

Extensive Experimentation Underway In California To Determine King Salmon Facts

By DEVAN L. SHUMWAY
SACRAMENTO (UPI)—The private life of the king salmon, one of the top sports fish of the Pacific Coast, is under probe by California's Fish and Game Department.

And so far only a few secrets have been revealed.

Director William E. Warne says scientists have completed the first phase of an investigation into the habits of the fish. The study is designed to learn why the salmon population has been declining in recent years.

One of the key objects of the study is to see if anything can be done about the decline.

Right now, the situation is stagnant. Nobody really can do anything conclusive—only hope.

Some day, Warne said, the California department may be in a position to improve salmon fishing.

But he warns: "It will be no overnight project. The life cycle of the king salmon is approximately four years and we cannot expect

any real results from the first experiment until at least 1962."

In order to find out what to do, you have to find out what's done by the fish now. That's the first step the department has already taken.

The initial experiment consisted of releasing one million king salmon two to three inches long at three places in the Sacramento River. All bore distinctive marks. Two or so months later, this large-scale operation was completed. Next year two million will be planted.

Now come the scientists to study differences in survival of fish released at various distances from the ocean. Effects of the differences will be measured as the fish are caught for sport and food and on the spawning beds upriver.

Said Warne: "While a more comprehensive project is planned for each of the next four years, practical problems arising from this year's work must first be solved if we are to succeed."

This boils down to the fact that in a quickie test the department conducted last year, the results were different than they were this year. This can confuse scientists.

In the quickie test, a few thousand fingerlings were transported from fresh to salt water in live bait tanks aboard a boat. Nearly 100 per cent of them survived.

But then this year, using the same technique and the same boat the salmon refused to cooperate. Only about 30 to 50 per cent of them survived the trip downstream.

"Our scientists have not yet pinned down the reasons for such a wide variation," admitted Warne sheepishly.

Then, there's the story of another experiment.

A group of salmon was trucked directly to the salt water release site. When the truck arrived, salt water was pumped into it until fish were in water of the same salt content and temperature as that into which they were released.

Six different truckloads got this special treatment. Only 10 to 40 per cent of them lived through the experience.

To show what the scientists have to deal with, here's what happened to another experiment.

Two groups were released at dif-

ferent places in fresh water. About 90 per cent of these lived through the experience.

This much, then, is made crystal clear by the experiments so far, according to Warne: "Quick transportation, with high survival, is essential to the success of the project."

The next step, then, for scientists is to continue experiments to try to solve the problem.

The experiment is important, not only to California, but to other West Coast states and Alaska, where the salmon is a main industry.

Other nations such as Japan and Russia will profit, too, if the California scientists can find a way to keep the salmon population growing rather than decreasing as it has been in recent years.

The Russians, for instance, re-

cently have been poaching on water just off the coast of Alaska for their salmon. This may be because they have a salmon problem, too, but they don't tell anybody about it.

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Hen Helped Make Oregon Famous In Earlier Years

OREGON STATE COLLEGE—A look back into Oregon's 100-year history brings to mind Lady McDuff who brought world-wide fame to Oregon State College and Professor James Dryden, former head of the poultry department.

Lady McDuff was a white Leghorn hen and the first chicken in the world to perform the then amazing feat of laying more than 300 eggs in one year. This was about 40 years ago when the United States average was less than 100 eggs per hen.

Oregon's average rate of lay now has climbed to 220 and is expected to reach 260 by 1970, reports Noel Bennion, extension poultry specialist at OSC. The yearly rate of lay in Oregon is 20 eggs per hen higher than the United States average.

Although the rate of production has increased since Lady McDuff's day there have been few changes in the egg itself or the way it is marketed. However, scientists now think they have hit upon a way to improve nature's way of packaging this basic food.

Homemakers can look forward to buying eggs out of the shell in individual plastic containers similar to those restaurants use to serve jelly. This means shoppers can see what they're buying. It also will reduce accidental breakage.

Another new idea being tried in egg marketing is to sell eggs in cartons holding 2 or 3 dozen, rather than the traditional 1 dozen.

Oregon has fluctuated between being an egg importing state and an egg exporting state. In the years following Lady McDuff's record-breaking performance, Oregon became especially noted for the breeding and production of high producing white Leghorns and top quality market eggs. From 1925 to 1940, Oregon exported excellent quality white shelled eggs mainly to the New York market. Bennion recalled.

At present, Oregon's egg production and consumption are about in balance. This situation probably will remain the same, Bennion believes. Improved methods of feeding, breeding and management will increase the rate of lay to keep up with the increasing number of people in the state.

The number one problem of the poultry industry during the past 10 years has been a decline in the per-person use of eggs, Bennion said. In 1945, the average person ate more than 400 eggs a year. The latest estimate is 344 eggs a year.

Ten years ago, the average United States factory worker had to work 32 minutes to buy a dozen eggs. Today he can buy the

same amount for just 16 minutes work so the decline in use isn't because of the price increase, Bennion said. And eggs are being produced cheaper all the time. The tendency is to use smaller birds that require less feed, but lay larger eggs.

It now takes between 4 and 4½ pounds of feed to produce a dozen eggs. Ten years ago it took 5½ to 6 pounds. By 1970 it probably will take only 3½ pounds, Bennion predicted.

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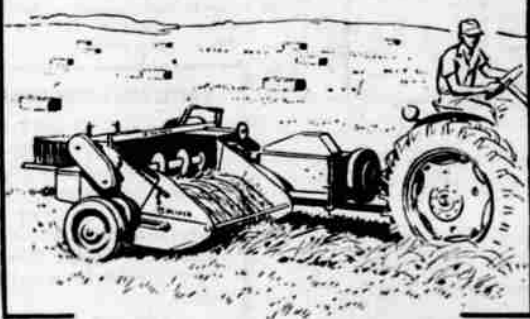
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