

## SCHOOL LUNCH FISH-COOKERY DEMONSTRATIONS IN OKLAHOMA

By Robert P. Seifert\*

A series of fish-cookery demonstrations for the lunchroom personnel of the Oklahoma schools was presented during the spring of 1954 by the U. S. Fish and Wildlife Service. A total of 36 demonstrations were given in cooperation with the Oklahoma School Lunch Division and the U. S. Department of Agriculture, for 1,600 managers, cooks, and workers representing 632 schools throughout the State. Nearly 120,000 children are fed daily in these schools, which have a total enrollment of over 220,000.

The purpose of these demonstrations was threefold: (1) to encourage greater use of fishery products in the school lunchrooms of the State, (2) to show lunchroom personnel improved or varied methods of preparing fish, and (3) to encourage use of a wider variety of fishery products.

To determine the effectiveness of these demonstrations in achieving these objectives, a survey was made of the use of fish in the schools before and after the demonstrations.



Today's children are tomorrow's consumers. Encouraging the use of fishery products in school-lunch programs will yield dividends in the future.

increased the use of fish in schools approximately 50 percent. However, the results in Oklahoma did not follow this trend. As shown in Table 1, Oklahoma schools represented at the demonstrations showed a decrease of 8 percent in their frequency of fish use after the demonstrations. In October 1953, which was before the program began, it was found that their use of fishery products averaged 1.3 times per month--about the same as the schools of most inland states which have had no special encouragement to use fish in their lunchrooms. In October 1954, or after the program was completed, their use of fish was only 1.2 times per month.

However, in making the survey, the use of fish in schools not represented at the demonstrations, and presumably not otherwise influenced in their use of fish, was also checked. It was found that for the same comparative periods, as shown in Table 1, their use of fish had declined 28 percent, i. e., from 1.1 times per month to 0.8 times per month.

The decline in the quantity of fish consumed, computed on the basis that one serving of fish contains approximately 2 ounces, was practically the same as the frequency of use. It should be noted here that the smaller average poundages of

\*Fishery Marketing Specialist, formerly with the Educational and Market Development Section, Branch of Commercial Fisheries, U. S. Fish and Wildlife Service, Washington, D. C.

The month of October was chosen as a representative period for the survey. Accordingly, individual school menus on file in the State School Lunch Division office were checked for October 1953 (a sample month before the demonstrations). The menus for 359 schools which had personnel attending a fish-cookery demonstration, and 205 schools not represented at any demonstration, were checked. The 205 schools not represented were used as a control in the survey.

Similar demonstration programs in many other states have

fish shown consumed by the schools not represented, as compared to those which were, is caused by a difference in the size of the schools in the two groups. Since practically all of the larger schools were represented at one of the Service demonstrations, it was necessary in the control group to use schools which were, on the average, smaller in size.

Table 1 - Results of Oklahoma School Lunch Fish-Cookery Demonstrations

Item	Times Fish Were Used Per Month Per School			Average Amount of Fish Used Per Month Per School		
	Demonstration		Percentage Change	Demonstration		Percentage Change
	Before	After		Before	After	
	No.	No.	%	Lbs.	Lbs.	%
For Schools:						
Represented . . . .	1.3	1.2	- 8	28.0	26.1	- 7
Not Represented . .	1.1	.8	-28	18.4	13.1	-29

Because the declines in the use of fish after the demonstrations were so unusual, it appeared likely that there must be some other factors which had influenced the choice of menus in the Oklahoma schools during the period surveyed after the demonstrations of fish cookery.

The Oklahoma School Lunch Program Director and his supervisors stated that the reason for the general decline in the use of fish in the schools was because of the large quantity of beef, beans, and cheese which had been distributed to the schools in the fall of 1954. This distribution of free protein-rich food was so ample that the schools could, if they chose, virtually eliminate the buying of any other "main dish" ingredient. Data obtained from the State Director of Commodity Distribution bore out the comments of the School Lunch Director and supervisors. A total of \$213,034 worth of beef, cheese, and beans were distributed free to the Oklahoma schools during August, September, and October of 1953. However, in the same months of 1954, \$650,043 worth of beef, cheese, and beans were distributed in this three-month period. Thus, triple the amounts of free commodities were available to the schools from the Department of Agriculture. The distribution of beef alone in August, September, and October of 1954 was nearly three times as much as all of the commodities distributed in the first three months of the 1953 school year. Under these circumstances it is somewhat surprising that the schools used as much fish as they did in 1954. The fact that the decline in the use of fish was held, in those schools represented at a demonstration, to only 8 percent is indicative of the value of the demonstrations to the schools, especially since nonrepresented schools showed a 28-percent decrease in their use of fish or a 2.5 times greater decline than the first group of schools.

Influencing the frequency with which fish is used in the schools is not the only purpose of the demonstrations. Various methods of preparation are also demonstrated. In the Service's demonstrations, emphasis is placed on methods by which fish can be prepared in the oven, since schools usually have more oven space than they have top-of-the-stove space as would be needed for pan-frying fish. It was noted in the survey that preparation of oven-fried fish proportionately tripled and baked fish doubled in those schools represented at a demonstration.

Table 2 - Relative Use of Fish, October 1954

Species	Percent
Salmon, canned . . .	38
Tuna, canned . . . .	32
Fillets, frozen . . .	29
Mackerel, canned . .	1
Total . . . . .	100

In the demonstrations, the use of both canned and frozen fish is shown. Canned salmon and tuna, frozen fillets (principally ocean perch and cod), and canned mackerel, in that order, were found to be most popular in the Oklahoma schools before the demonstrations and remained in that order of popularity afterwards. However, an increase in the use of frozen fillets was noted as an apparent result of the work

done. This is understandable since the people of inland areas are often found to be a little skeptical of frozen fish unless some extra effort is made to point out the advantages for using the frozen product. Table 2 shows the percentages of various kinds of fish chosen for their menus by the Oklahoma school lunch managers in October 1954.

Table 3 - Percentage of Fish Served Per Day

Day	Percent
Monday . . . . .	9.6
Tuesday . . . . .	10.5
Wednesday . . . . .	11.7
Thursday . . . . .	11.7
Friday . . . . .	56.5
Total . . . . .	100.0

Friday is still "fish day" in the Oklahoma schools. Fish are served more often on that day than on all the other days combined (table 3).

In this summary of the fish-cookery demonstrations in Oklahoma, the State School Lunch Division should be given special credit for the excellent cooperation which all of its personnel extended to the Service's Home Economist and Fishery Marketing Specialist conducting the demonstrations and survey in the

State. Credit should also be given the School Lunch Division personnel for their efforts in following through on the material presented at the demonstrations. At their annual workshops, and in their monthly bulletins, they have consistently included mention of fishery products. Fish can reasonably be expected to enjoy much greater use in Oklahoma as a result of the State's and Service's work whenever beef and other protein-rich foods are not so amply distributed as free commodities.



#### BLACK PEARLS

A Kobe, Japan, pearl dealer, after several years of experiments, recently announced success in a process by which light pearls are made black. His process remains secret but it is understood to be based on his discovery that the core and the outer layers of pearls have different heat expansion coefficients. The outer layers are loosened from the core substance under heat after which a pigment is forced into a small hole drilled in the pearl. The pigment seeps evenly between the core and the outer layers of the pearl. It is claimed that the pearl thus treated does not lose its lustre. The Kobe dealer reports that European dealers have responded enthusiastically to the new product.

--U. S. Consulate Dispatch,  
Kobe, Japan, July 8, 1954.