



# Reproduction & Domestication in Eurasian perch



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Animal and Functionalities of Animal Products

*Team Domestication in Inland Aquaculture*



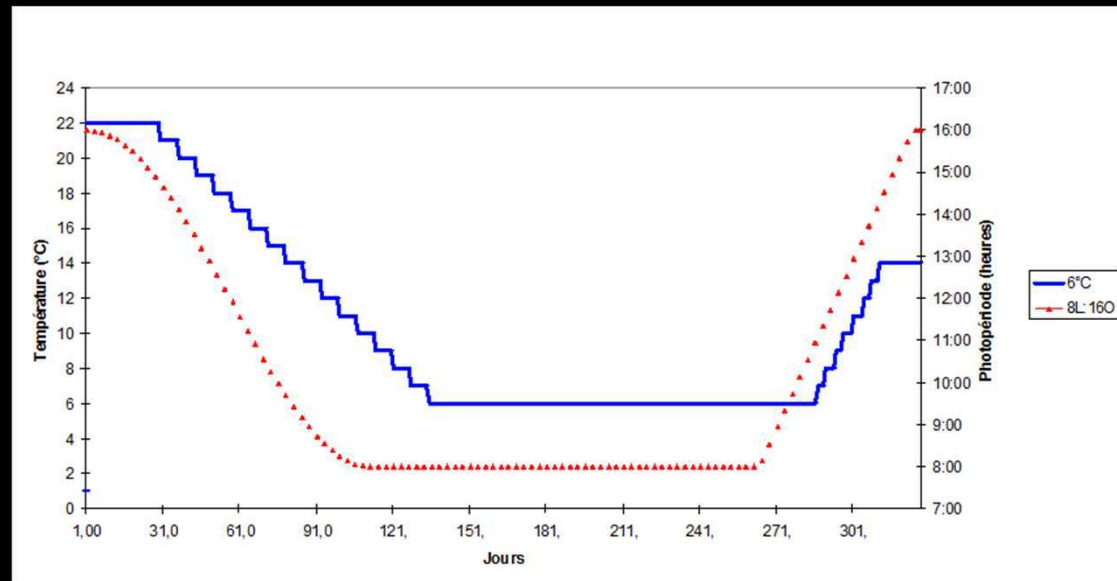
# Strong knowledge on broodstock management

- Environmental determinism and control of reproductive cycle = management of photoperiod and temperature

4 PhD thesis (Sulistyo, 1998; Migaud, 2002; Wang, 2006; Abdulfatah, 2010)

Reliable protocols exist for out-of-season spawning !

10-11 months



## Further issue:

- *Adaptation / strains or geographical origins* (see Schaerlinger et al., 2012)
- *Possibility to shorten the reproductive cycle duration? To change chilling temperature?*
- *Impact of temperature or photoperiod accident (chilling period) => egg quality?*

## - Feeding and nutrition

1 PhD thesis (Henrotte, 2009 – Namur, Belgium )

Effect of fatty acids on reproductive physiology and performances

Feeding strategy affects reproductive performances (Castets *et al.*, 2012)

*Efficient protocols for broodstock feeding / no problem with egg quality !!*

*No real feeding ratio, use of raw products as complements (no formulated specific diet)*

## - Breeder characteristics

- Sexual maturity between 11 and 14 months => first reproductive cycle (see Ben Ammar *et al.*, 2012)

- Behavior / fish density : preference for high density and large tanks

- Domestication, geographical origin and fish size (see Schaerlinger *et al.*, 2012)

*Optimization of hatchery performances to reduce the cost of larvae production*

## - Spawning induction and artificial fertilization

Many studies from Czech, Hungarian and Polish teams (see BIM publication N° 24, 2008)

Effect of carp pituitary extracts, hCG, GnRHa ...

*Efficient protocols for spawning synchronization and artificial reproduction practices*

*New classification of oocyte maturation stage and indicators of oocyte quality based on oil droplet fragmentation (Zarski et al., 2011a, b)*

**Main specific research has been done => phase 2 = optimization / farm strategy for juvenile production (cost reduction)**

Ex : extension of the natural spawning season OR total control of the reproductive cycle with numerous spawning / year ???

# Domestication

- Eurasian perch => domestication level = 4

(Teletchea and Fontaine, Fish and Fisheries, in press)

- Reproductive cycle totally controlled in farm conditions, but no breeding programs with a genetic management of broodstock (and still frequently many inputs of wild fish = fertilized eggs)!!
- Major sanitary risk!!



**Thanks for  
your attention**