

Brief Communication

OXYTETRACYCLINE RESIDUES IN RAINBOW TROUT
(SALMO GAIRDNERI)
FED A COMMERCIAL MEDICATED FEED

Several papers deal with levels and residues of oxytetracycline in the tissues of treated rainbow trout (*Salmo gairdneri*) (*Silvén et al.* 1968, *Ljungberg et al.* 1969, *Herman et al.* 1969, *McCracken et al.* 1976). The sensitivity of the experimental methods employed varies considerably, and consequently the various data concerning the length of time in which oxytetracycline residues can be detected in fish muscle are not readily comparable.

At the Research Station for Salmonids, Sunndalsøra Unit, a series of experiments has been performed to establish realistic withdrawal times for farmed fish treated with antibiotics. Some preliminary results on oxytetracycline residues are presented here.

One group of 50 rainbow trout (Group 1, average weight 3.1 kg) was held in brackish water (salinity 2.5 %) at $8.2 \pm 2.8^\circ\text{C}$ (mean \pm s) for an experimental period of 40 days. A second group (Group 2, comprising 100 fish, average weight 71.5 g) was held under similar water conditions at $7.7 \pm 0.9^\circ\text{C}$ for 100 days. The wide temperature range of $\pm 2.8^\circ\text{C}$ (Group 1) was due to a marked drop in water temperature between day 16 and 17 of the experimental period. The test fish were allowed to adapt to the experimental conditions for 10 days, and all were starved 2 days prior to treatment. Both groups received oxytetracycline (TMQ — oxytetracycline base, Pfizer Ltd.) in commercial pellets (T. Skretting Ltd.) at 75 mg of oxytetracycline/kg fish/day for 10 days. However, due to feed refusal from the second day of treatment, the total feed intake of Group 1 was calculated to be 60 %, i.e. 45 mg of oxytetracycline/kg fish/day. A standard dry feed chart was used to determine the proper amount of feed.

Three fish from each group were killed at intervals after treatment. Controls were included. Fish were stored at -20°C and assayed individually within 1 month of storage.