

Lobster and Crab Fisheries Division
Maine Department of Marine Resources

Notes on Some Changes in the Maine Lobster Industry
1967 - 1990

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In the last 24 years while collecting catch/effort and biological data, we (Lobster and Crab Fisheries Division) have been privileged to observe and record many changes in the Maine lobster industry. We have recorded thousands of personal interviews with individual lobstermen as well as thousands more of informal dockside discussions. Gradual changes in the fishery have occurred over the years. The following is a synopsis of a few of those changes.

Lobsters Dealers

In 1966 the Department of Sea and Shore Fisheries (renamed the Department of Marine Resources in 1973), as part of its lobster research initiative, began a study on the Maine commercial lobster fishery. A preliminary survey was designed to determine the number and location of all the commercial lobster dealers along the Maine coast that purchased lobsters directly from fishermen. Of these dealers it was decided that only those who purchased lobsters from five or more fishermen would be included in the survey.

In the fall of 1966 our survey included 153 lobster dealers located from Kittery to Cutler. By the end of 1967 that number had grown to 158. Since then the number of dealers has fluctuated, but has steadily declined. At present (fall of 1990) there are only 108 dealers (a 32% decline since 1967). Figure 1 shows the reduction of active buying stations by county for the years 1967 and 1990. Throughout this sampling period Knox and Hancock counties have consistently boasted the highest number of lobster dealerships.

Another point of interest is that in 1967 there were five fishermen's co-ops operating along the Maine coast. For a period of time (early to mid '70's) co-op fever seemed to catch the fishermen. As a result fishermen's co-ops increased to where the present day number is 14 (an increase of 36%). All cooperatives, with the exception of one, were established on existing dealer locations.

Recently a new type of buying station began in Portland at the Portland Fish Exchange. To date we do not include this location in our survey. During our interview with lobstermen in different areas we have not talked with any who plan to sell at the Exchange. Many reasons have been quoted (but not recorded) such as, " have to take time off from lobstering to sell, to far to travel, no readily available bait, etc". The prospect of extra moneys for their catch does not seem to be enough to offset the time and inconvenience required to sell at the Exchange.

Handling and Storage

Handling and storage of lobsters by the dealers has undergone a few minor but important changes since the late 1960's. Lobsters were crated in 100 lb lots when the shells were hard and in 90 lb lots when the shells were soft. Now most dealers pack the crates with less poundage. Eighty pound crates seem to be the normal weight now, but we have observed a few dealers packing in ninety pound crates. It should be noted that these densities are what a dealer uses to store lobsters at his place of business. Lobsters

packed for shipping may have higher poundage depending on the season.

Another change has been the progression from pegging lobster claws with wooded or plastic pegs to banding the claws. There were complaints that pegs caused damage to the meat in the claw. Also, many pound owners refuse to store pegged lobsters due to their greater susceptibility to the bacterial disease, red-tail. The open wound created by the peg provides the lethal bacteria with a port of entry to the lobster's circulatory system. For a period of time banding created a lot of controversy. Gradually banding lobster claws has increased in popularity to where today few if any lobsters are pegged. A more marketable lobster has been the result.

There has not been much change in the way lobster dealers store their lobsters prior to shipping. The most noticeable change over the years is the greater use of fiberglass tanks as opposed to the earlier years when the majority of the tanks were wood. Lobsters are still kept in live cars and crates tied to docks and floats. One of the most modern systems that has been observed in recent years is in the southern part of the state at Bayley's Lobsters in Pine Point.

Buying Practices

There have been few changes in the buying practices of lobster dealers. Probably the most significant change is the purchasing category of lobsters. The basic one and two price structure has

remained consistent throughout the years, i.e., in January to mid-July lobsters are purchased from the fishermen at one price (a hardshell price). Then about mid-July, depending on when shedding begins, lobsters are purchased at two separate prices, hardshell and softshell. In August or September when the majority of the lobsters caught are softshell the two price structure will return to one which is usually the softshell price. During the winter months, as lobster catches decline, the price usually increases (1991 may be a notable exception). Some lobster dealers do not go on the two price system, but only purchase lobsters at a single price, which is an average of the two - a practice often seen in York county.

A third pricing category for cull lobsters was first seen during our survey in October 1985 in southern Maine. The cull price at that time was about \$.50 a lb. below the softshell price. We have also observed that some fishermen keep the pistols (lobsters with no claws) and only sell their one claw culls. The practice of buying lobsters on a cull price has steadily increased where today approximately one half of the dealers use a cull price.

A select buying category was noted in June 1989 when we found a dealer paying \$.90 extra per lb. for lobsters above 2 lbs. In August that same year, we noted a Lincoln county dealer paying four prices: hardshell, softshell, cull and select. Throughout 1990 several dealers used the select category. The select price has ranged between \$.90 to \$1.50 per lb above the hardshell price. This select price may be in part attributed to the increase in minimum

size and a greater volume of lobsters larger than 2 lbs. In past years we have observed dealers saving out selects and selling them when they get a full crate. Because these large lobsters were saved from many different catches it would have been difficult for the dealers to compensate the fishermen without excessive book keeping. However, now that a larger portion of each fisherman's catch are selects this profit can easily be passed on.

Boat Price

The price of lobsters in 1990 was possibly the most disappointing of any year to date. In the beginning of the survey in April the ex-vessel price was \$ 2.75 a lb. When dealers began buying on the two price system, \$3.25 and \$1.75 for hardshell and softshell were recorded, respectively. After lobsters went back to the single softshell price it remained at about \$ 2.00 a lb to the end of the year. Many fishermen said their only salvation was the increase in their catch weight. With the economy at recession levels, and lobsters being a luxury item, it seems unlikely that a major increase in price of lobsters will be possible in the near future.

Fishing Effort and Efficiency

There have been many observations made in the course of the survey in addition to the actual data that is recorded. A few of these observations are: 1) the majority of lobster boats in the sixties and early seventies were smaller than present day boats; 2)

fiberglass boats, once quite rare are now common and very popular; 3) diesel engines, while not surpassing the popularity of gasoline engines, are much more prevalent in lobster boats today; 4) hydraulic haulers while on a few lobster boats in the sixties can now be observed on almost every boat; and 5) electronic equipment such as radar, depth recorders, and loran, nonexistent or uncommon (one exception being depth recorders) two decades ago, can now be found in most boats.

These aforementioned technological advances can be linked to an increase in fishing effort and efficiency over the years. 1) Larger boats enable lobstermen to handle greater number of traps, to increase their fishing area, and to continue to fish during times of inclement weather. 2) Fiberglass boats do not require as much time and maintenance. 3) Diesel engines, while the initial outlay can be expensive, are less costly to run and more durable. In 1980 during the fuel shortage the port survey crew began to record the gallons of gasoline and diesel fuel used by lobster boats. The reason for this was because if a quota were placed on the fuel used by Maine lobstermen it would be important to know the fuel needs of the lobster fleet. At that time 44% of the fuel used was diesel. In 1989 when we discontinued recording this information 54% of the fuel was diesel. 4) Hydraulic haulers have replaced almost all the capstans which were in use. The capstan is more cumbersome and slower to use, requires more physical effort, and could cause an injury if the fisherman gets a riding turn on one. 5) The electronic equipment that has increased the most on lobster

boats is the radar and loran. In early years of the port survey few boats fished on foggy days; now the presence of fog is not as great a deciding factor for boats to remain on the mooring.

For purposes of characterizing the Maine lobster fleet in April 1978 we began to note the number of fishermen using punts (boats powered by outboard). In 1978 out of 341 boats surveyed, 3% were punt fishermen. The most punts were seen in 1984, when 17% of 289 boats were punt fishermen. A difficult question in later years was how to classify a punt or skiff? Is a 23 ft. open fiberglass boat with a 150 hp motor and a hydraulic hauler a punt? By earlier definitions - yes, however this description has been changed. Now the length of the boat and motor type are taken into consideration. In 1990 out of the 263 lobster boats sampled 7% were skiff fishermen.

Lobster Traps

Lobster traps in 1967 were predominantly the half round wood type with a single parlor and approximately 3 ft in length. The longer 4 ft rectangular double parlor trap became more popular with the increased use of the hydraulic hauler.

Whether traps were made of wire or wood was not recorded until 1978, when about 18% of the traps fished were wire. This estimate steadily increased to its present level of approximately 76% in 1990. The first wire traps were made of a thinner uncoated wire than is commonly seen today. These traps which had a limited longevity did not seem to pan out very well for the lobstermen or

the manufacturer.

Since our survey began in 1967 the number of lobster traps has more than doubled from about 700,000 traps to nearly 2 million traps today. The average number of traps per boat has steadily increased from 247 in 1967 to 472 traps per boat in 1990 (Figure 2). Trap limits have been a consistent topic for discussion by lobstermen as a means of reducing effort. If trap limits were to be imposed for purposes of achieving conservation objectives the limit would have to be below the average number per boat to have any affect. In addition entry into the fishery would need to be controlled at the same time.

Lobstermen Handling and Selling Practices

The method of handling lobsters aboard lobster boats has not changed very much during the course of this study. Various fishermen are using a unique basket design or tray to make handling and off loading the day's catch easier. The holding trays and on board tanks (mostly fiberglass) seem to be of a larger size than they were years ago.

Over the years we have observed fishermen to occasionally withhold part or all of their catch from dealers. However, this practice has been increasing in recent years. We did not attempt to record this information until 1979 when approximately 3% of the lobsters observed were kept by the lobstermen for home use or sale elsewhere (roadside, restaurant, individual). This figure was 6% in 1989. If the price of lobsters continues to remain low the

amount of the catch held back (for sale elsewhere) by the lobstermen may increase in the coming year.

Carring lobsters has always been done by some fishermen in the hope of maximizing their income. This method has also been increasing the last few years. Carring lobsters and hoping for a \$.50 a lb increase in the price can be risky. Within the last year instead of the price increasing it decreased considerably. The threat of theft and disease is also a real concern.

Another practice we have observed in recent years is fishermen saving select lobsters (larger than 2 lbs) out of their catch and storing them in a live car or dummy trap (without heads) sunk on the bottom. When an ample supply is accumulated, it's sold to dealers that pay extra for the larger size lobsters. This is also done with the hardshells during the shedding season when a dealer, other than the lobsterman's regular buyer, is still buying on two prices.

An Evolving Industry

The attitude of the majority of the lobstermen has always been one of concern for their industry. This has been true since the beginning of our study and probably since lobstering originated. True there are some lobstermen that would attempt to catch the last lobster available in the ocean, we know, we've met them. This type of fisherman will always be with us. When we began our dockside survey we met a variety of reactions, the lobstermen were quite skeptical. After a number of years as the study continued they

seemed to be less doubting. During the mid seventies when the yearly poundage dropped to around 17 million many lobstermen began to express an interest in the results of our research and the management implications. We also heard their opinions and cures for the decrease. In most recent years the two incremental (1/32in) increase in the minimum size have caused the most controversy to date. Many lobstermen recognize the conservation benefits of a larger gauge, and support the continued increase. Many lobstermen are unsure and want to progress more slowly. Others are dead set against any change unless it only affects someone else. Whether or not two remaining increases ever occur (Maine Legislature is likely to delay gauge at 3 1/4 in) there are more lobstermen today that feel gradual changes are necessary to protect the industry. Lobstermen are more aware of the resource from which they earn their living. The days when they dumped their oil, old traps, garbage, etc. overboard are gone. Many of these changes were because of regulatory and statutory action. Every change that has been recommended to the industry has usually met with extreme resistance; however, once in place, has been accepted by the majority. What will continue, whether directed by the economy, by the industry or by research studies is change.

Figure 1. Incidence of active lobster dealers by county along the Maine coast from 1967 through 1990.

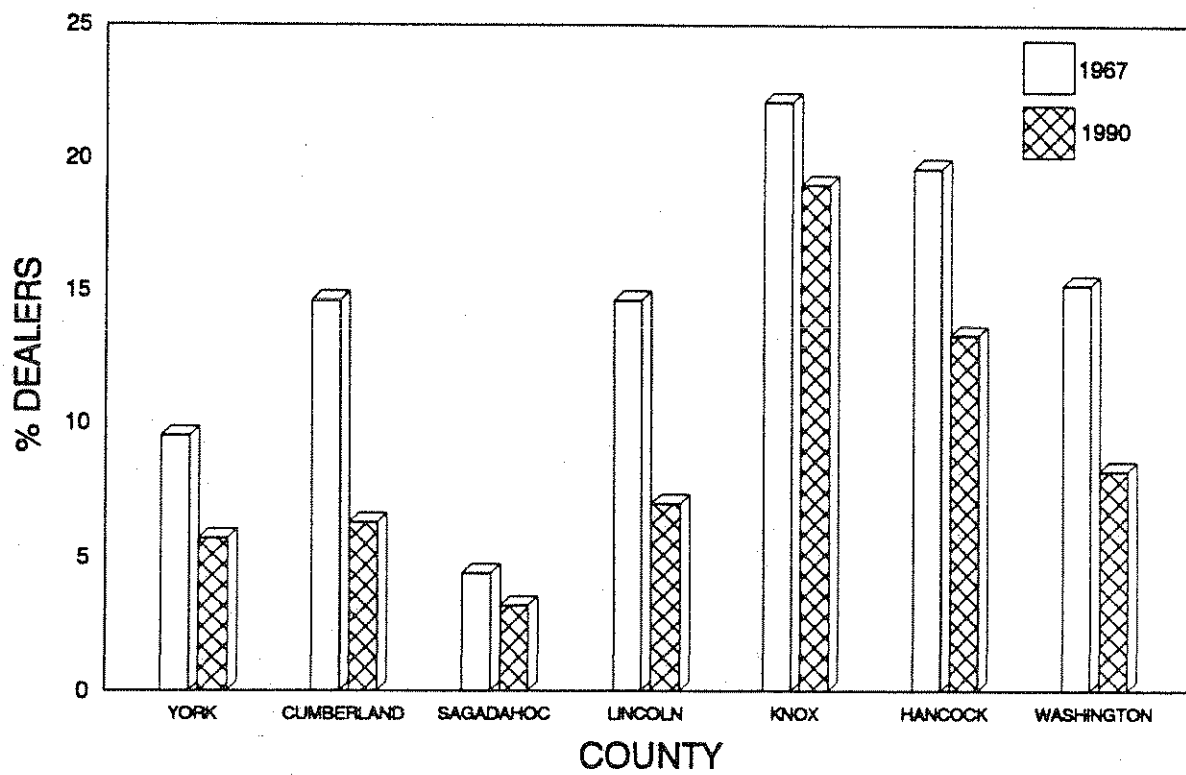


Figure 2. Annual averages of the number of traps fished by lobster boats along the Maine coast, 1967-90.

