DIFFERENTIAL PERFORMANCE OF VENTRAL FIN CLIPPED AND ADIPOSE FIN CLIPPED/CODED-WIRE TAGGED SPRING CHINOOK SALMON AT WARM SPRINGS NATIONAL FISH HATCHERY, OREGON

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Abstract. -Warm Springs National Fish Hatchery is operated by the U.S. Fish and Wildlife Service, and is located on the Warm Springs River within the Confederated Tribes of the Warm Springs Reservation of Oregon. For three brood years (1987-89), we applied ventral fin clips and adipose fin clips/coded-wire tags in order to evaluate the two marks on hatchery performance of spring Chinook salmon (Oncorhynchus tshawytscha). Each brood year, approximately 100,000 fish received a ventral fin clip and 100,000 were marked with an adipose fin clip/coded-wire tag. For the 100,000 ventral fin clipped fish, 50,000 received a left ventral fin clip and 50,000 received a right ventral fin clip. The mark study was also nested within a diet study, where fish in ponds containing left ventral fin clips were fed one diet and fish in ponds containing right ventral fin clips were fed another diet. From our sampling at the hatchery, we found that: 1) each mark group within a diet had variable length frequency distributions at release; 2) age, length, and sex composition at return were similar for each marked group within a diet; and 3) survival to adult was affected by diet but not by type of mark. In closing, spring Chinook salmon marked with a ventral fin clip performed as well as fish marked with an adipose fin clip/coded-wire tag; but sample sizes were small and survival to adult was low for all groups.

Spring Chinook salmon returns to Warm Springs National Fish Hatchery for the marking/diet study, 1987-89 brood years combined.

Diet	Mark	Number Released	Jack Return	Age 4 Return	Age 5 Return	Total Return	Percent Return
Dry	AdCWT	137,033	4	24	8	36	0.026%
Dry	LV	147,799	3	31	6	40	0.027%
Total		284,832	7	55	14	76	0.027%
Moist	AdCWT	140,564	1	50	11	62	0.044%
Moist	RV	153,851	6	60	9	75	0.049%
Total		294,415	7	110	20	137	0.047%