

Tagging of salmon smolts with DST micro

The effects of tagging large salmon smolt with DST micro tags have now been investigated in a rearing experiment. Scientists at the Institute of Freshwater Fisheries in Iceland conducted the experiment in November 2004 through February 2005. Dummy DST micro tags were used but they are identical to real DST micro tags.

The aim of the study was to find out the influence of tagging with DST micro tags inserted into the fish body cavity. The outer shell of the tags was made of ceramic, but for comparison one group was tagged with plastic tags (table 1 - group I). A total of 9 groups/treatments were tested in the experiment (table 1) and it was repeated for two different groups of fish, which were different in size. A total of 620 fish were used in the experiment. There were three groups without DST tags (groups A, B and C), but the other groups were internally tagged with DST tags. Different orientation of the tag was also tested in the experiment, having two groups with the curved end of the tag anterior (groups D and E) and two groups with the curved end posterior (groups F and G). Some groups were not sewed.



The tags were placed into the body cavity with a surgery and after recovery the fish were reared in tank for about 3 months. The fish were individually tagged with serial coded micro tags, which make it possible to register the influences of the tagging on each individual.

Fish with right treatment in group E, G and I where total 70, of that group only 3 fish died. By giving the fish time to recover, researchers could be able to transfer the tag from dead fish to new one before release. The mortality of the experimental fish indicates that the antibiotic and vitamin have positive impacts on the tagged fish (group D vs. E, and group F vs. G). This also indicates the importance of sewing the tagged fish (group H). The results are now being analysed.

Table 1. The groups of the 9 different treatment used in the experiment. N means that No and Y means Yes.

Group id	Number N	Cut	Sewed	DST	Antibiotic + Vitamin	Tag* orientat.
A	50	N	N	N	N	
B	50	Y	Y	N	Y	
C	50	Y	N	N	Y	
D	30	Y	Y	Y	N	C
E	30	Y	Y	Y	Y	C
F	30	Y	Y	Y	N	D
G	30	Y	Y	Y	Y	D
H	30	Y	N	Y	Y	D
I	10	Y	Y	Y**	Y	D

* C: curved end anterior D: curved end posterior

** This group was tagged with dummy DST made of plastic.

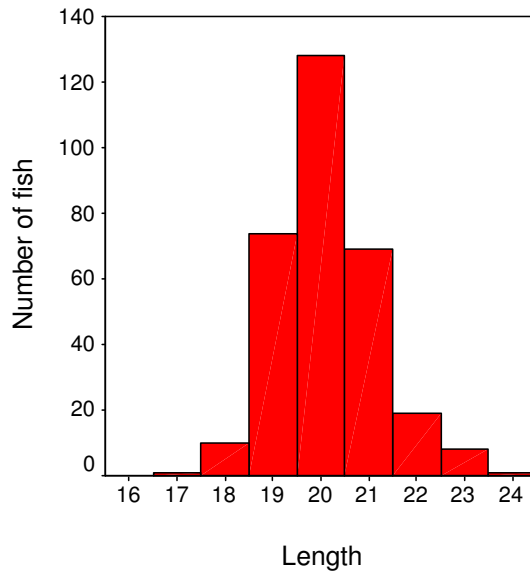


Figure 1. Length distribution of the larger smolt used in the experiment

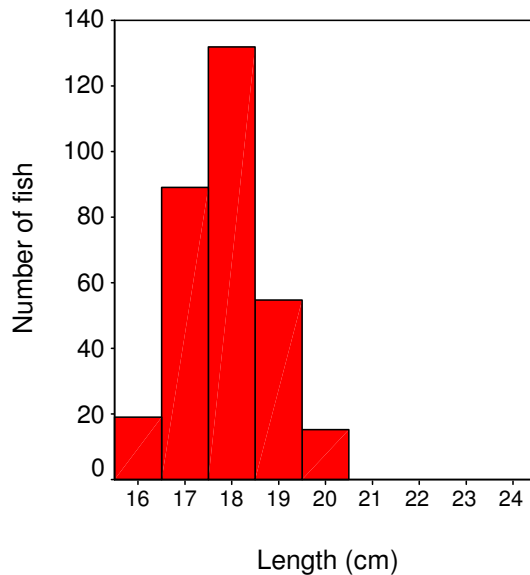


Figure 2. Length distribution of the smaller smolt used in the experiment

Contact person: Ingi Runar Jonsson, Institute of freshwater fisheries, Iceland.
 e-mail: ingi@veidimal.is, Source: www.star-oddi.com