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NEXT TO THE THRILL of hooking and landing a coho or a sporty chinook is the enjoyment that can result from a quality plate of salmon.

Great Lakes sports fishermen have had very little experience in catching and handling salmon. They are seeking instructions in guarding the quality of their catch and getting the fish ready for dinner.

This bulletin discusses certain practices which should help fishermen get the most enjoyment out of every salmon they catch.

skin or scales are a bright-silver color. Dark-tan or brown coloring and poorer-flesh quality go together. Many people prefer to smoke or pickle poorer quality fish. A second clue of quality is the time of year when salmon is taken. Generally, fish caught in the spring and early summer are superior in quality to those caught after they have been in the spawning stream for some time. A third indication of lowered flesh quality is softness or mushiness caused by undue mauling during handling and transportation.

HANDLING

The following steps are important for retaining the fresh-caught quality of salmon from the Great Lakes: (1) clean thoroughly as soon as possible after catch, (2) protect from strong odors, such as motor fuel, (3) place on ice or in cooler but not in standing water and (4) keep away from direct sunlight and air—refrigerate or freeze as soon as possible. Avoid such misuse as leaving for hours at the end of a stringer, banging around on an open deck, or stuffing into a hot auto trunk. Salmon are among the soft-fleshed fishes and can be badly bruised in handling.

SELECTING

A few simple rules of thumb can be used to determine the quality of salmon. One is based on the outside or scale color of the fish. Best quality occurs when

REMOVAL OF FAT AREAS

Members of the salmon family store-up fat in certain parts of the body. These fats contain off-flavors and pesticide residues. Locating and removing all of these areas is a way to eliminate the disagreeable section of the fish as well as the part with the greatest concentration of pesticides.

One of these fat areas runs along the top (dorsal) fin line from the head to the tail as shown in Fig. 1. This is commonly known as the back-fat strip. Roughly, it is V-shaped in form and measures up to one-half inch in width and one-half inch in depth on a mature salmon. Studies have shown that it contains up to 20 percent or more actual fat.

There are two ways in which the back-fat strip can be removed. First, if the fish is filleted, the strip may be left attached to the bones by carefully leaving a strip up to one-half inch wide on the top line attached to the fin, Fig. 2. The second method, used when the fish is not to be filleted, is to make a V-shaped cut

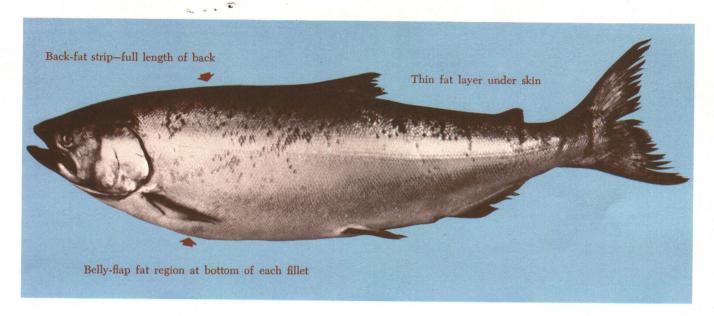


Figure 1—Chinook salmon with arrows showing fat deposit areas as viewed from the exterior of the fish.



Figure 2a—Skeleton of a fish remaining after two fillets have been removed. With this method, the back-fat strip is left attached to the skeleton and disposed of.



Belly-flap fat region at bottom of each fillet



Figure 2b—Flesh side of two fillets before removal of belly-flap strip.

from head to tail while removing the top fin. With both methods, the strip is disposed of before cooking.

A second fat region is an area called the belly-flap. Two belly-flaps actually result when the fish is opened during cleaning, one on each flank of the cleaned fish. Each belly-flap includes bottom fins, Fig. 3. Research has shown the belly-flap region to be 27 percent actual fat.

Belly-flap strips are wider than the back-fat strip. Remove a strip one-half to three-quarters of an inch wide on the belly-flap from gills to anal fin (Fig. 3) from fillets or whole fish before cooking. Since the flesh in this region is less flavorful and softer, one may choose to dispose of an even wider area when cutting out the belly-flap fat strip.

A third area of fat deposits is found in a thin layer just under the skin of the fish over the entire body.



Fillet with belly-flap strip removed

Figure 3—Belly-flap fat strip when removed from the fillet.

The most concentrated amounts of skin fat are found along the straight axial line from the head to the tail on the side of the fish. This line is also visible in the flesh after the skin has been removed, Fig. 4. The fat in this thin layer will melt-out during cooking. A sharp knife may be used to score or puncture the skin in several places to allow the melted fat to separate more readily from the flesh. Or, the skin can be easily removed (Fig. 4), by separating a little flesh from the skin at the tail end, then running a sharp knife between the skin and flesh. It is necessary to grip the tail-end skin, pulling forward and upward. However, the skin does hold the flesh in place during cooking, and can be easily removed when the fish is fully cooked.

COOKING OUT THE FAT

Some fat deposits exist throughout the flesh of the fish. During cooking, much of this fat leaves the flesh areas. As this fat melts out, it carries with it some of the residues of hard pesticides. Until more research is accumulated, eating fish dishes which contain the cooked body fluids or fat is questionable, especially when fish are taken from waters known to contain pesticide residues. Included are home made chowders, soups, and home-canned salmon which has been cooked in its own fluids. Steamed, baked, or broiled fish can be drained during or after cooking to avoid consuming the melted fats and fluids.

FREEZING EXCESS SALMON

Only the highest quality fish should be frozen. Old and fatty fish will deteriorate more rapidly than young, early-season and well-cleaned fish. All air should be



Thin fat layer under skin



Figure 4—Fillet of salmon and the skin which has been removed from it.

excluded from the package in which salmon are frozen. The product to be frozen should be moist rather than dry. Before using, fish should be allowed to thaw in the package for a period of several hours. If cutting is necessary after freezing, it should be done when fish is partially thawed.

CUTS OF SALMON

Steaks make excellent pieces for baking, broiling, or barbecuing. Cut 1 to 1½-inch thick steaks across the fish after the fatty strips have been removed. Partially thawed salmon is easily cut into steaks.

Fillet

Fillets are halves of fish with bones usually removed. To fillet, use a sharp knife and start cutting at the back of the head, running the knife along the full length of the back in one continuous motion. Using the tip end of the knife for deep cutting, make additional deeper cuts until the rib cage is reached. Then, let the ribs guide the tip of the knife while cutting flesh away from ribs. When fillet is removed from one side, repeat the cutting on the opposite side for the second fillet. Fish may be easily packed for freezing after filleting.

Whole

Whole salmon may be baked, broiled, or cooked over the charcoal grill after being field dressed. Or, the head and all fins can be removed before cooking. With fully grown salmon, it is often necessary to remove the head and tail so that it can be placed in the cooking container.

Best flavor results when these two guidelines are followed. First, be sure that the fish is carefully and completely cleaned, with special attention to removal of every last bit of the black kidney line found resting against the backbone in the opened cavity. Second, remove the fatty tissues on the top line and belly regions as described earlier.

Butterfly

For grilling over charcoal, whole salmon, fillets, or butterfly cuts may be used. To butterfly, cut the salmon down the middle from the inside. Leave the skin at the back uncut so that it holds the two halves together. Then, lay the fish flat with the skin-side down so that it now resembles the two wings of a butterfly. Both the skin-side and the flesh-side may be basted with your favorite sauce while it cooks over the charcoals. Bones can be easily removed, if desired, after butterfly is cut.

Accumulations of exterior slime collect on a cleaned salmon if kept any length of time before cooking. This slime can be removed with a serrated knife or a strong-bristled, scrubbing brush. Scraping or brushing from tail section forward is more successful than from head toward tail section. When a frozen salmon with skin still intact is thawed, the slime will appear again and can be removed in the same manner.

SALT FLAVORING

Many cooks and sportsmen enjoy a salt flavoring in salmon, perhaps because it imparts part of a smoked fish flavor. Salting is easily achieved with members of the salmon and trout family of fishes. Merely agree upon the amount of saltiness your diners like best and then prepare the water and salt solution. Generally, the proper solution for smoking is found by adding salt to water until it will float a whole egg. For cooking other than smoking, a weaker solution is desirable. Large fish should be kept in the cold, salt-water solution for approximately 18 hours before cooking.

The mild salt water solution works wonderfully for fish which are prepared for cooking over charcoal. The combination of salt flavor and smoke from the charcoal results in a semi-smoked condition. Small chips or chunks of fruitwood, maple, or hickory-wood placed on the hot charcoal while the fish cooks, also impart a smoked fish flavor. The flavor becomes even more pronounced when the salmon is kept in the coldest section of the refrigerator after cooking.

Since cooked fish tends to flake apart, barbecuing equipment should include a basket or some type of cover grate so that the fish can be turned over during cooking. Remember that the skin holds the flesh together during cooking and can be easily removed when cooked. The skin should be punctured or scored to enable the skin fat to escape as it melts. Finally, a hood over the cooking flesh will concentrate the smoke flavoring.

IMPORTANT POINTS TO REMEMBER

- A. Early and mid-season salmon have prime flesh quality while late-season fish have poorer flesh quality. (It is also thought that younger fish contain lower levels of pesticide residues.)
- B. Handle with care to preserve quality.
- C. Bright, silver-scale color is an indication of topquality salmon.
- D. Fat regions in salmon can be identified and removed before cooking.
- E. Preparing fish dishes containing, or cooked in, melted fish fats or body fluids is presently discouraged.

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