Spermatogenesis and induced spawning of male *Mugil capito* reared in fresh water fish farm

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The testis of *Mugil capito* is of the percoid type. The testicular tissue of *Mugil capito* is calssified into six stages: In mature, mature prespawning, spawning, spent and resting stage. The testis of *Mugil capito* undergoes regular cyclic changes.

Males of *Mugil capito* were collected monthly from aquatic region; Boughaz lake Edku representing the testis under natural condition of spawning; from Nozha hydrodrome (fresh water fish farm) and from Damistta fish farm (brackish water). total length, total weight, stage of maturity and the date of capture were recorded. Their abdominal cavity was opened and the testes removed, fixed in Bouin's solution. After that the gonads were dehydrated, cleared and embedded in paraffin. Six mm thick sections were stained with eosin and haematoxyline and iron haematoxyline. For the induced spawning, *Mugil capito* males, up to the age of 2 years (weight: 118 to 408 g.), were brought from a pond to the laboratory and stocked in a fiber glass tanks at room temperature. Males kept at 18° C and under photoperiod (12 L: 12 D) recieved and injection of GTH (1500 IU/Kgm.) as first dose and (2000 IU/Kgm.) as a commulative dose. After hormonal stimulation, the milt was collected after the first and second injection. Milt volume, sperm count were measured after injections using the technique of Mosselios (1951).

The aim of the present work is to describe spermatogenesis to give us information about seasonal changes in the reproductive cycle of *Mugil capito* and also to determine the quantity and quality of spermatozoa produced by the injection with chorionic gonadotropin hormone, which is essential for artificial fertilization of this fish species.

The spermatogenic activity starts in late August and gradually increases till October, reaching maximum in late October and November. The process of spermatogenesis decreases and almost ceases by March, the testis passes through a resting period from April to late August. The activities of spermatogenesis were affected by slight increases in temperature.

In *Mugil capito*, asynchronous entry of the primary spermatogonia into the reproduction period, results in formation of the additional portion of spermatozoa. On the other hand, prolonged spawning in *Mugil capito* is enhanced.

After hormonal stimulation, the quantity and quality of spermatozoa which produced from *Mugil capito* are measured. It shows that the volume collected is maximum after 48 hr. (commulative dose 2000 IU). After three days the mean volume of milt is decreased and none could be collected after four days. The number of sperm collected after injection with commulative dose (2000 IU GTH) is more than those collected after injection with one dose of cGTH (1500 IU).