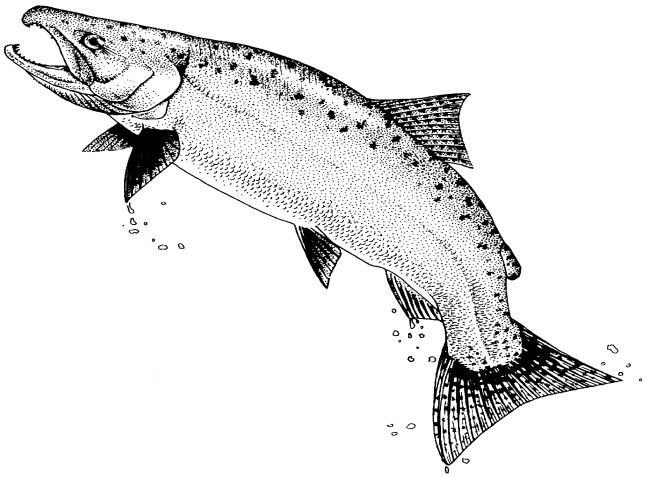
Hatchery Facts

Frequently Asked Questions

Introduction



In the hundred plus years hatcheries have been in the Columbia River Gorge, the how and why salmon are raised has changed as has our knowledge of salmon life cycles. The first fish culturists did not fully understand the complexity of the salmon life cycle. Fish culture was an experiment with a lot of trial and error and many mistakes were made.

Today, fish culture is still an experiment. Fish culturists continue looking for different rearing techniques to improve the hatchery product. Hatchery personnel must understand disease, recognize the importance of genetics, understand how hatchery fish interact with wild fish, and how salmon adapt to the changing environments.

Hatcheries will continue to change as our knowledge expands. Today hatcheries have standards to insure that their spawning procedures will maximize genetic diversity. For example, hatcheries are studying ways to improve rearing young salmon by simulating more natural environment. Fish diets are continually being improved as the fish requirements are more completely understood. Disease policies are in place to insure the healthiest fish can be reared and released. By studying and evaluating hatchery successes and failures, hatcheries have implemented new production methods such as developing new incubation methods, changing rearing environments, modifying feeding methods, changing release strategies, and improving water quality. New methods and procedures must be evaluated and improved upon, making hatchery programs more effective and considerate of the natural environment on which we depend.

If I catch a salmon or steelhead, can I tell if it is wild or of hatchery origin?

Depending upon the species you catch, you may not be able to tell if it was raised at a hatchery. All coho salmon and steelhead trout currently released from National Fish Hatcheries now have an adipose fin clip to identify it as a hatchery fish. Chinook salmon may or may not be fin clipped.

Do hatchery fish compete with wild fish?

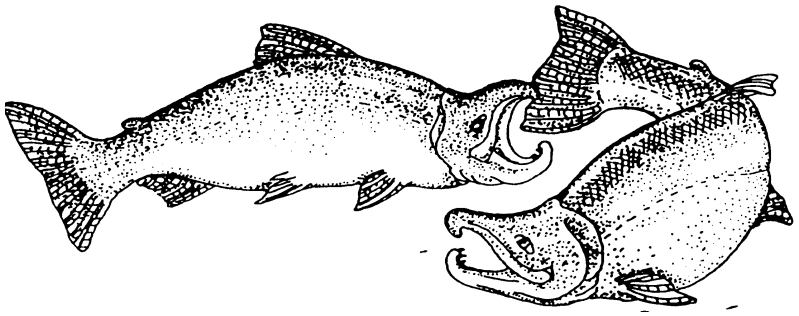
Little information exists to document interactions between wild and hatchery fish. However, existing information suggests that hatchery fish are at a distinct disadvantage compared to naturally raised fish. The idea of competition between wild and hatchery fish is most often in reference to steelhead which when released from the hatchery, do not migrate to the ocean and reside in the streams. Biologists are concerned with the potential effects of these resident fish on naturally spawning populations. To address these concerns, hatchery programs are being evaluated and modified to minimize potential impacts.

Are hatchery fish diseased? Do they spread diseases to wild fish?

Both hatchery and wild fish can carry organisms which can cause disease. Fish health biologists aim to decrease the incidence of disease by testing fish for pathogens and recommending treatment to improve fish health. There is little evidence to support the idea that hatchery fish spread disease to wild fish under natural conditions in the Columbia River basin, but we have policies in place to minimize risk to wild populations.

Are all hatchery fish marked?

Only a representative sample of fish released from hatcheries are marked. Types of marks include fin clips, coded-wire tags, and Passive Integrated Transponder (PIT) tags. The adipose fin is the most commonly clipped fin; other fins may be clipped for special studies. Fish with missing fins can easily be identified as hatchery fish. The fin clip is the only visible mark. Coded-wire and PIT tags are injected into the body of the fish and are not visible. Information from these marks can be used to estimate a number of statistics important to fishery managers.



Which fish are spawned and why?

Fish have evolved to spawn throughout a period of time. To mimic this adaptation, culturists spawn fish of all sizes throughout the run to assure genetic diversity and greater chances for survival. Spawning protocols emphasize random selection of adults in an effort to circumvent any potential selection effects associated with artificial propagation.

What happens to the hatchery fish after they are spawned?

In some cases, the salmon are injected with chemicals prior to spawning, making them unfit for human consumption. These fish are sent to a rendering facility (made into fertilizer, oils extracted for cosmetics, etc.) Under Federal agreements, fish not injected with chemicals are used by native American tribes for subsistence and ceremonial purposes, or for food in our Federal Prisons program.

In the wild, salmon die after spawning and their carcasses contribute essential nutrients to the watershed. Some hatcheries are now putting spawned salmon carcasses into the streams in an effort to increase their productivity.

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