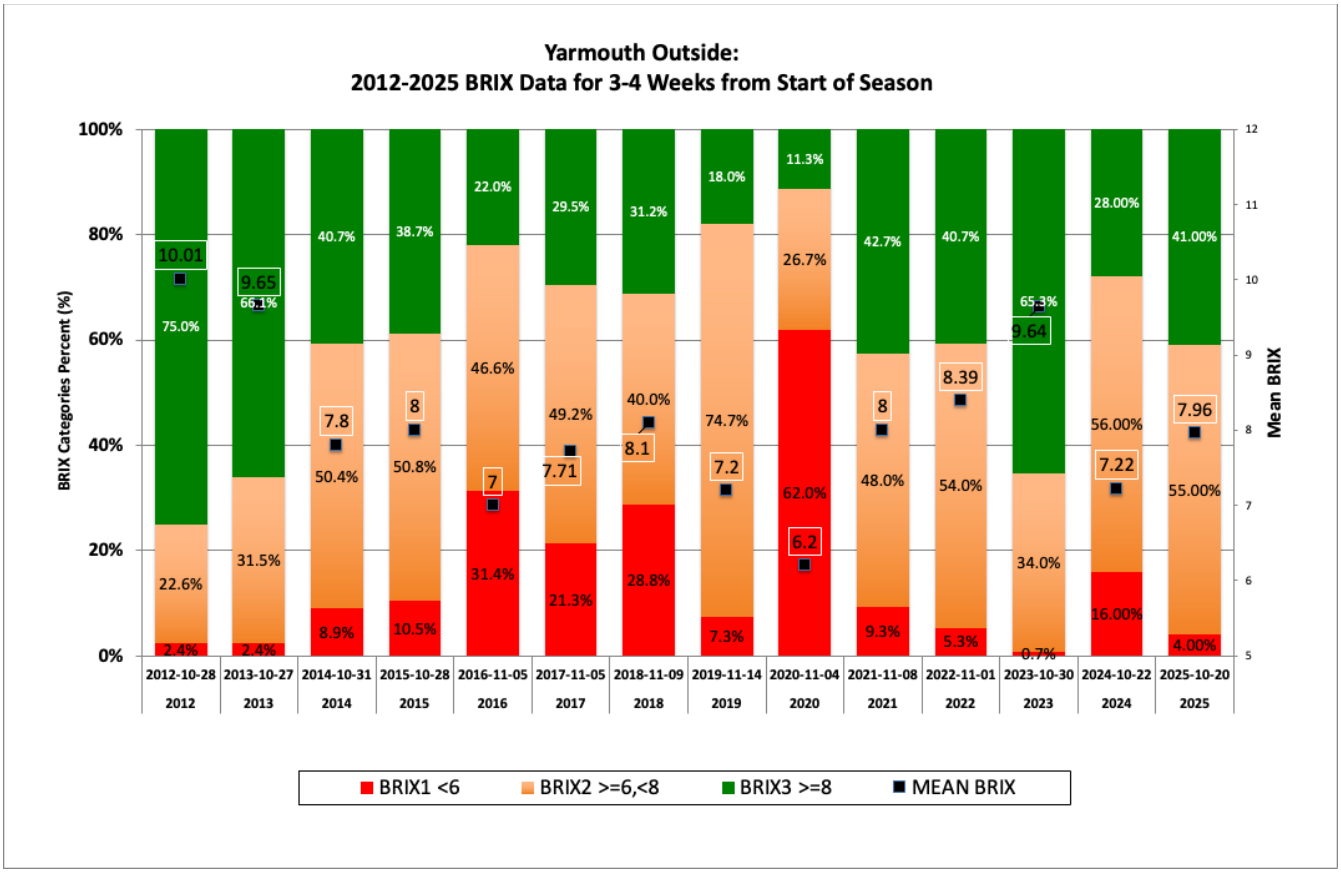
In the figure below, 2025 preseason results for 5 sample sites in Yarmouth Outside show a declining average BRIX from early-September to early-November samples. Similarly, the proportion of "Good" levels of BRIX (≥8 mg/mL) decline from 60% in September sampling to 17% at the end of sampling in early November. The proportion of "Poor" lobsters (BRIX<6 mg/mL) sampled in Yarmouth Outside remains low (<6%) until the November sample when "Poor" lobsters represent 36% of the sample.

Average BRIX level values for samples in 2025 declined from a high of 9.48 mg/mL in the first preseason sample in early September, to a low of 6.74 mg/mL at the ending sample in November. Overall average BRIX values for 2025 (7.98 mg/mL) are slightly above the average BRIX in 2025 samples for Yarmouth Outside of 7.71 mg/mL).The trend since September is observed to be a declining average BRIX into the start of the commercial season.



(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

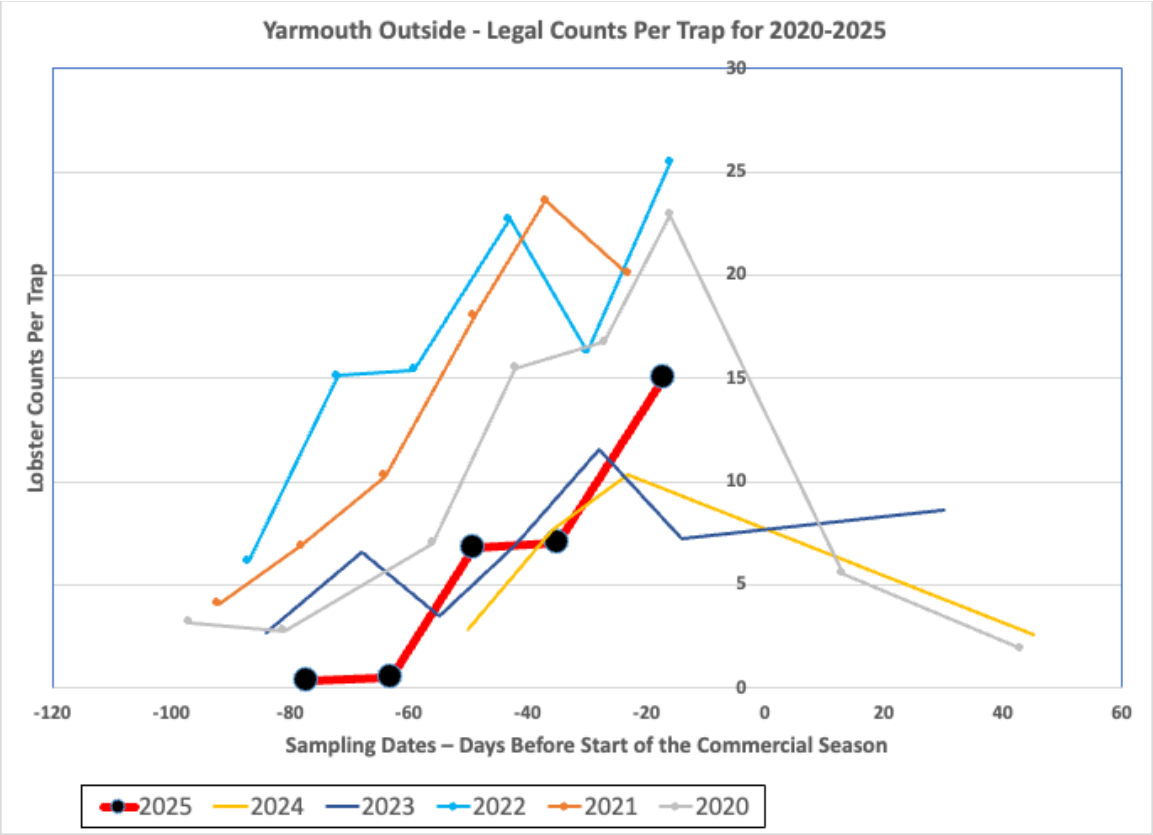
From the figure below, annual samples 3-4 weeks from the start of each commercial season opening are variable across the series from 2012 to 2025 for Yarmouth Outside. The average BRIX for the 2025 sample of October 20 (7.96 mg/mL) is an intermediate value among average BRIX values in the series. BRIX categories are directly comparable to years 2014 and 2022 – years of known overall lower quality in the lower BRIX regime.



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) that occurred in the survey samples dates in 2025 are compared to past years' samples (2020-2024). The 2025 legal counts for Yarmouth Outside (thick red line) are initially below the past years' counts during annual September and October samples. However, and as typical of past years, the time series of counts per trap over the preseason in Yarmouth Outside exhibit a rise from the October samples through November.

Initial commercial catches are predicted to follow the rising legal counts per trap trend (slightly beyond 15 counts/trap) at the start of the season after which counts per trap begin the characteristic decline at the start of the commercial fishery. Commercial catch rates are expected to fall off even more at the beginning of the commercial season as legal-sized lobster abundance is extracted and as was observed in the 2020, 2023, and 2024 in-season samples.



YARMOUTH OUTSIDE – Summary

1) Yarmouth Outside samples show a decline over the preseason period in average BRIX to below the acceptable measures of 8 mg/mL by the end of preseason sampling. The trend is for the percentage of "Good" category lobsters (BRIX≥8) to decline while the percentage of "Poor" category lobsters (BRIX<8) increases.

2) Yarmouth Outside Lobster Quality Category for 2025 samples are classified as "Moderate-Low" (ML). It is anticipated that "Good" BRIX levels may be attained into December 2025 as lobster move from post moult to premoult status over the winter. The 2025 sample is directly comparable to the 2014 and 2022 samples, years of actual lower quality lobster in the commercial fisheries.

3) Yarmouth Outside sampling legal counts per trap exhibit an increasing trend from low counts (close to 1 lobster per trap) to 15 lobsters per trap by the end of preseason sampling. It is anticipated that Yarmouth Outside initial commercial catch rates will be improved compared to recent years.

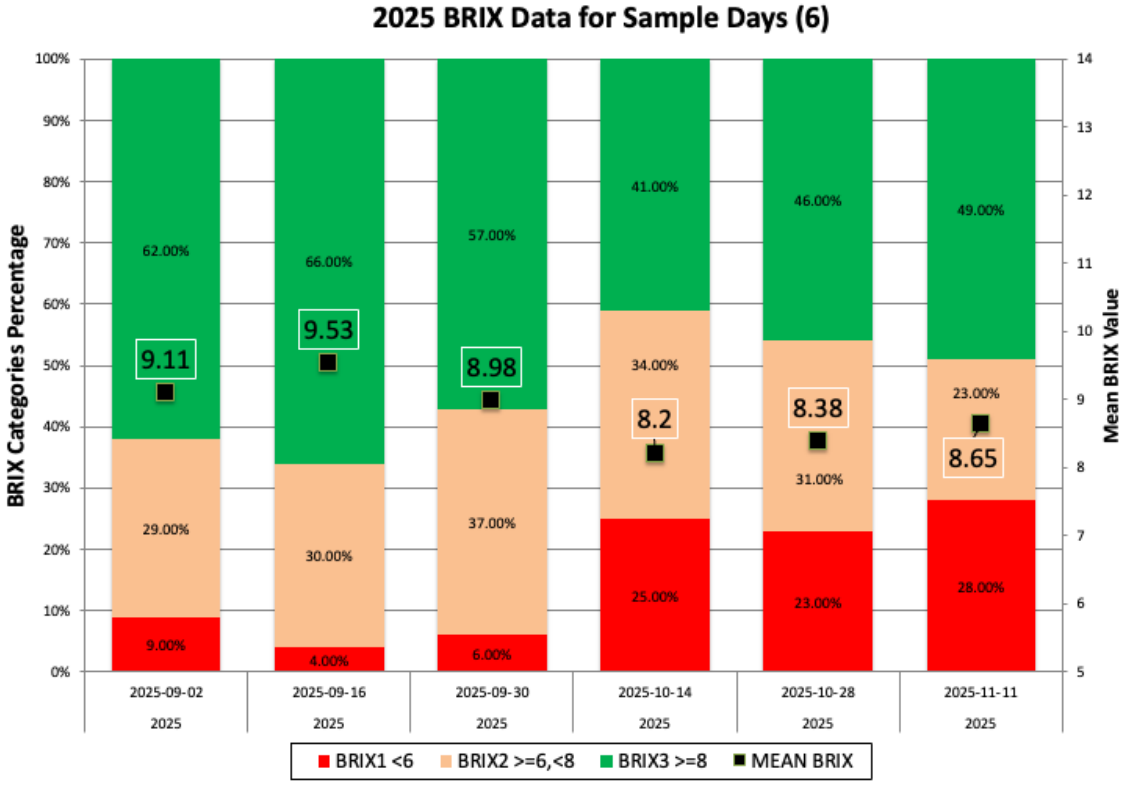
4) Yarmouth Outside Weaks samples are near negligible in 2025 preseason sampling.

LOBSTER BAY INSIDE

2025 SUMMARY OF RESULTS

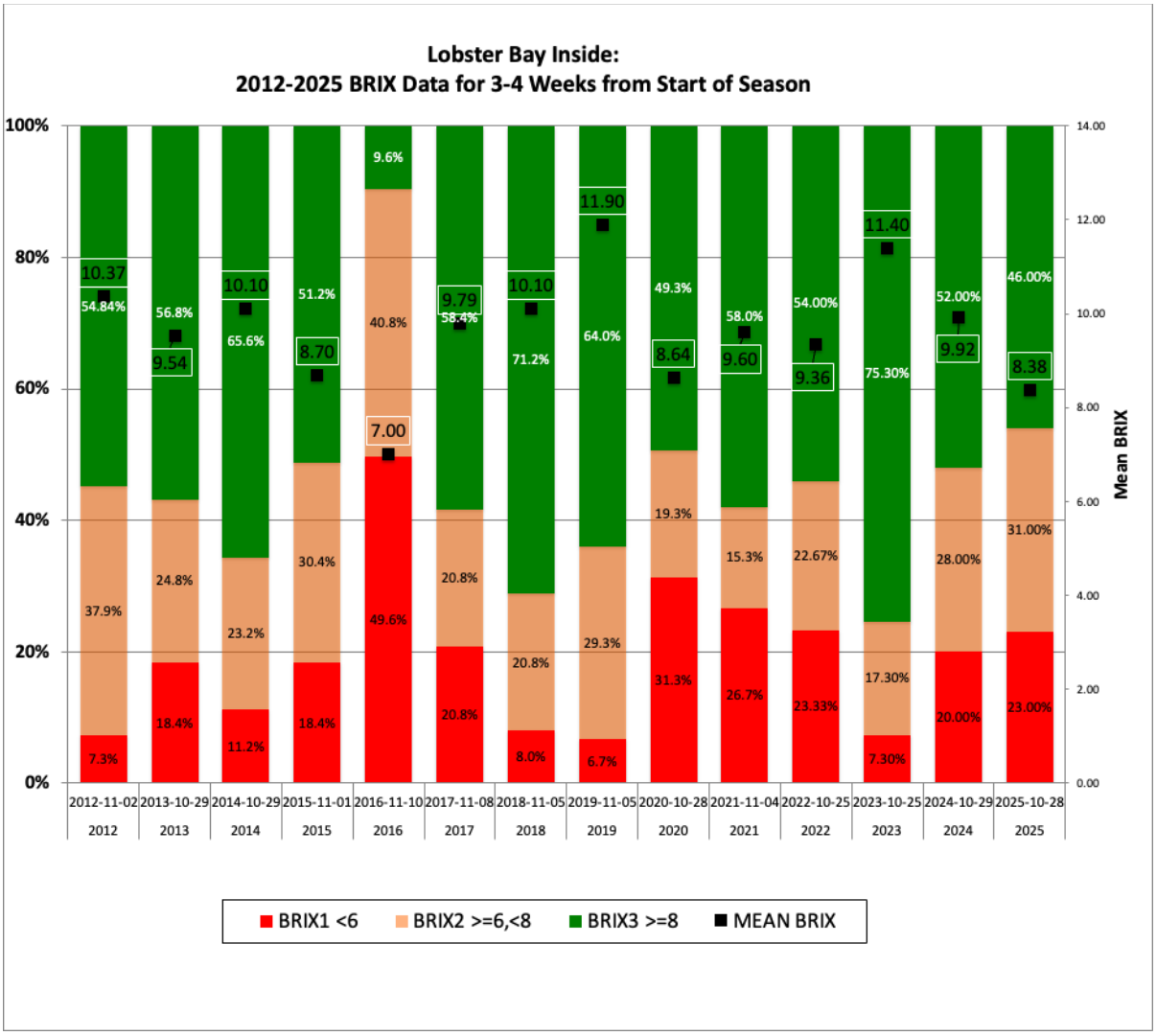
(A)Blood Protein (BRIX) Categories–2025 Samples

In the figure below, 2025 preseason survey results for 6 sample sites in Lobster Bay Inside show a slight decline in average BRIX from a high of 9.53 mg/mL in mid-October to 8.65 mg/mL by mid-November. Samples in 2025 attained "Good" levels of BRIX (≥8 mg/mL) of over 50% in early sampling, dropping below 50% in late preseason samples. Similarly, "Poor" levels of BRIX (<6 mg/mL) were below 10% in early sampling, rising above 25% in late preseason samples. Overall average BRIX level values for samples in 2025 (7.98 mg/mL) were 9% below average BRIX values for Lobster Bay Inside in 2025 (8.81 mg/mL). The trend since September is observed to be a relatively stable average BRIX close 9 mg/mL into the start of the commercial season.



(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

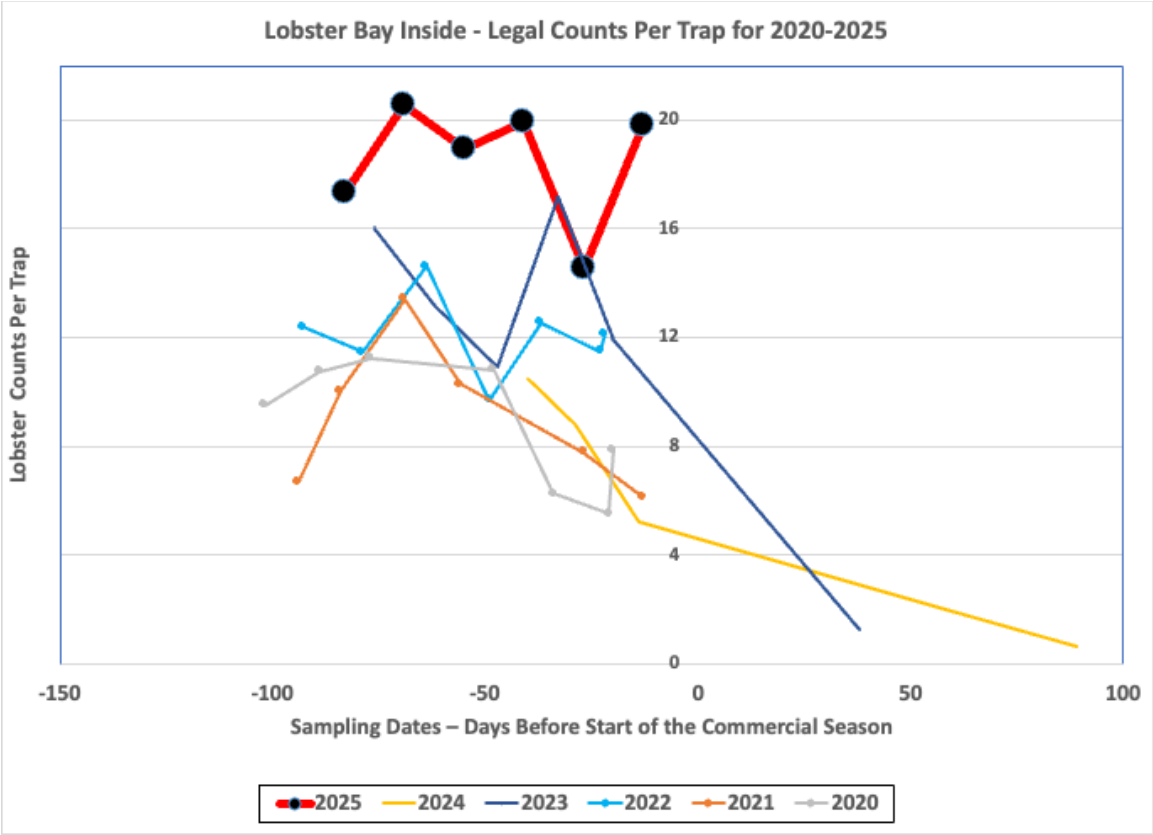
From the figure below, annual samples 3-4 weeks from the start of each commercial harvest season opening are variable across the series from 2012 to 2025 for Lobster Bay Inside. Overall, Lobster Bay Inside average BRIX are higher than that of the other areas. As such, the 2025 average BRIX of 8.38 mg/mL for the October 28, 2025 sample is the second lowest in the series. This 2025 sample is directly comparable to the 2015 sample, a period of low quality lobster in the commercial fishery.



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) that occurred in the survey samples dates in 2025 (thick red line) are compared to past years' samples (2020-2024). The legal counts per trap for Lobster Bay Inside sampling are generally highest among the 4 Inside locations surveyed in LFAs33 and 34.

In 2025, Lobster Bay Inside counts are the highest observed in the series for all sample dates. Consequently, the evidence suggests that legal catch counts in Lobster Bay inside at the start of the commercial season in 2025 should be between 15 and 19 legal lobsters per trap. It is noted that commercial catch rates are expected to fall precipitously in Lobster Bay Inside after the beginning of the commercial season as legal sized lobster abundance is extracted (as per the in-season sampled catch counts of 2023 and 2024 in the figure below).



LOBSTER BAY INSIDE– Summary

1) Lobster Bay Inside shows a decline in average BRIX from a high near 10 mg/mL to a low under 9 mg/mL by the end of preseason sampling. Approximately 50% of samples attained "Good" levels of BRIX (≥8 mg/mL) while "Poor" levels of BRIX (<6 mg/mL) approached 30% by the end of preseason sampling.

2) Lobster Bay Inside Lobster Quality Category for 2025 samples are classified as "Moderate-Low" (ML). It is expected BRIX levels will be maintained into December 2025 as lobster move from post moult to premoult status over the winter. The 2025 sample is most comparable to years 2015, a year of known low quality lobster catches.

3) Lobster Bay Inside sampling legal counts per trap in 2025 exceed those of past years. It is therefore anticipated that Lobster Bay Inside initial commercial catch rates will be higher than past years.

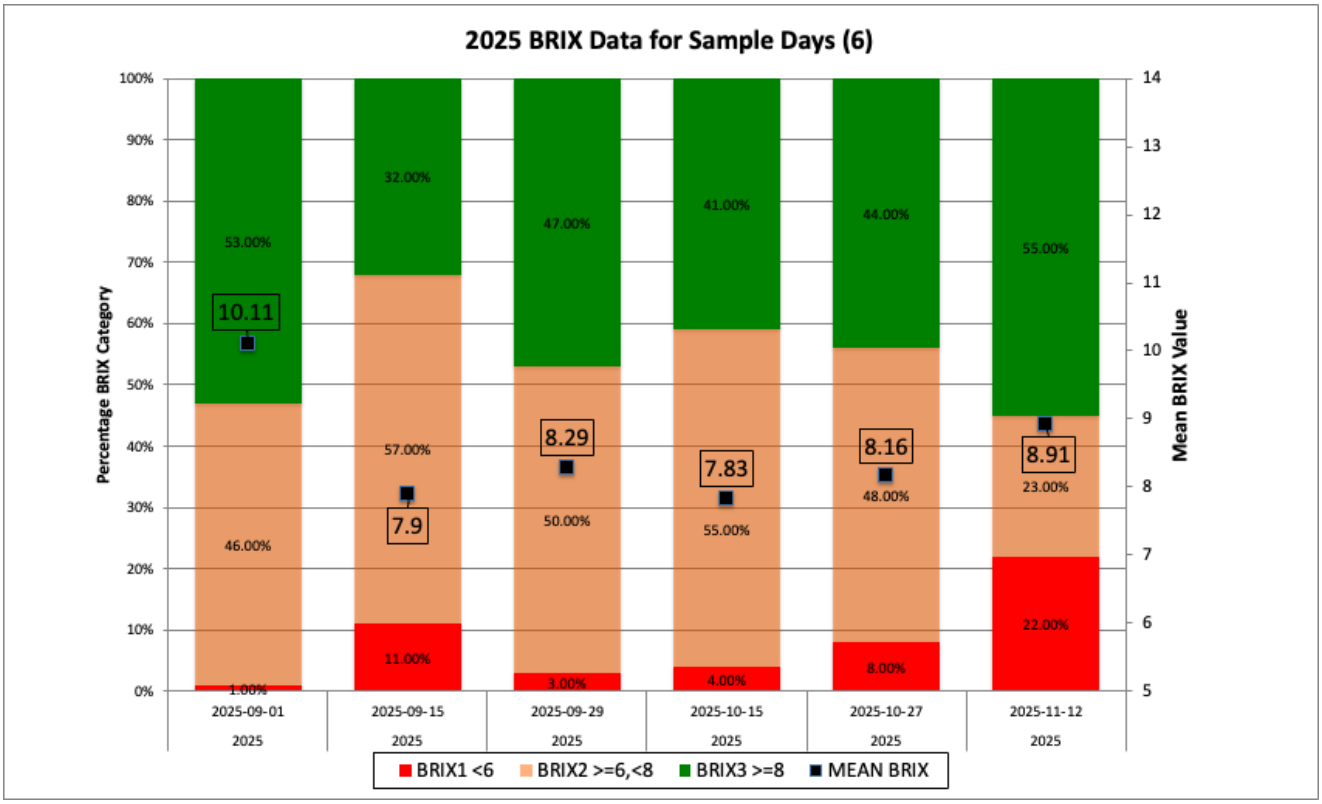
4) Lobster Bay Inside Weaks samples are near negligible in 2025 preseason sampling.

LOBSTER BAY OUTSIDE

2025 SUMMARY OF RESULTS

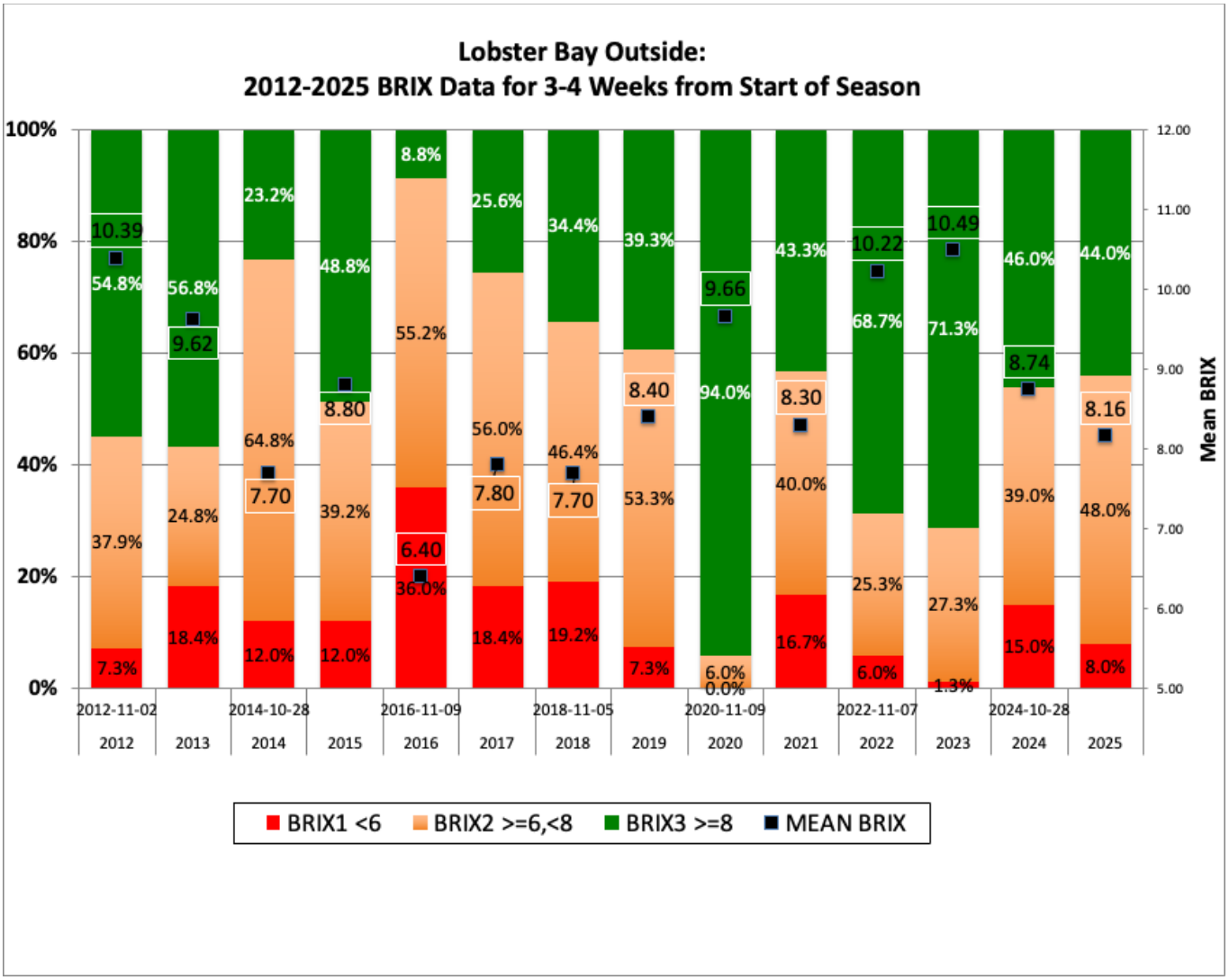
(A)Blood Protein (BRIX) Categories–2025 Samples

In the figure below, 2025 preseason sampling results are provided for 6 sample sites in Lobster Bay Outside. These results show a relatively steady set of average BRIX between the mid-September sample and the mid-November sample with average BRIX varying between a low of 7.9 mg/mL in mid-October to a high of 8.91 mg/mL by mid-November. Samples attained "Good" levels of BRIX (≥8 mg/mL) near 50% with incidences of "Poor" lobsters in samples around 10%. The exception is the last preseason sample with highest "Poor" percentage of over 20%.



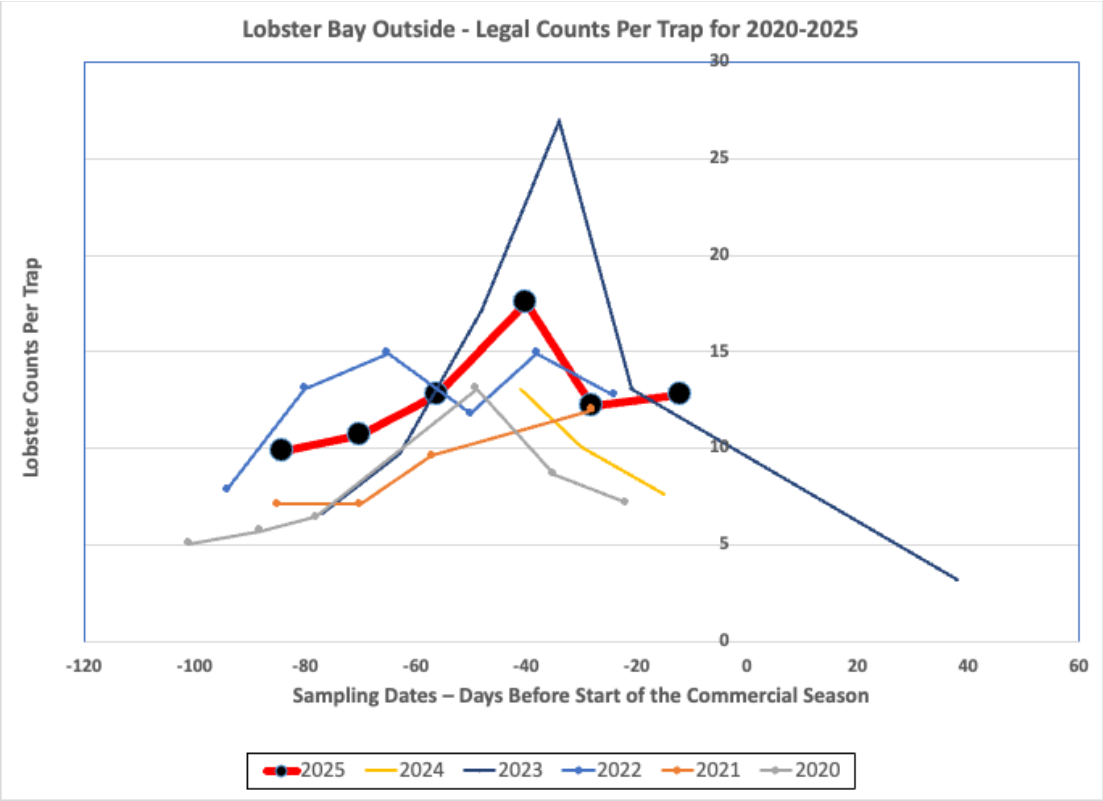
(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

From the figure below, annual samples 3-4 weeks from the start of each commercial harvest season opening are variable across the series from 2012 to 2025 for Lobster Bay Outside. The 2025 sample (October 27) has the intermediate BRIX average of 8.16 mg/mL in the series. The October 27, 2025 sample is comparable to the 2019 and 2024, samples with similar average BRIX value and similar BRIX category levels.



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) that occurred in the survey samples dates in 2025 (thick red line) are compared to past years' samples (2020-2024). The counts per trap for Lobster Bay Outside sampling in 2025 are within the range of values for other years 2020-2024. In 2025, Lobster Bay Outside counts are comparable to past years' counts at similar sampling dates which makes these among the highest legal counts per trap (approximately 15 counts per trap) across all outside areas. Commercial catch rates are expected to fall precipitously in Lobster Bay Outside after the beginning of the commercial season as legal-sized lobster abundance is extracted (as per the 2023 in-season sample illustrated below).



LOBSTER BAY OUTSIDE– Summary

1) Lobster Bay Outside shows a relatively constant average BRIX over the sampling period with overall average BRIX of 8.53 mg/mL. Samples attained approximately 50% "Good" levels of BRIX (≥8 mg/mL) and incidences of "Poor" lobsters in samples were low initially (near 10%) in early preseason samples but climbing to over 20% in the mid-November sample.

2) Lobster Bay Outside Lobster Quality Category for 2025 samples are classified as "Moderate-Low" (ML). It is expected that BRIX levels will be maintained into December 2025 as lobster move from post moult to premoult status over the winter. The 2025 sample is most comparable to samples in 2019 and 2024.

3) Lobster Bay Outside counts are among the highest across all sampling areas (15 legal counts per trap). Thes results are comparable to past years' counts at similar sampling dates in this area. It is anticipated that Lobster Bay Outside initial commercial catch rates in 2025 will be similar to catches in recent years.

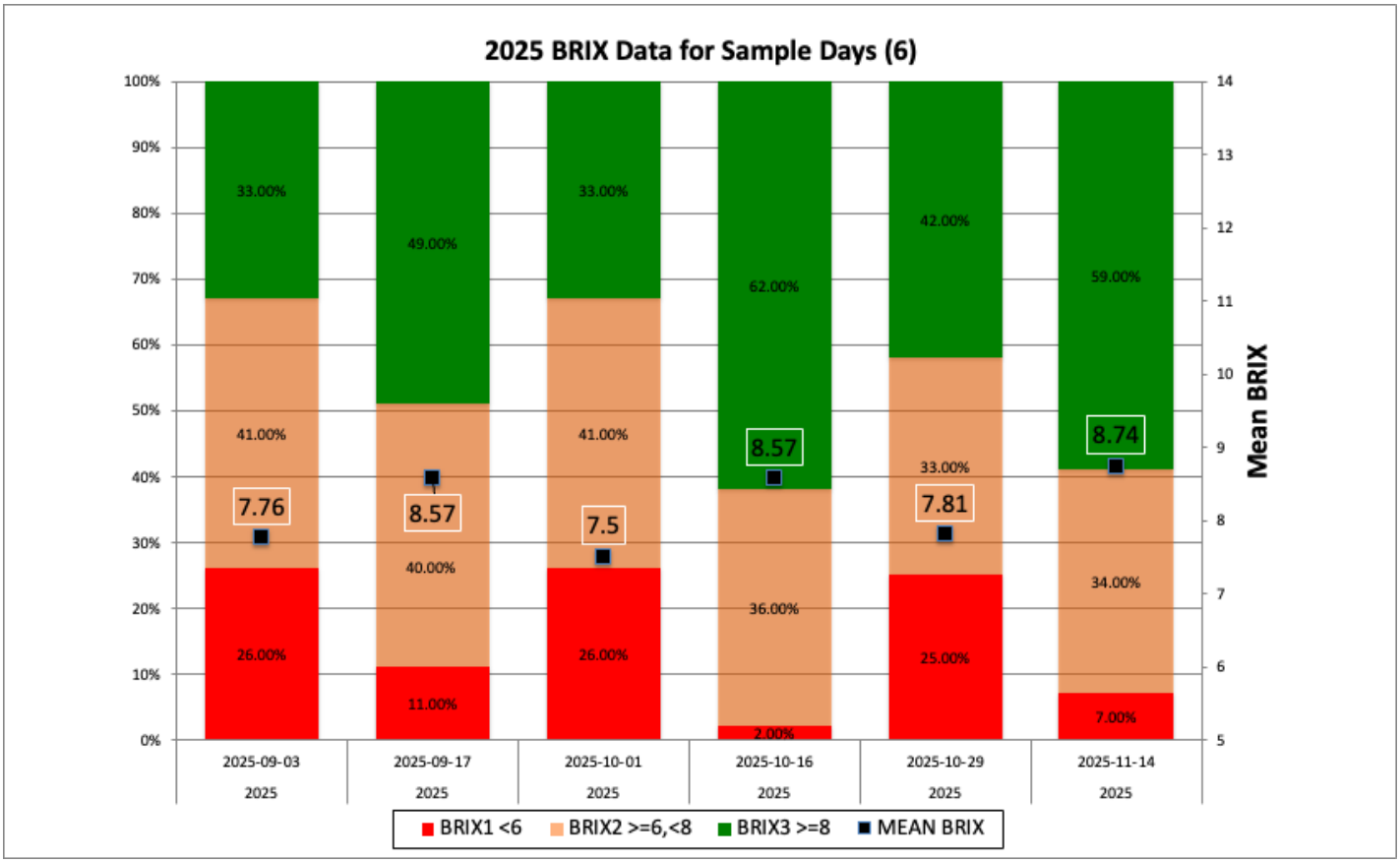
4) Lobster Bay Inside Weaks samples are near negligible in 2025 preseason sampling.

PORT LA TOUR INSIDE

2025 SUMMARY OF RESULTS

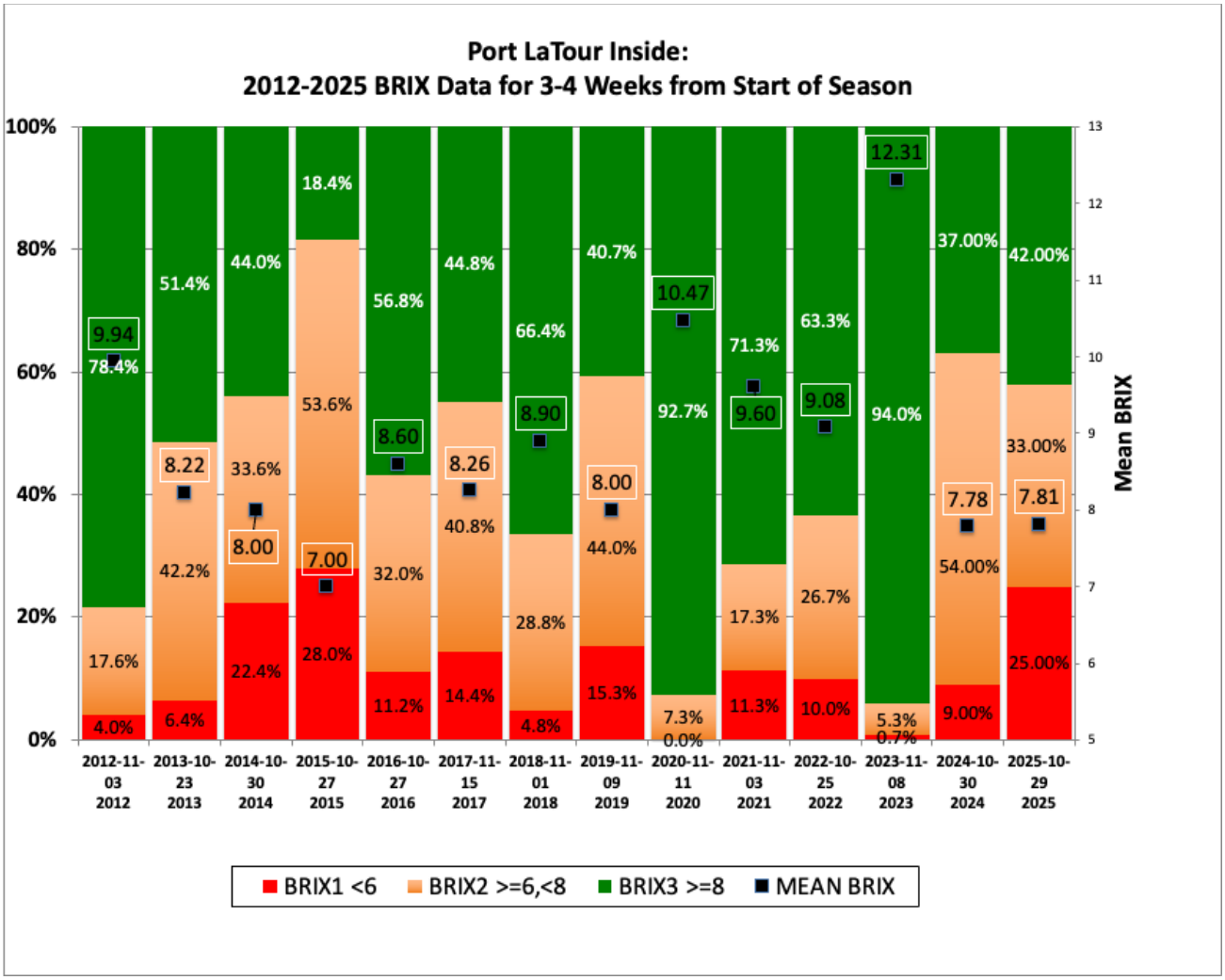
(A)Blood Protein (BRIX) Categories–2025 Samples

In the figure below, 2025 preseason survey results for 6 sample sites in Port La Tour Inside show a relatively stable series of average BRIX over the preseason period from the early-September (7.76 mg/mL) to the mid-November sample (8.74 mg/mL). "Good" levels of BRIX (≥8 mg/mL) varied between 33% (September 3 sample) to 62% (October 16 sample). "Poor" levels of BRIX (<6 mg/mL) varied between 2% (October 16 sample) to 25% in the September and October samples.



(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

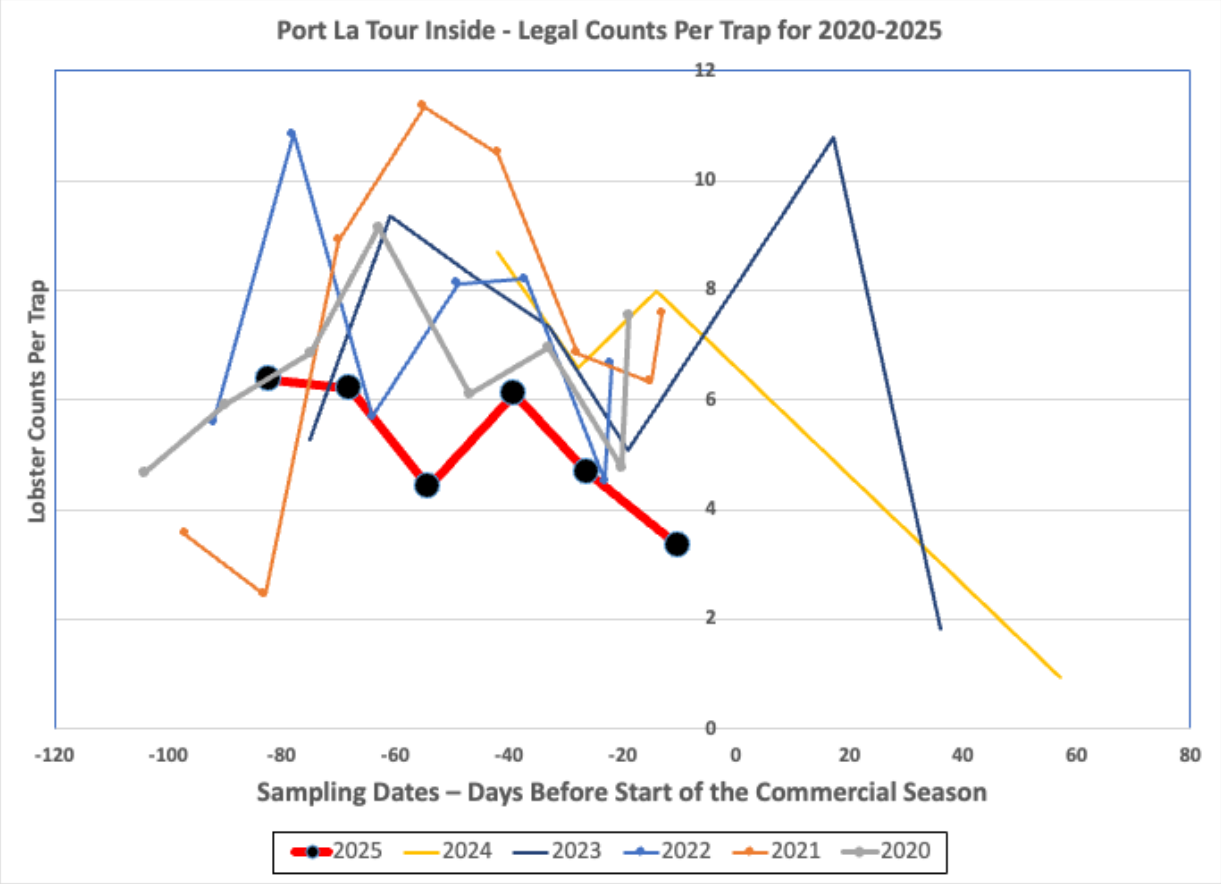
From the figure below, annual samples 3-4 weeks from the start of each commercial harvest season opening are variable across the series from 2012 to 2025 for Port La Tour Inside. The October 29, 2025 sample is directly comparable to the October 30, 2014.



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) that occurred in the survey samples dates in 2025 (thick red line) are compared to past years' samples (2020-2022) for Port La Tour Inside. In 2025, Port La Tour Inside counts are below past years' counts at similar sampling dates and show a declining trend into the start of the commercial season (legal counts estimated at 4 counts per trap).

Consequently, it is anticipated that catches in Port La Tour Inside will be reduced compared to past years. As evidenced in the figure below, commercial catch rates are expected to fall precipitously after the beginning of the commercial season as legal-sized lobster abundance is extracted (as per 2023 and 2024 in-season samples illustrated below).



PORT LA TOUR INSIDE– Summary

1) Port La Tour Inside samples show a relatively constant average BRIX from early-September (7.76 mg/mL) to mid-November samples (8.74 mg/mL). By the end of the preseason sampling period "Good" levels of BRIX (≥8 mg/mL) are over 50% while "Poor" levels of BRIX (<6 mg/mL) are under 10%.

2) Port La Tour Inside Lobster Quality Category for 2025 samples are classified as "Moderate-Low" (ML). It is expected that BRIX levels will be maintained near 8 mg/mL into December 2025 as lobster move from post moult to premoult status over the winter. The 2025 sample is directly comparable to the 2014 sample prior to the start of the commercial season.

3) Port La Tour Inside sampling counts show a declining trend at levels below those of past years' sample legal catch counts per trap. It is anticipated that Yarmouth Inside initial commercial catch rates will be below catches of recent years.

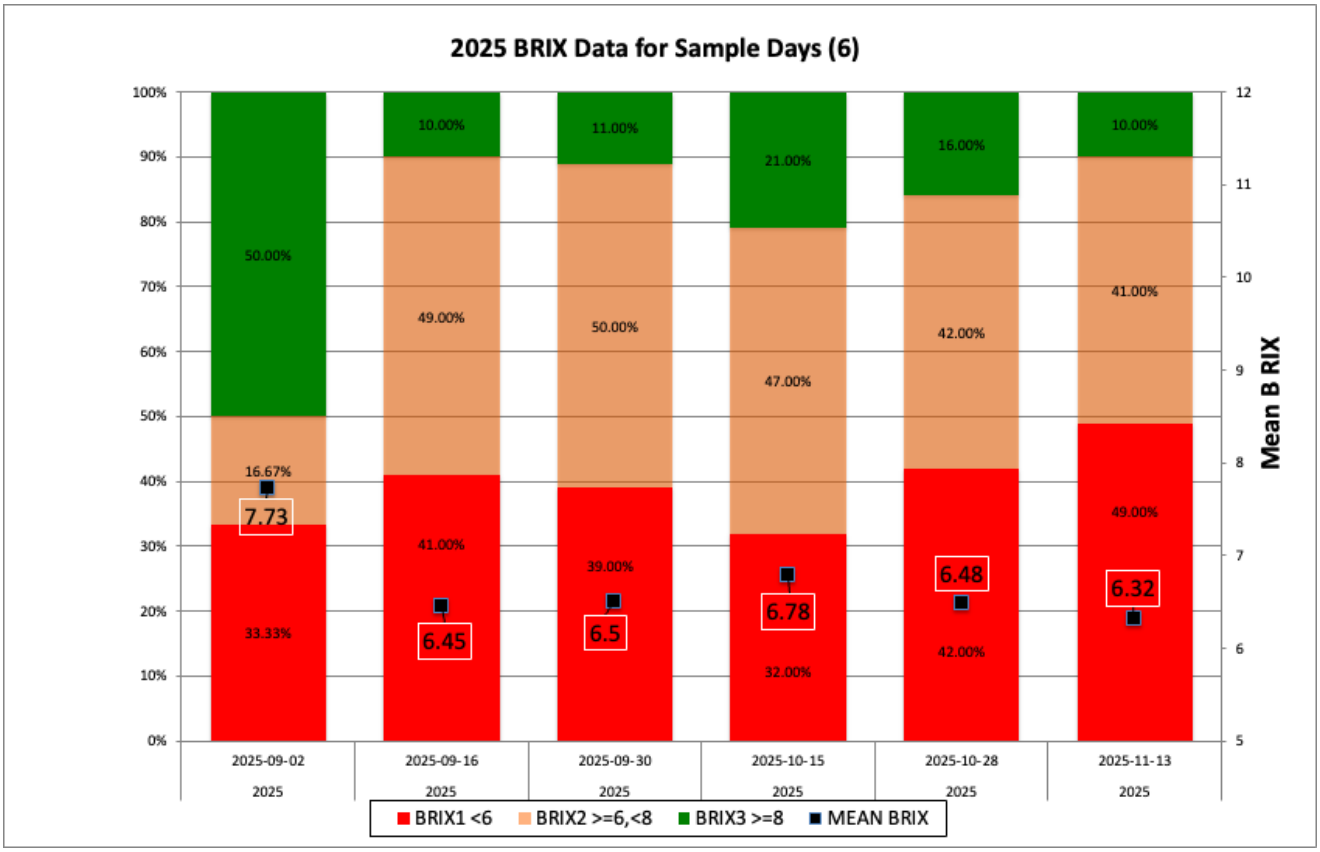
4) Port La Tour Inside Weaks samples are near negligible in 2025 preseason sampling.

PORT LA TOUR OUTSIDE

2025 SUMMARY OF RESULTS

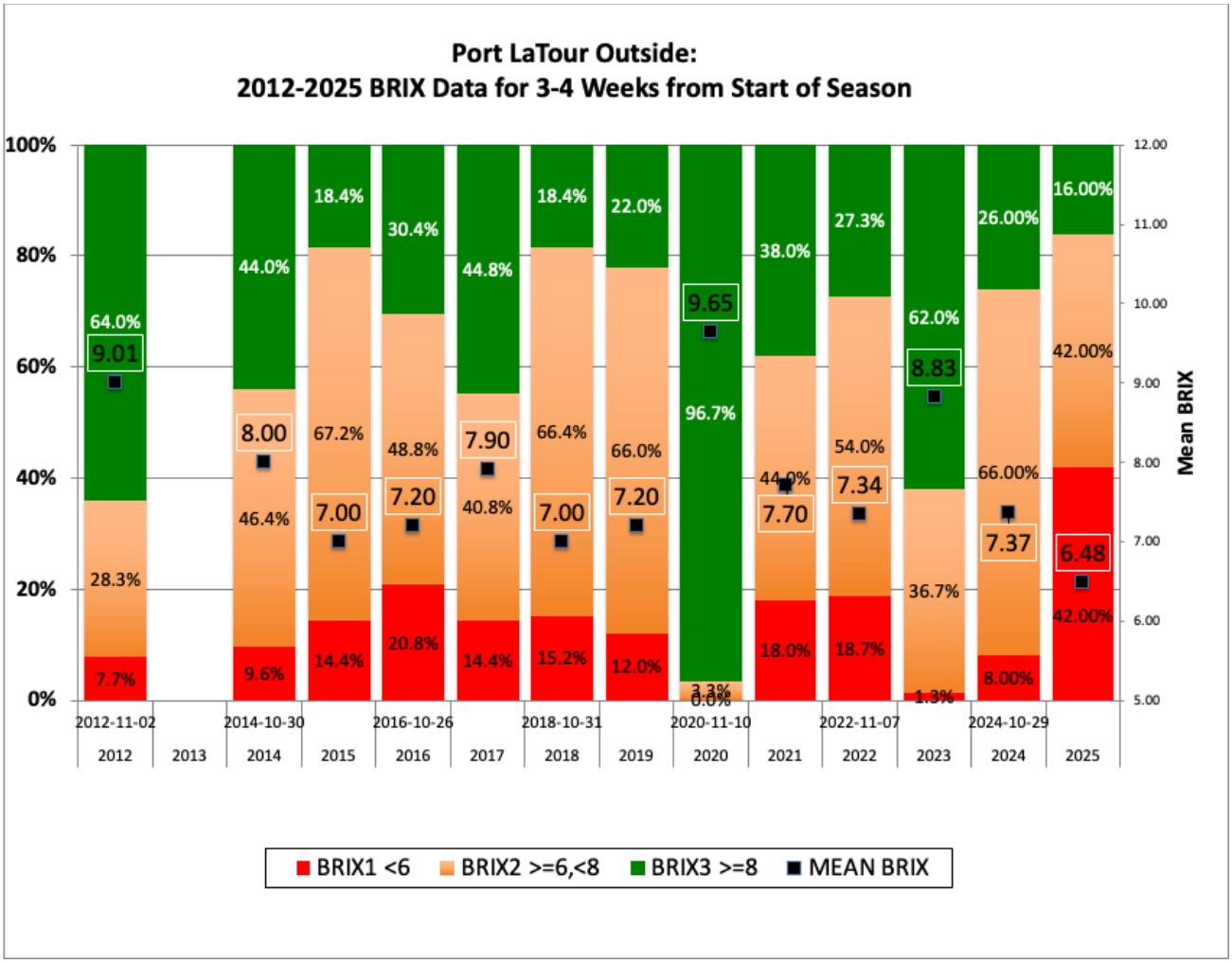
(A)Blood Protein (BRIX) Categories–2025 Samples

In the figure below, 2025 preseason survey results are presented for 6 sample sites in Port La Tour Outside. Beyond the first sample of early September, average BRIX values per sample are steady. Average BRIX values range from a high of 6.78 mg/mL in mid-October to a low of 6.32 mg/mL in mid-November. BRIX level categories are relatively constant with "Good" levels of BRIX (≥8 mg/mL) varying between 10% to 21% while incidences of "Poor" lobsters in samples to the end of the sampling period vary from 32% to 49%.



(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

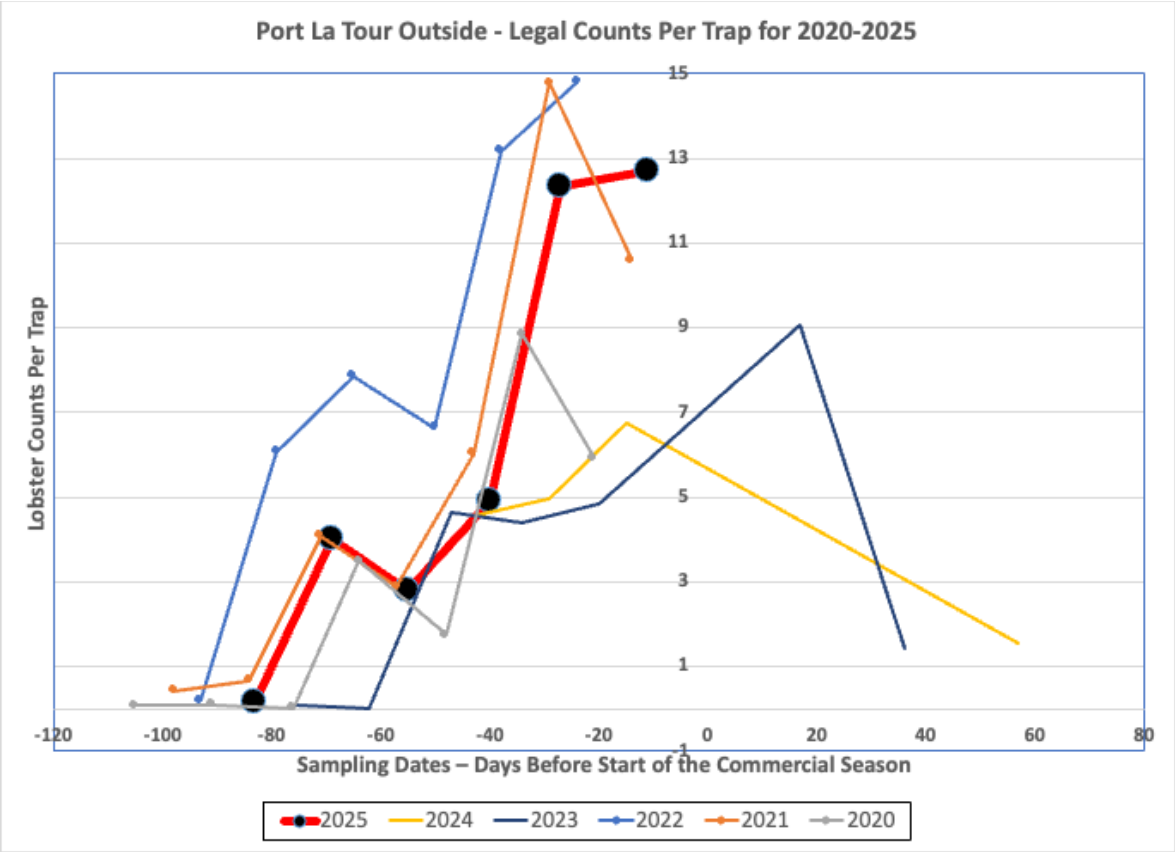
From the figure below, annual samples 3-4 weeks from the start of each commercial harvest season opening are highly variable across the series from 2012 to 2025 for Port La Tour Outside. The October 28, 2025 sample is comparable to the October 26, 2016 sample with similar average BRIX value (7.2 versus 6.48 mg/mL) and comparable BRIX category levels.



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) that occurred in the survey samples dates in 2025 (thick red line) are compared to past years' samples (2020-2024) for Port La Tour Outside. In 2025, Port La Tour Outside counts are among the highest in comparison to past years' counts at similar sampling dates. The 2025 time series of counts over the preseason in Port La Tour Outside exhibit a rise to the end of the sampling period (mid-November) similar to the 2021 and 2022 counts series in this location.

It is expected that commercial catches in Port La Tour Outside in 2025 will be similar to those of 2021 and 2022. Predicted legal counts per trap are between 12 and 14 lobster pre trap. As evidenced in the figure below, commercial catch rates (as observed in the 2021 and 2023 in-season samples) are expected to fall precipitously after the beginning of the commercial season as legal-sized lobster abundance is extracted (as occurred in 2023 and 2024 in-season samples illustrated).



PORT LA TOUR OUTSIDE– Summary

1) Port La Tour Outside average BRIX values are relatively constant over the sampling period from mid-September to mid-November. Average BRIX during this period vary between 6.32 and 6.78 mg/mL.

2) Port La Tour Outside Lobster Quality Category for 2025 samples are classified as "Moderate-Low" (ML). It is expected that moderate BRIX (near 8 mg/mL) will be attained into December 2025 as lobster move from post moult to premoult status over the winter. The 2025 sample is comparable to the 2016 sample.

3) Port La Tour Outside counts for 2025 are among the highest in the time series and comparable to the counts of 2021 and 2022. Counts per trap are expected to reach 12-14 legal lobsters per trap at the start of the 2025-26 commercial season.

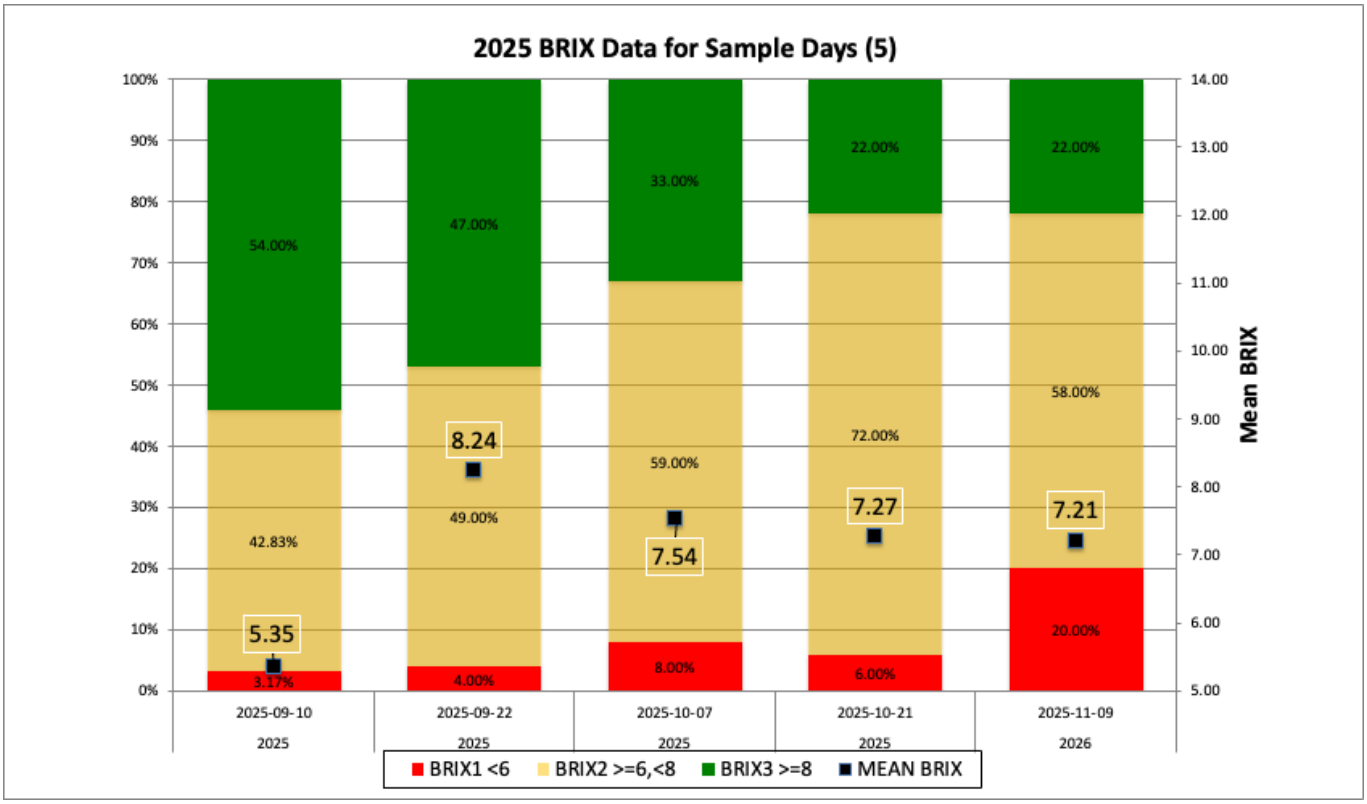
4) Port La Tour Outside Weaks samples are near negligible in 2025 preseason sampling.

ST. MARY'S BAY INSIDE

2025 SUMMARY OF RESULTS

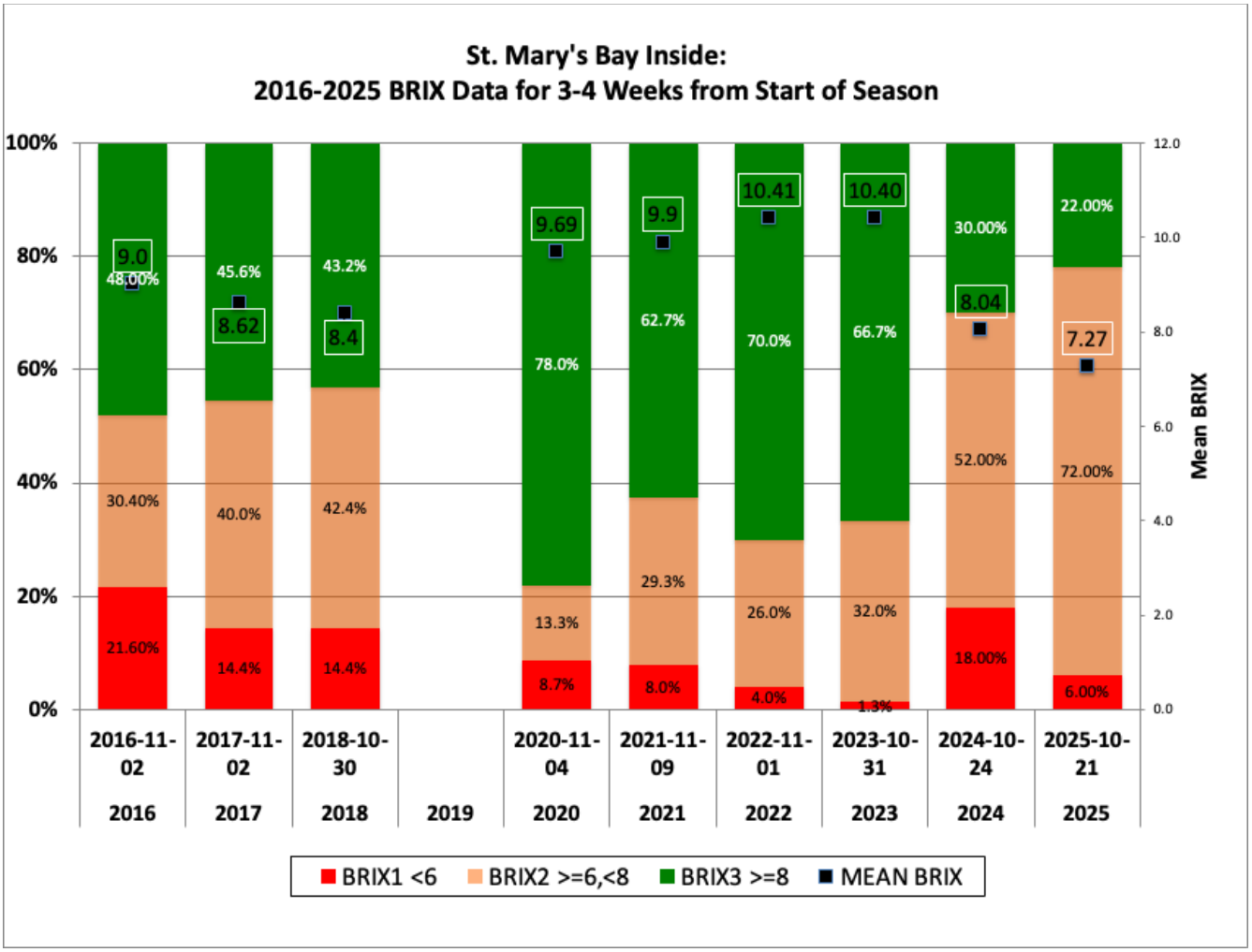
(A)Blood Protein (BRIX) Categories–2025 Samples

In the figure below, 2025 preseason survey results for 5 sample sites in St. Mary's Bay Inside are provided. Beyond the initial September 10 sample, average BRIX values tend to fall from the end September sample (8.24 mg/mL) to the final early-November sample (7.21 mg/mL). "Good" levels for BRIX (≥8 mg/mL) decline over the same period from less than 50% to near 20%. At the same time, the proportion of "Poor" lobsters (BRIX<6 mg/mL) sampled in St. Mary's Bay Inside gradually increase from 4% to 20% by the early-November sample at the end of preseason sampling.



(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

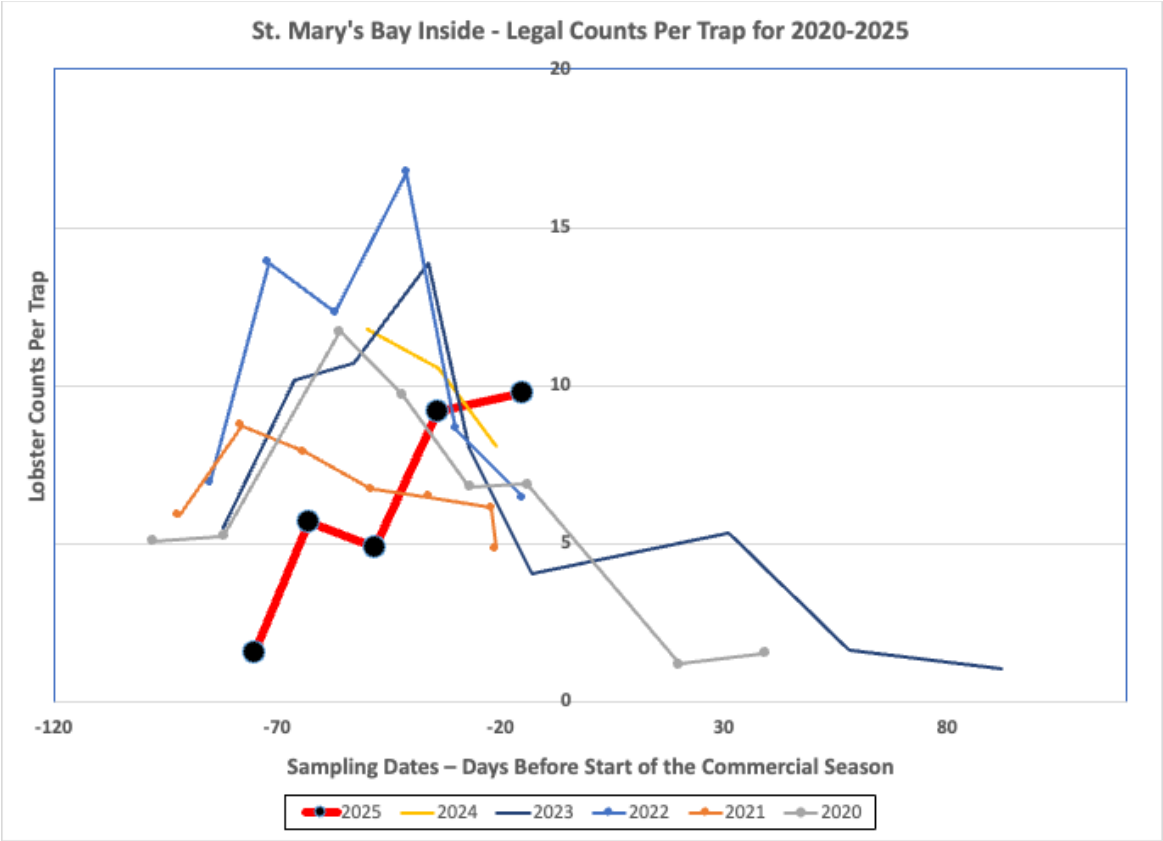
From the figure below, annual samples 3-4 weeks from the start of each commercial harvest season opening are somewhat variable across the series from 2016 to 2025 for St. Mary's Bay Inside. The 2025 sample (October 21) has the lowest BRIX average (7.27 mg/mL) in the series. The October 24, 2025 sample is most closely comparable to the October 30, 2018 sample (which has the second lowest BRIX in the series at 8.04 mg/mL).



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) that occurred in the survey samples dates in 2025 (thick red line) are compared to past years' samples (2020-2024). The counts for St. Mary's Bay Inside are intermediate to the previous years' comparable counts with an increasing trend over the preseason sampling period. By the end of sampling, legal counts per trap in this area have exceeded past years counts (approximately 10 legal counts per trap). Consequently, it is anticipated that St. Mary's Bay catches at the start of the commercial season will increase relative to past years.

As evidenced by the 2020 and 2023 in-season sampling in the figure below, commercial catch rates are expected to fall precipitously after the beginning of the commercial season as legal sized lobster abundance is extracted (as for the in-season samples of 2020 and 2023 illustrated).



ST. MARY'S BAY INSIDE– Summary

1) St. ***Mary's Bay Inside samples show a gradual decline of average BRIX at moderately low levels of 8.0 mg/mL and below. "Good" BRIX category levels declined from over 50% in September samples to near 20% by early November. At the same time, the proportion of "Poor" lobsters sampled in St. Mary's Bay Inside grew from 3% to 20% by end of sampling.***

2) St. Mary's Bay Inside Lobster Quality Category for 2025 samples are classified as "Moderately-Low" (ML). It is expected that average BRIX levels of 8 mg/mL will be maintained into December 2025 as lobster move from post moult to premoult status over the winter. The 2025 sample is directly comparable to the 2024 sample.

3) St. Mary's Bay Inside sampling counts per trap increase over the sampling period exceeding past years' catch counts for the early November 2025 sample. It is anticipated that St. Mary's Bay Inside initial commercial catch rates will be improved in the 2025-2026 commercial season with catch counts near 10 lobsters per trap.

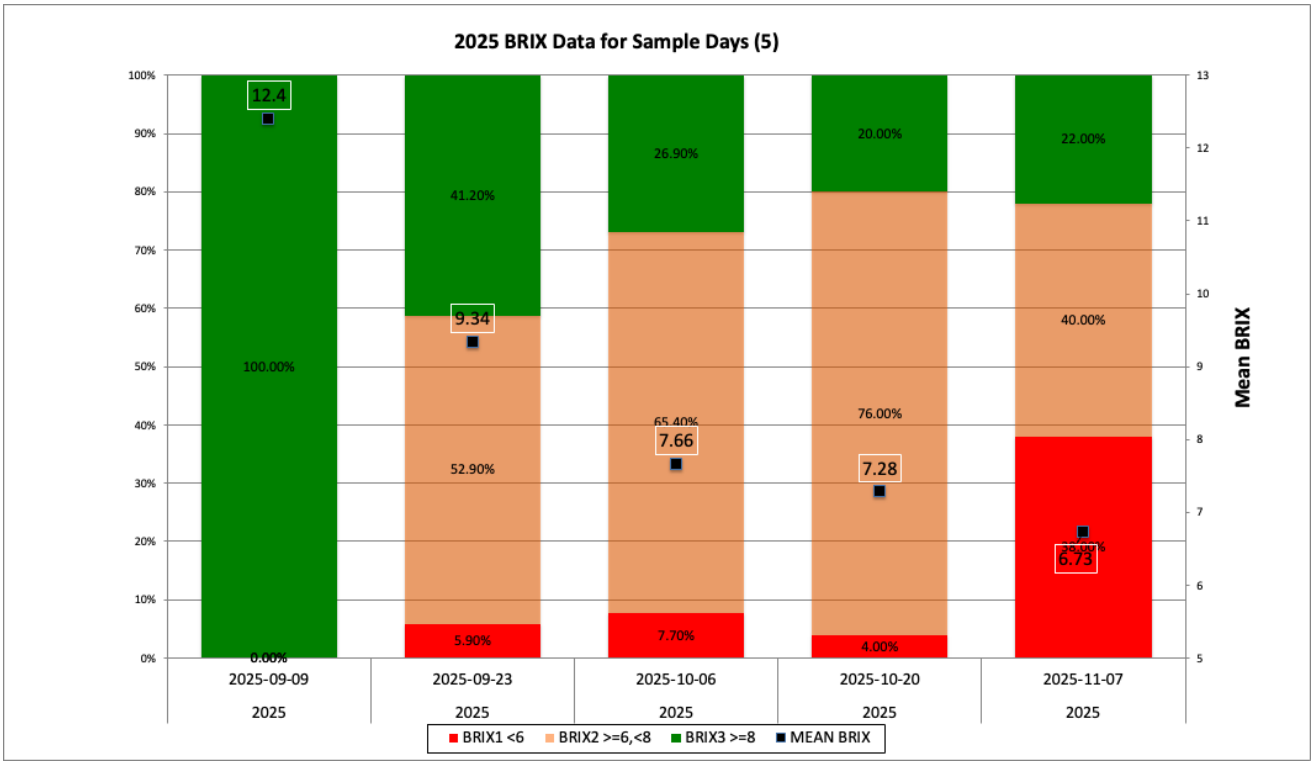
4) St. Mary's Bay Inside Weaks samples are near negligible in 2025 preseason sampling.

ST. MARY'S BAY OUTSIDE

2025 SUMMARY OF RESULTS

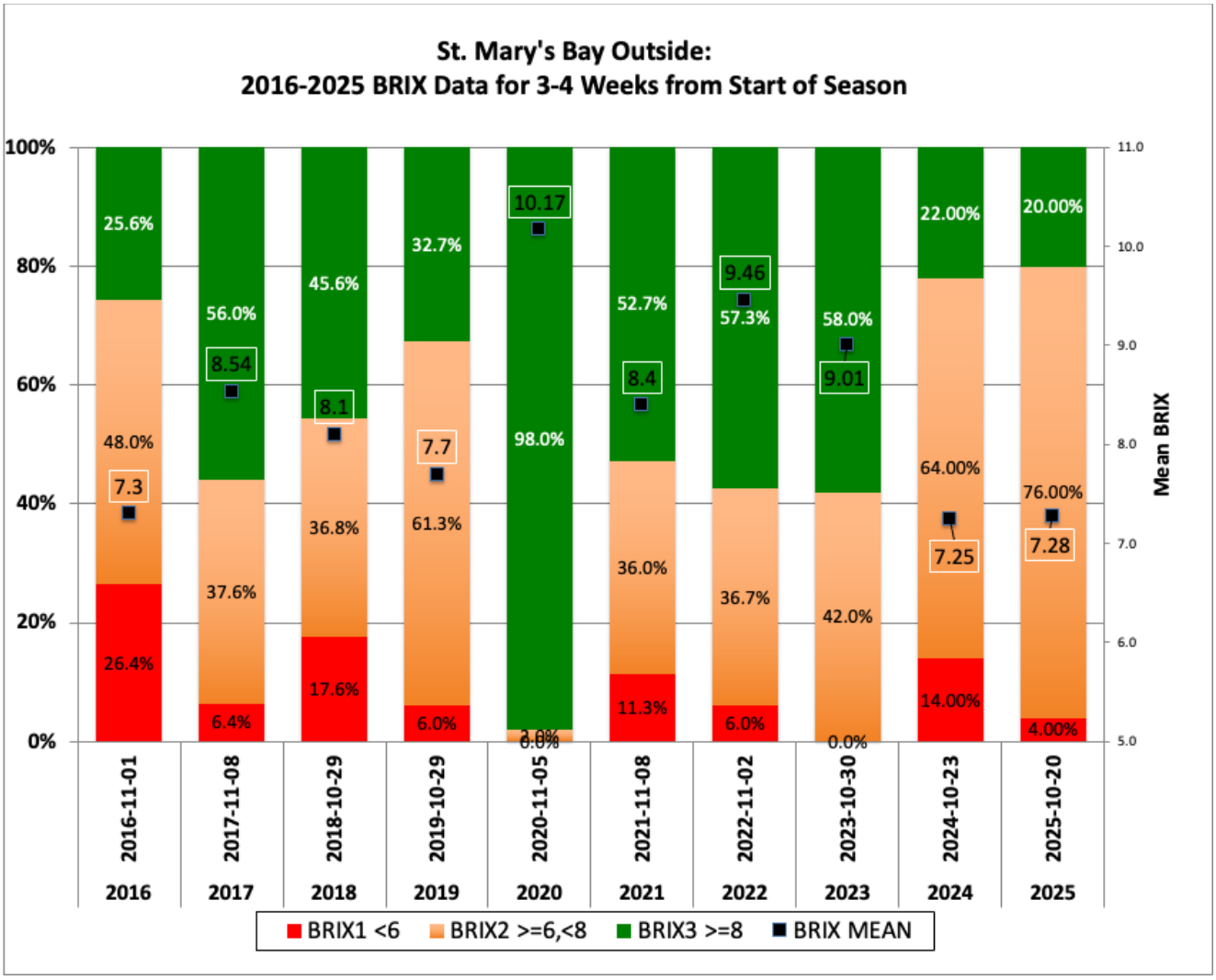
(A)Blood Protein (BRIX) Categories–2025 Samples

In the figure below, 2025 preseason survey results for 5 sample sites in St. Mary's Bay Outside are presented. Beyond the early September sample (which had limited availability), there is a steady decline in average BRIX ranging from a high of 9.34 mg/mL (September 23 sample) to the low of 6.73 mg/mL at the ending early-November 7 sample. BRIX category levels shifted with samples attaining "Good" levels for BRIX (≥8 mg/mL) that declined from 41% down to 20% over the sampling period. The proportion of "Poor" lobsters (BRIX<6 mg/mL) sampled in St. Mary's Bay Outside grew from 6% to almost 40% by the end of sampling. Average BRIX level at the end of the sampling period (6.73 mg/mL) approach unacceptable category levels (at 6 mg/mL).



(B) Blood Protein (BRIX) Categories – Annual Samples 3-4 weeks before season start

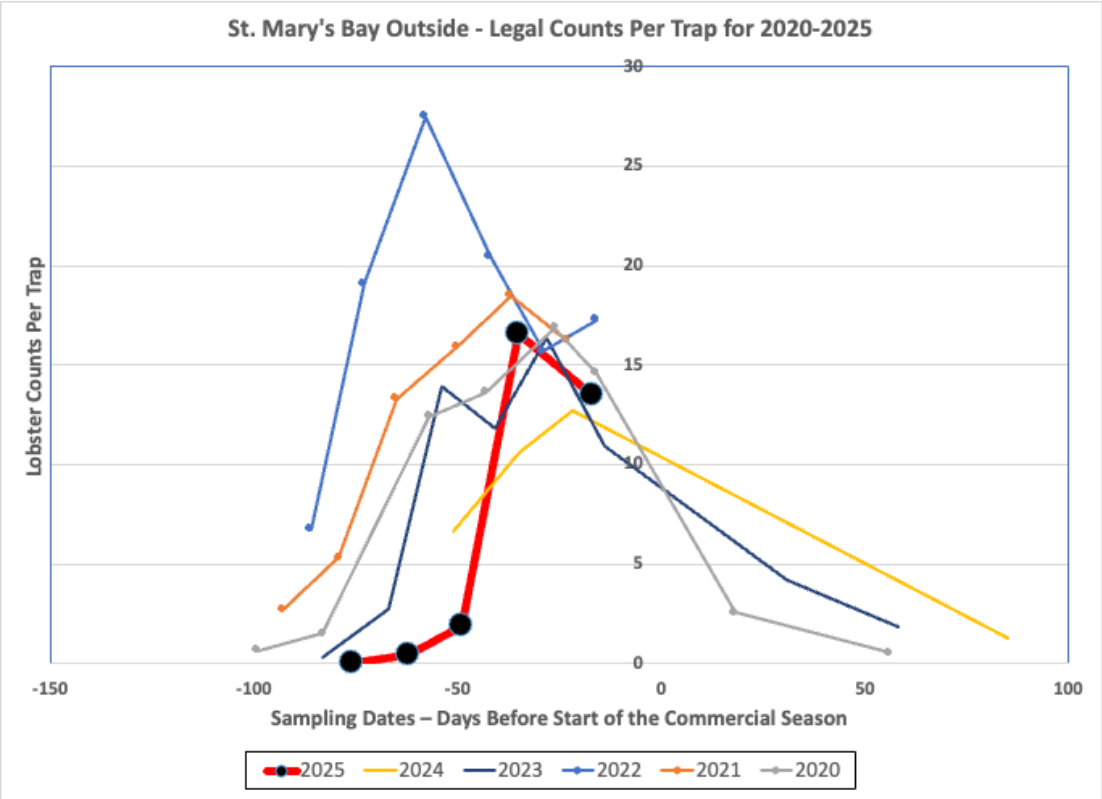
From the figure below, annual samples 3-4 weeks from the start of each commercial harvest season opening are variable across the series from 2016 to 2025 for St. Mary's Bay Outside. The 2025 sample (October 20) is directly comparable to the October 23, 2024 sample that has the lowest BRIX average (7.25 mg/mL) in the series which also approximates the 2025 average BRIX of 7.28 mg/mL



(C) Counts (legal-sized) per trap for 2025 samples

In the figure below, the counts per trap of lobsters (male and female) of legal-sized (82.5 mm or greater) that occurred in the survey samples dates in 2025 (thick red line) are compared to past years' samples (2020-2024). For the early samples of 2025 (early-September through early-October), the counts for St. Mary's Bay Outside are the lowest in the time series for comparable dates prior to season opening. However, the late October and early November samples show a recovery of legal counts per trap to levels comparable to past years. Consequently, it is anticipated that this recovery will continue into the start of the commercial season when legal catch counts are estimated to be near 14-16 legal lobsters per trap in St. Mary's Bay Outside.

As evidenced by the 2020, 2023, and 2024 in-season sampling for St. Mary's Bay Outside in the figure below, commercial catch rates are expected to fall precipitously after the beginning of the commercial season as legal sized lobster abundance is extracted.



ST. MARY'S BAY OUTSIDE– Summary

1) St. Mary's Bay Outside samples exhibit steady decline in average BRIX over the sampling period. "Good" levels for BRIX range decline from highs of over 40% down to near 20% while lobsters sampled in the "Poor" category increase from under 6% to near 40% by the end of preseason sampling. Average BRIX level values fall from a high of 9.34 mg/mL to a low of 6.73 mg/mL at the end of sampling.

2) St. Mary's Bay Outside Lobster Quality Category for 2025 samples are classified as "Moderately-Low" (ML). It is expected that favorable BRIX near 8 mg/mL will be maintained into December 2025 as lobster move from post moult to premoult status over the winter.

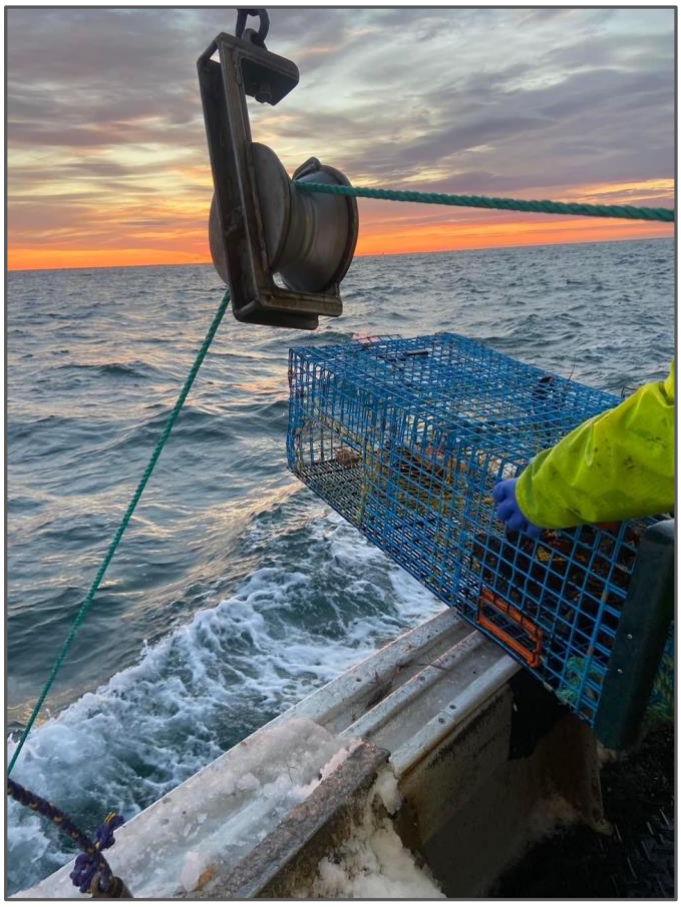
3) In 2025 samples in September and October legal counts per trap for St. Mary's Bay Outside were the lowest in the time series for comparable dates prior to season opening. These counts recovered in later 2025 samples ending in high relative counts by the early November sample. It is thus anticipated that St. Mary's Bay Outside initial commercial catch rates will be comparable to recent years.

4) St. Mary's Bay Outside Weaks samples are near negligible in 2025 preseason sampling.

Acknowledgements

Coldwater Lobster Association and Université Sainte-Anne wish to thank all participants in, and contributors to the 2025 Preseason Lobster Moult & Quality Survey. Your commitment to this scientific task is commendable. We appreciate and thank all for your continued support and improvement of this important scientific study for the benefit of the lobster sector in southwest Nova Scotia. To those about to embark on another lobster season in LFAs 33 and 34, here's to calm waters, a prosperous season, and stable international and domestic markets. Stay safe and watch out for one another.

Finally, it has been a privilege and a pleasure to have had the chance to work with our colleague and friend at CLA, Heather Mulock since 2016 on the lobster sampling program. Heather has always been there for her industry clients and for the lobster resource. Moreover, she has been a committed advocate, mentor, and critique of these reports and to the data collection regime. On behalf of all of us associated with the work, I extend a very large "thanks" to Heather for her enormous contribution to making these reports more relevant to industry and more important to the sustainability of the resource. Thanks, Heather and good luck in all you do. We miss you already.



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