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Danish Discards of Cod in the Baltic

by

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Introduction.

According to Council Resolution 1975/4:22 investigations on discards in the Danish cod fishery in the Baltic have been continued in February 1980 in subdivision 25 and 22. The work has been done onboard the commercial vessels by investigators sent from the Danish Fisheries Institute.

No attempts to estimate the survival of discards have been made. According to Olofson and Otterlind (1978) and Bagge (1978) there is a good relationship between the present convention mesh size, 90 mm, and the minimum landing size 30 cm (50% retention length). The minimum landing size in the Danish fishery until 1979 has been 33 cm, then increased to 38 cm and in April 1980 reduced to 35 cm. Heavy discards are to be expected accordingly.

The following results refer to a minimum landing size of 33, 35 and 38 cm.

Results.

The results are shown in table 1.

The mean weight of discards in relation to landing by weight in subdivision 25 in March 1979 were 8.0%, in February 1980 the corresponding value was 7.2% and thus less even the minimum landing size was increased to 35 cm. In subdivision 22 no investigations on discards were made in 1979, but compared to April 1978 (18.1%) the discards in February 1980 decreased to 7.2% although the minimum landing size was increased from 33 cm in 1978 to 38 cm in 1980.

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It appears from table 1 that 63.3% of the discards in subdivision 22 in February 1980 belonged to age group II (year class 1978) and 35.2% to age group III (year class 1977). According to young fish surveys carried out in subdivision 22 and 25 year class 1978 is very weak (in subdivision 22 almost lacking), in subdivision 22 year class 1979 also seems to be weak. As there have been no change in mesh size the decreasing percentage of discards in relation to landings must be caused by weak recruiting year classes.

In fig. 1 the weight of discards as percentage of landings in March 1979 and February 1980 (subdivision 25) are plotted against depth. The negative relationship demonstrated in 1979 (Bagge 1979) is also true in 1980.

#### Summary.

In spite of an increased minimum landing size in the Danish fishery in the Baltic the percentage of discards by weight in relation to landings have decreased, possibly due to weak recruiting year class (1978,1979).

#### References:

- Bagge, O and H. Knudsen, 1974: Length-girth relationship in cod. Rapp. P.-V. Réun. Cons. int. Explor. Mer. 166 pp. 83-84.
- Bagge, O. 1979: Danish Discards of Cod in the Baltic. CM. 1979/J:7. Baltic Fish Committee.
- Olofson, J. and G. Otterlind, 1978: Swedish mesh selection experiments on Baltic cod in 1977 and 1978 - CM 1978/B:2 Fishery Technology Committee.

Table 1. Cod discarded in subdivision 25: November 1978, March 1979, February 1980, and in subdivision 22: April 1978 and February 1980.

Date	Haul nr.	Depth Fathoms	Duration of haul minutes	Landings in kg	Discards 33 cm in kg.	33 cm percentage of landings	33 cm		Mean Length cm	Sub- divis- ion
							kg per hour	Mean weight kg		
13.03.79	1	42	275	1 465	185	12.6	40.4	0.235	-	25
14.03.79	2	48-50-50	195	1 750	100	5.7	30.8	0.245	-	25
14.03.79	3	48	195	1 250	73	5.8	22.5	0.239	-	25
14.03.79	4	46	220	1 375	117	8.5	31.9	0.216	-	25
19.03.79	5	46	190	1 100	145	13.2	45.8	0.234	-	25
19.03.79	6	48	210	875	89	10.2	25.4	0.223	-	25
19.03.79	7	48-44	210	850	125	14.7	35.7	0.229	-	25
20.03.79	8	55	190	1 375	39	2.8	12.3	0.242	-	25
20.03.79	9	55	90	450	9	2.0	6.0	0.243	-	25
20.03.79	10	55	310	1 160	46	3.8	8.9	-	-	25
	1-10			11 650	928	8.0	-	0.223	28.6	25
7.11.78	1+2	28	495	750	125	16.6	15.6	0.213	-	25
8.11.78	3+4	22	500	692	517	74.7	62.3	0.152	-	25
10.11.78	5+6	28	480	690	260	37.6	32.4	0.247	-	25
	1-6			2 132	902	42.3		0.197	26.8	25
4.04.78	1+2+3	15	720	883	136	15.4	11.3	0.267	-	22
5.04.78	4+5+6	15	630	667	131	19.6	12.4	0.287	-	22
7.04.78	7+8	15	420	333	74	22.2	10.6	0.287	-	22
	1-8			1.883	341	18.1		0.279	30.1	22
19.02.80	1-2	15	420	492	33 )	6.7 )	4.7	0.449 )	34.4 )	22 )
26.02.80	3-4	15	420	593	31 )	5.2 )	4.4	0.344 )	30.8 )	22 )
21.02.80	5-6	15	420	442	13 )	2.9 )	1.7	0.388 )	31.0 )	22 )
	1-6			1 527	77 )	5.0 )		0.370 )	32.1 )	22 )
12.02.80	1	44	250	1 325	140	9.6	33.6	0.266	-	25
12.02.80	2	47	245	1 938	98	4.8	24.0	0.255	-	25
13.02.80	3	44-47	245	1 250	98	7.3	24.0	0.263	-	25
13.02.80	4	47	300	2 025	125	5.8	25.0	0.291	-	25
14.02.80	5	42-45	240	1 075	88	7.6	22.0	0.289	-	25
14.02.80	6	45	355	1 200	121	9.2	20.5	0.245	-	25
15.02.80	7	45	255	725	70	8.8	16.5	0.236	-	25
15.02.80	8	45	265	742	56	7.0	12.7	0.252	-	25
	1-8			10 280	796	7.2		0.263	29.3	25

Age %.  
I II III  
1.5 63.3 35.2

FIG.1.

