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## **Proposed Thermal Marks for Brood Year 2005 Salmon in Korea**

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### **Abstract**

We plan to mark approximately 3.2 ~ 3.6 million chum salmon, which covers about 50% of release of BY 2005 chum salmon at Namdae-cheon (river). Chum salmon will be marked at Salmon Research Center (Yangyang hatchery) using only 1 thermal mark.

### **Introduction**

Korea released tagged juvenile chum salmon using coded wire tags (CWT) and clipped adipose fins in 2003, 2004, and 2005. The information from the returning salmon within some years will help determining the optimum period of release of juvenile. Aside of this method, we need to begin additional marking technology. All NPAFC countries but Korea has been released fry salmon with otolith marking. Otolith thermal marking on Korea chum salmon will be executed as a preliminary research to provide information about growth, survival during the early ocean life stage, and hatchery origins.

### **Plan for 2005 brood year stock**

The proposed thermal mark for the 2005 brood year salmon is shown in Table 1. We plan to mark approximately 3.2 ~3.6 million chum salmon at Yangyang hatchery with 1 pattern, which covers about 50% of release of BY 2005 chum salmon at Namdae-cheon (river). The thermal mark was suggested by Dr. R. Josephson. Thermal mark pattern is presented in both the RBr notation (Munk and Geiger 1998), with the modification by Hagen (1999).

## References

- Hagen, P. 1999. A modeling approach to address the underlying structure and constraints of thermal mark codes and code notation. (NPAFC Doc. 395). 12 p. Alaska Dept. Fish and Game, Juneau Alaska.
- Munk, K.M. and Geiger, H.J. 1998. Thermal marking of otoliths: the “RBr” coding structure of thermal marks. (NPAFC Doc. 367). 19 p. Alaska Dept. of Fish and Game, Juneau Alaska.

Table 1. Proposed thermal mark releases from Korea for 2005 brood year stocks of chum salmon.

No	BROOD	YEAR OF	SPECIES	STATE/			FACILITY	STOCK	FINAL
	YEAR	RELEASE		PROVINCE	REGION	AGENCY			RELEASE SITE
K05-1	2005	2006	CHUM	GANGWON	EAST/JAPAN	SRC	Yangyang Hatchery	Namdae-river	Namdae-river
SEA COAST									

No	REARING		ESTIMATED		HATCH	GRAPHIC IMAGE		MARKING	
	TREATMENT	STAGE	RELEASE	RBr CODE	CODE	PREHATCH	POSTHATCH	SYSTEM	
K05-1	fed	fry	3,200,000	1:1.3,2.3n	3,3nH			CHILLER	
			-3,600,000						