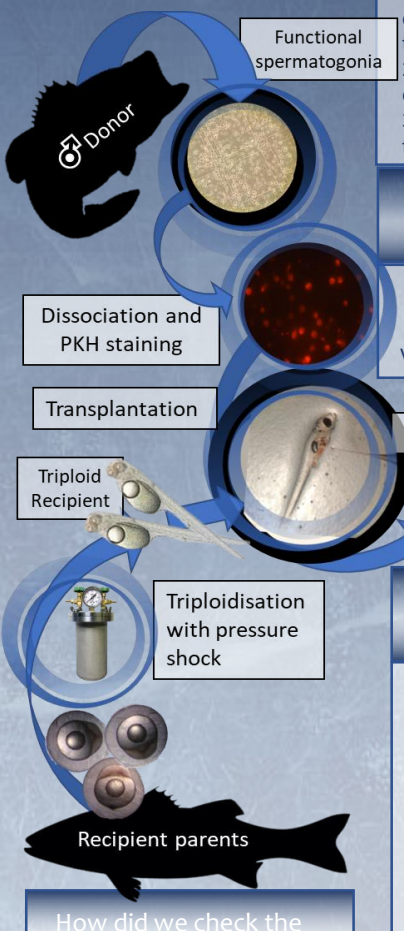
Application Of Surrogate Broodstock Technology In European Percids

Stanivuk Jelena
Marinović Zoran
Káldy Jenő
Ljubobratović Uroš
Horváth Ákos

WHAT is surrogate broodstock technology?

Gaining donor-derived gametes from surrogate fish (recipient) by transplanting germ cells of a different species donor.

HOW surrogate broodstock technology is done?



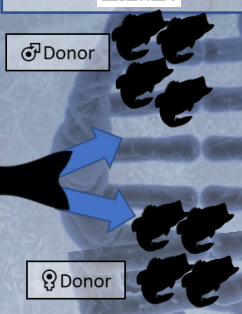
WHY surrogate broodstock technology?

1) Cryopreservation of embryos or fish eggs is hardly possible, but it works for their precursors- germinal cells!
2) Accelerated production of endangered species.
3)The rapid spreading of rare desirable features.

What species did we use?

Recipient- 3n pikeperch (*Sander lucioperca*), 9th, 16th, 28th DPH
Donors- Perch (*Perca fluviatilis*), Volga pikeperch (*Sander volgensis*)

For more detailed Material & Method



The main outcomes

1) Triploid pikeperch larvae can survive total anesthesia and microinjection even before the swim bladder inflation.
2) A designed protocol of dissociation and staining of cells from juvenile male gonads of Volga pikeperch and Euroasian perch can be considered effective.
3) The current attempt of transplantation cannot be defined as successful due to the lack of incorporation of cells into the genital ridge.

What did we see?

After 50 days, we saw live stained cells scattered or in small groups in the adipose tissue and on the surface of the peritoneal wall, incorporation in the genital ridge was not noticed. Autoluminescence is excluded.

How did we check the transplantation success?

PKH-labelled cells, 50 days after transplantation were searched under fluorescent microscopy.

HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES
Aquaculture and Environmental Safety Institute
Stanivuk.Jelena@uni-mate.hu

HAKI

AQUA EXCEL 3.0