

ACM 2017
Barcelona, Spain



Spawning kinetics of greater amberjack (*Seriola dumerili*) in response to multiple GnRHa injections or implants

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DIVERSIFY - WP3 REPRODUCTION & GENETICS GREATER AMBERJACK

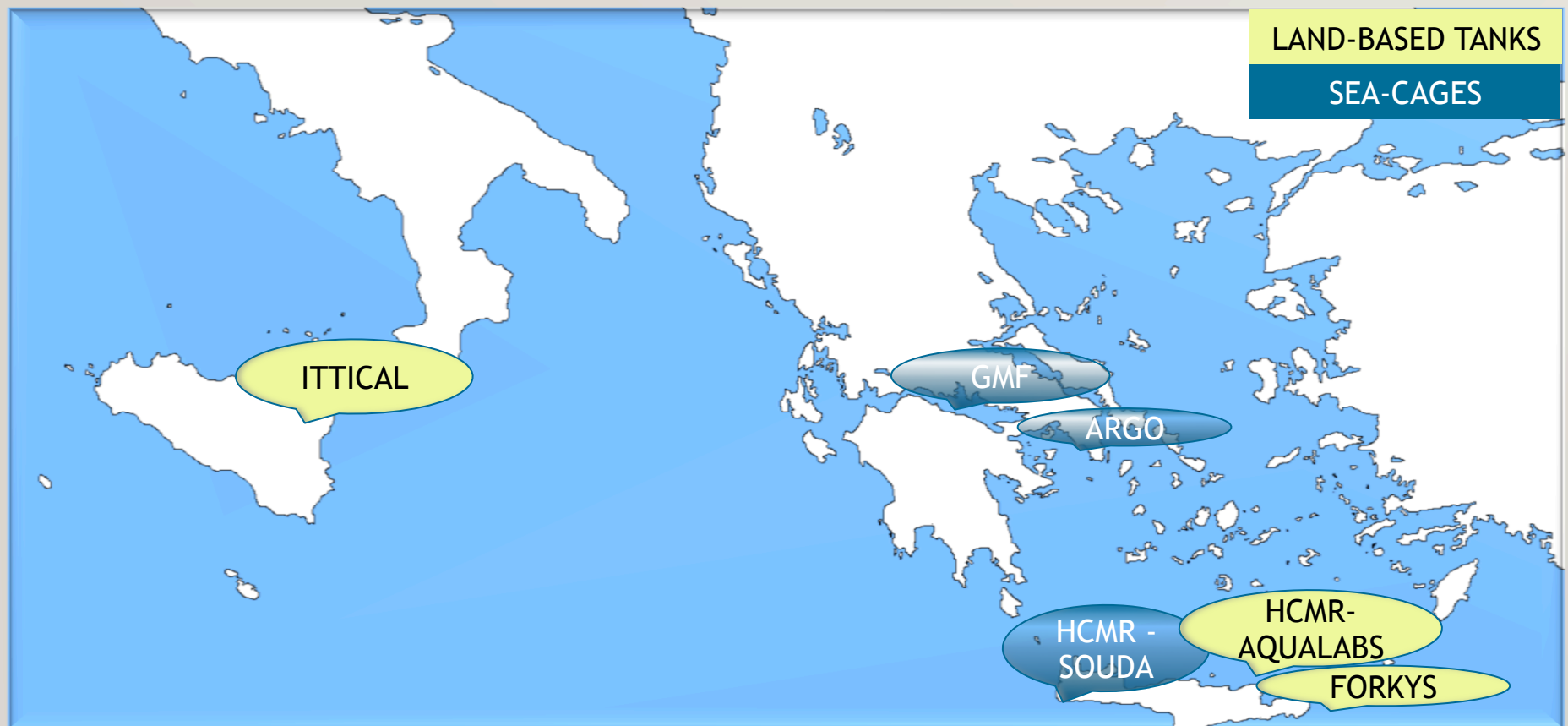
Task 3.2 “Development of an optimized spawning induction protocol for captive greater amberjack in the Mediterranean”



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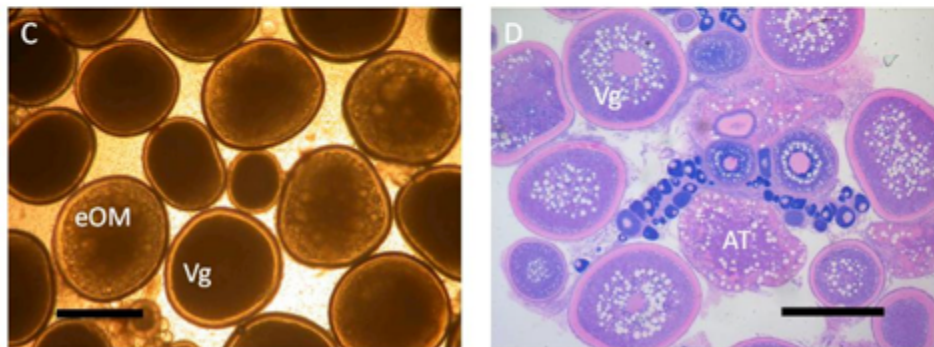
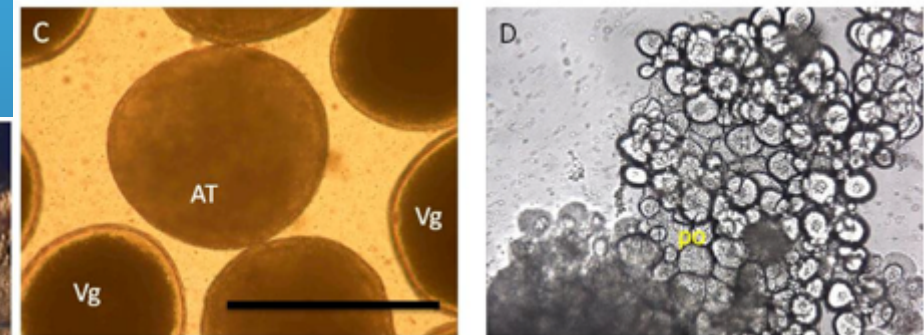
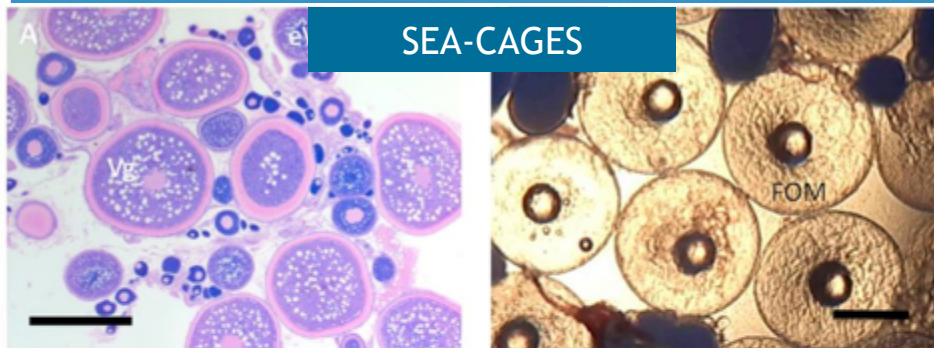
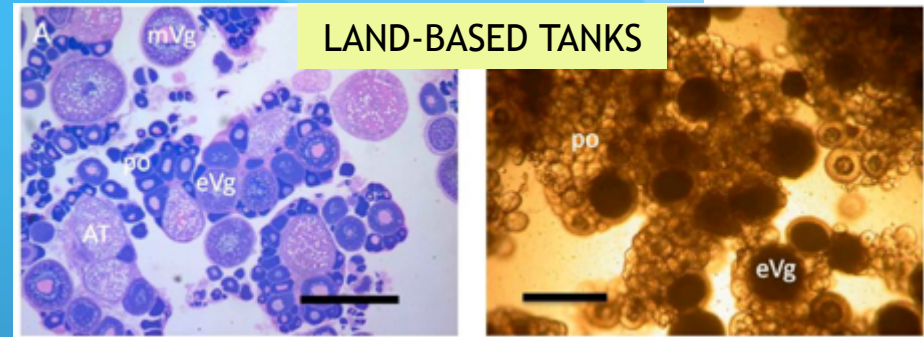


Stock	Rearing method	Number of individuals	Size at sampling (range in kg)	Feeding
ARGO	sea-cages	29	11.2-23.6	pellet
GMF	sea-cages	28	11.8-21.5	live fish
SOUDA	sea-cages	7	14.0-20.7	moist pellet
AQUALABS	land-based	26	9.8-18.5	pellet
FORKYS	land-based	19	12.6-20.3	raw fish, squid
ITTICAL	land based	7	15-25	raw fish, squid



Evaluation of reproductive stage...

- Females in sea-cages in better reproductive stage than in land-based tanks
- In majority, fish in land-based tanks failed to undergo vitellogenesis



- DOW
1. Implants or multiple injection
 2. Different doses
 3. Timing of application



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Spawning inductions...



cage

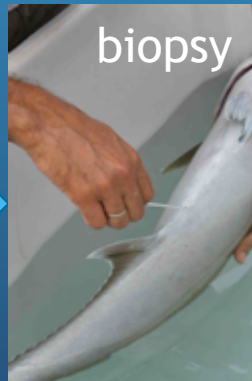
broodstock
treatment
protocol



tank



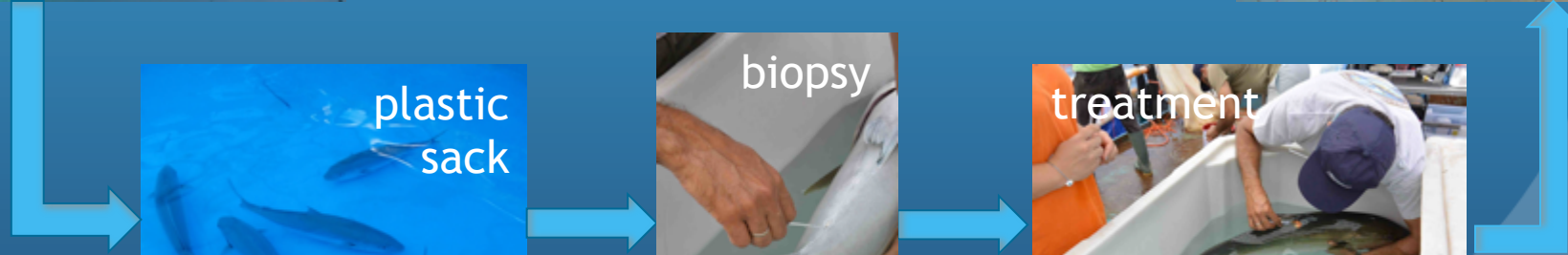
plastic
sack



biopsy



treatment



Implants vs multiple injections...



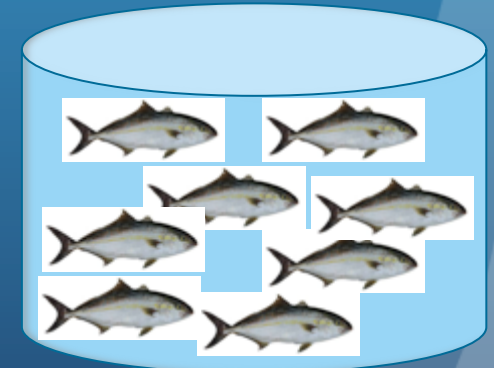
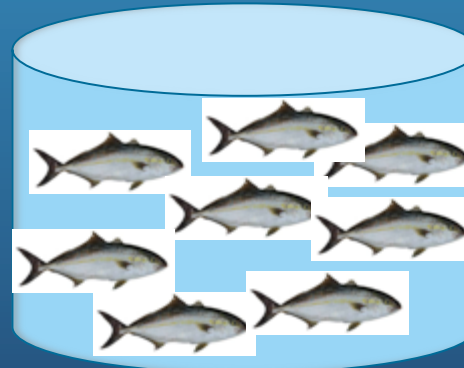
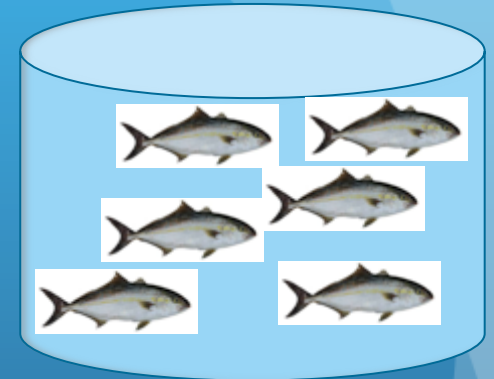
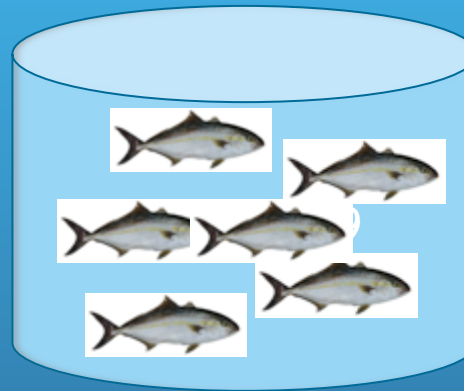
implants

injections

sex ratio
1F : 1M

2 implants
(every 14 days)

3 injections
(every 7 days)



Data collection...

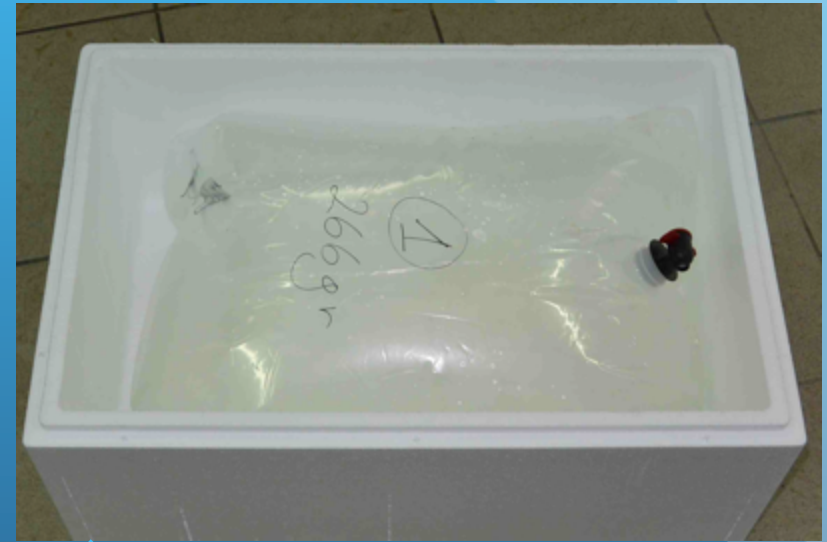
- Oocyte diameter
 - Wet mount photos
 - Histological processing
-
- Fecundity
 - Fertilization
 - 24h embryo survival
 - Hatching
 - 5d larval survival



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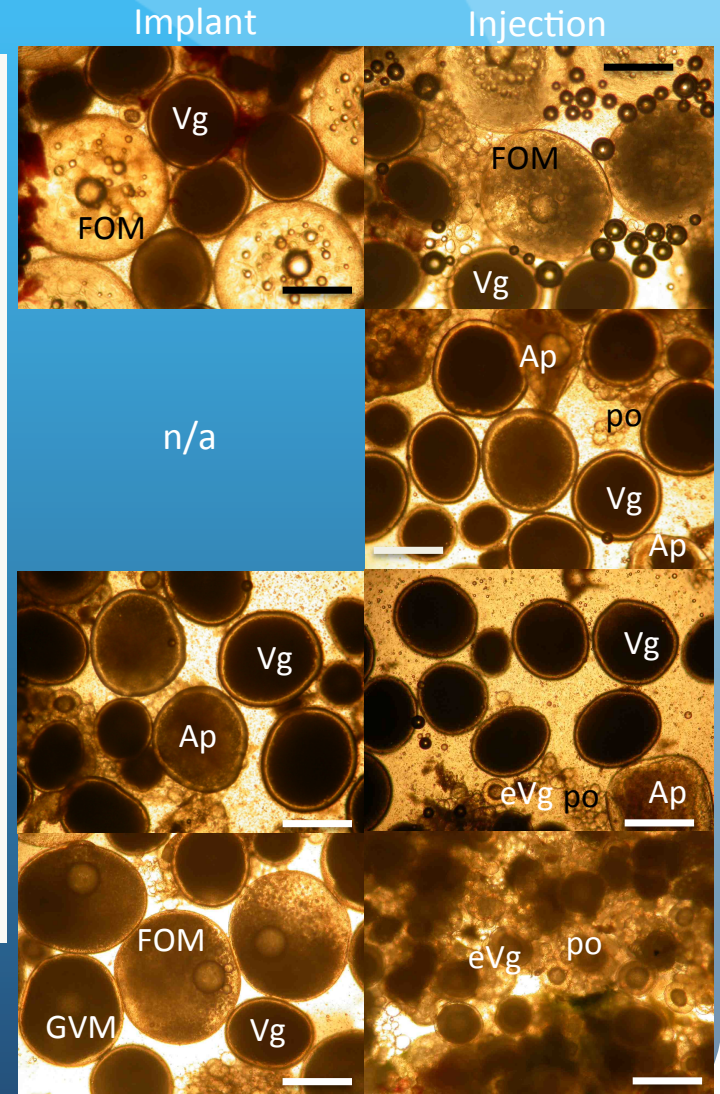
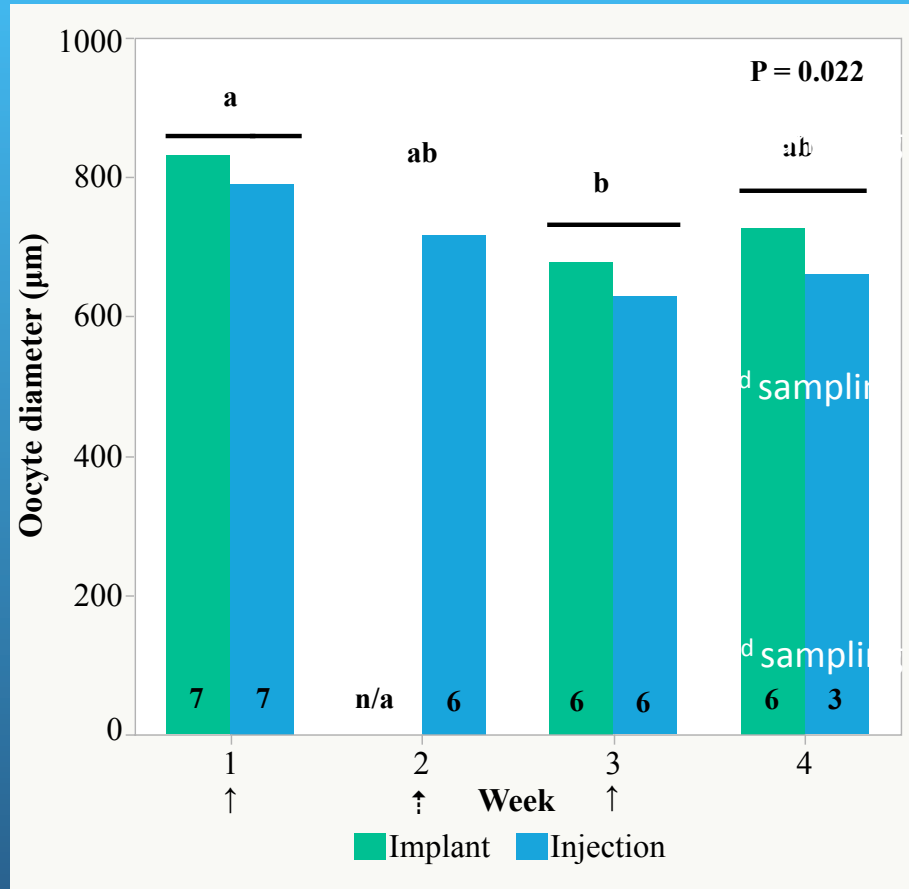
Egg storage and shipping...



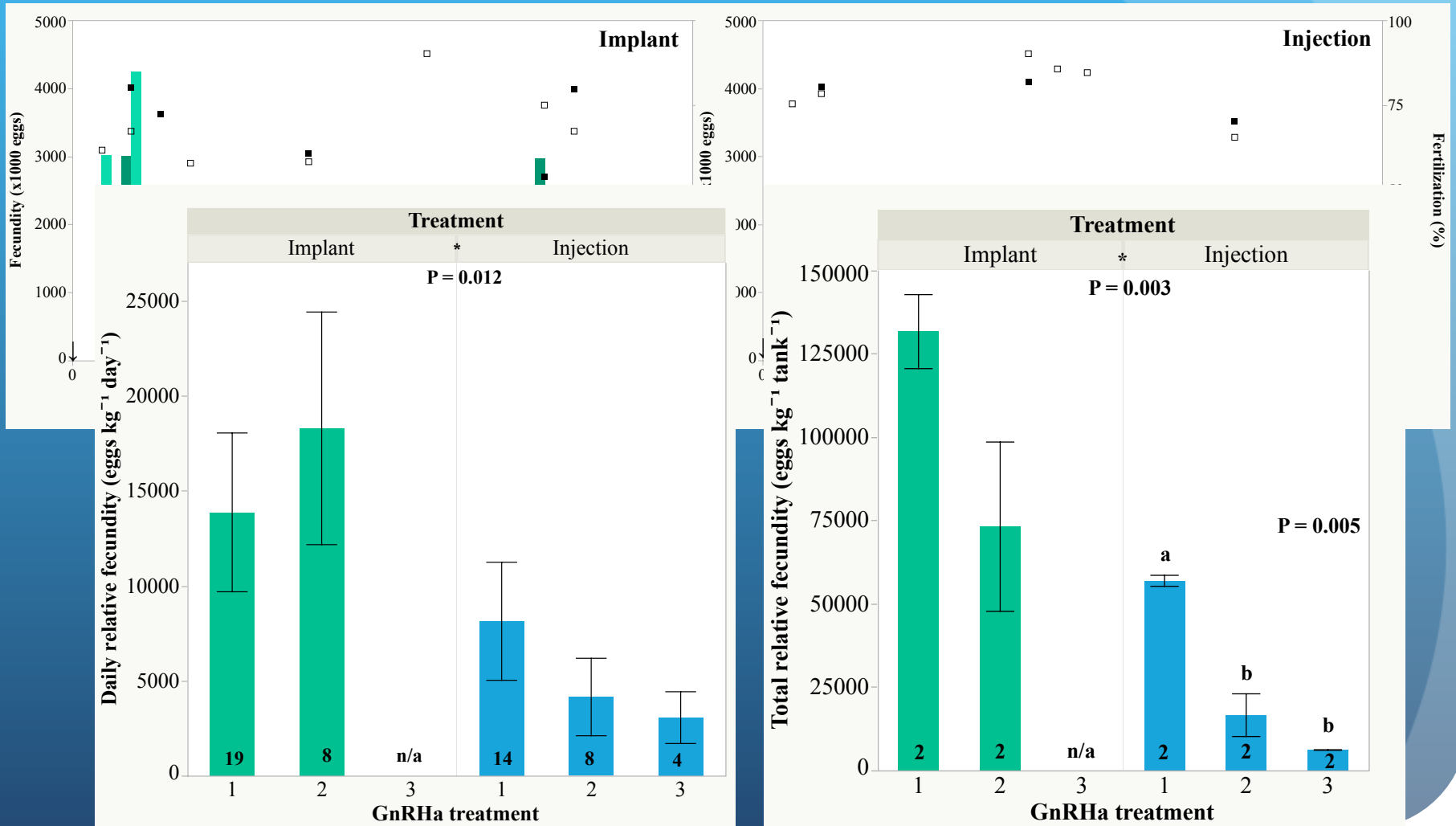
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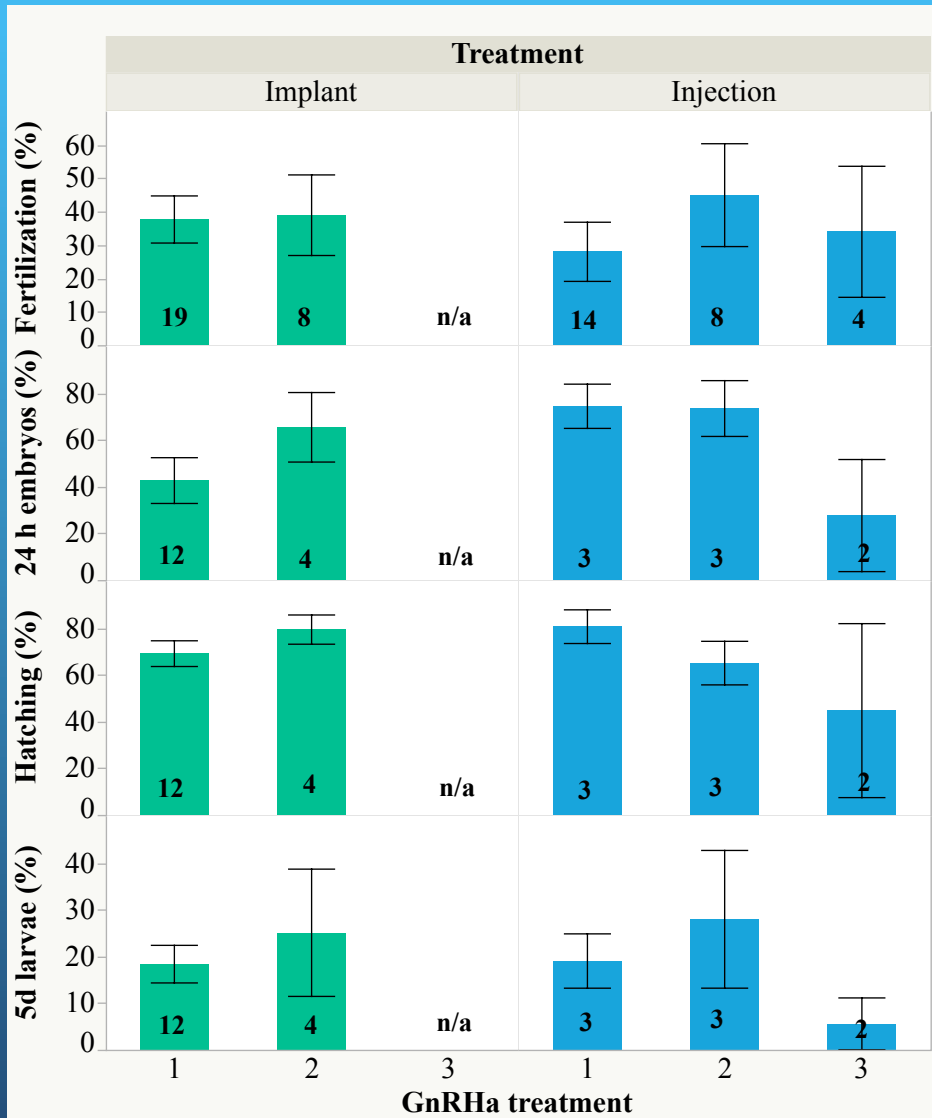
Results - Oocyte diameter...



Results - Egg production...



Results - Egg and larval quality...



36%

53%

70%

20%

To conclude...



implants

27 million eggs

15,230 eggs/kg

13 spawns

Potential to produce
more

injections

10.5 million eggs

6,120 eggs/kg

13 spawns

Spent

>100,000 fish!



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2017 planning...



DOW

1. Implants or multiple injection
2. Different doses
3. Timing of application

The work will be delivered
on month 54...

ARGOSARONIKOS



GMF





Thank you for your
attention...



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