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MSX in Rappahannock River & Great Wicomico River

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Rappahannock River at Balls Point

Date	Source of Oysters	No. of Oysters	MSX Infections No.	MSX Infections Intensity
3 May 1983	James River	25	4	0-0-2-2 all localized cases
3 May 1983	Piankatank River	25	1	0-0-0-1 "
Great Wicomico River Native Oysters				
4 May 1983	Fleet Pt.	24 2 yr. olds	12	1-2-6-3
4 May 1983	Haynie Pt.	25 "	20	5-6-9-0
4 May 1983	Rogue Pt.	25 "	11	1-1-9-0
4 May 1983	Upper Middle Ground	23 Spat	2	0-0-1-1

On 2 May 1983, a low-tide salinity survey in the Rappahannock River and the Great Wicomico River revealed that salinity values were too high or borderline for expulsion of MSX infections. This requires salinities of <10 o/oo for at least two weeks. The upper half of the Rappahannock River appears to be safe in regard to expulsion of MSX by low salinities. The lower half is dubious with 10 to 14 o/oo salinities. The Great Wicomico River has a small drainage area and little runoff. This makes it vulnerable to MSX once it establishes infections, because it takes lower salinities to discharge them. Salinities in the oyster-growing area were 10 to 14 o/oo at low tide.

The latest samples show very little MSX in Rappahannock River oysters at Balls Pt just above Towles Pt. These were all very light or rare infections, localized in the gills. An additional sample from a private ground in the lower half of the river is being collected. Additional samples will be needed about 1 June to insure that late-summer infections do not become established in May.

The MSX situation in the Great Wicomico River is much more serious. Three samples of 2-year old oysters showed infections of 44 to 80% in live oysters. These infections have increased significantly in intensity between 15 April and 4 May 1983. Mortality can be expected in June and July. The death rate as shown by over 50% boxes (empty shells) is already serious and these seed oysters will be greatly reduced in numbers and quality for transplanting to low salinity waters in the Potomac River tributaries.

I estimate that 80% of the 1982 spatfall, in the Great Wicomico River, which was the best for many years, is already dead, but probably most of these were killed by a predatory flatworm (Stylocus) which is still abundant in the river. The samples in the above table are arranged in order from the river mouth up river.