



WP 20 3.4

Grow out husbandry – meagre

MarilóLópez Belluga & Jordi Comas Morte

marilo.lopez@culmarex.com

jordi.comas.bersolaz@culmarex.com



**grupo
culmarex**

Diversify Annual Coordination meeting. Bari. November 2014



CONTENTS

- 1. Scenario description***
- 2. Experience in rearing meagre***
- 3. WP 20 3.4***



1. SCENARIO

PROBLEMS IN FEEDING AND ONGROWING MEAGRE

PECULIAR FEEDING BEHAVIOUR

+

SPECIAL FEEDING PATTERN

Often result in...

...VERY POOR PERFORMANCE!!

FEEDING BEHAVIOUR

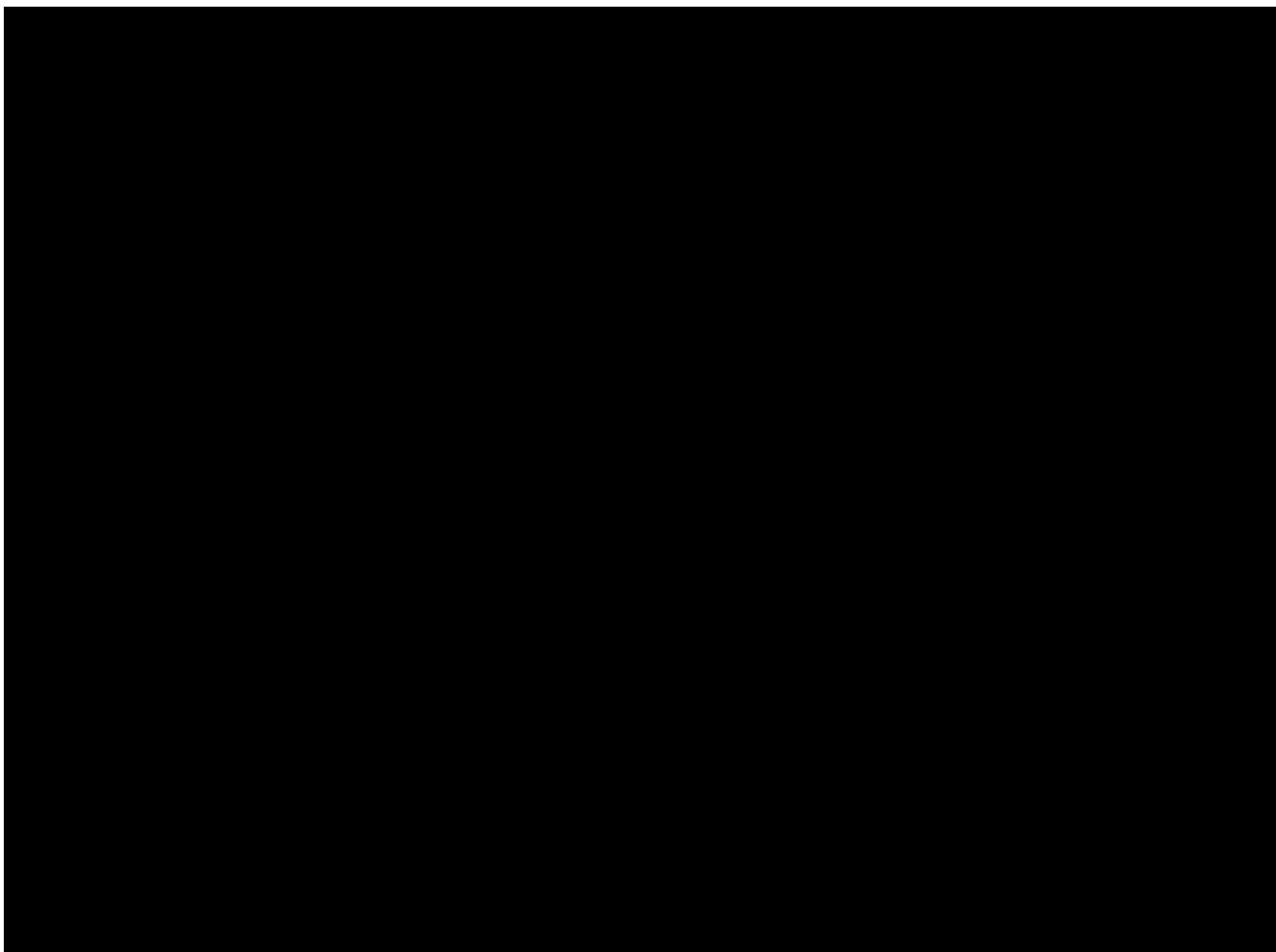
- **Bottom feeders**
- **Low responders to feed delivery**
- **Easily disturbed when feeding**
- **High feeding rates**
- **Very low feeding speed**



COMPLEX FEEDING MANAGEMENT



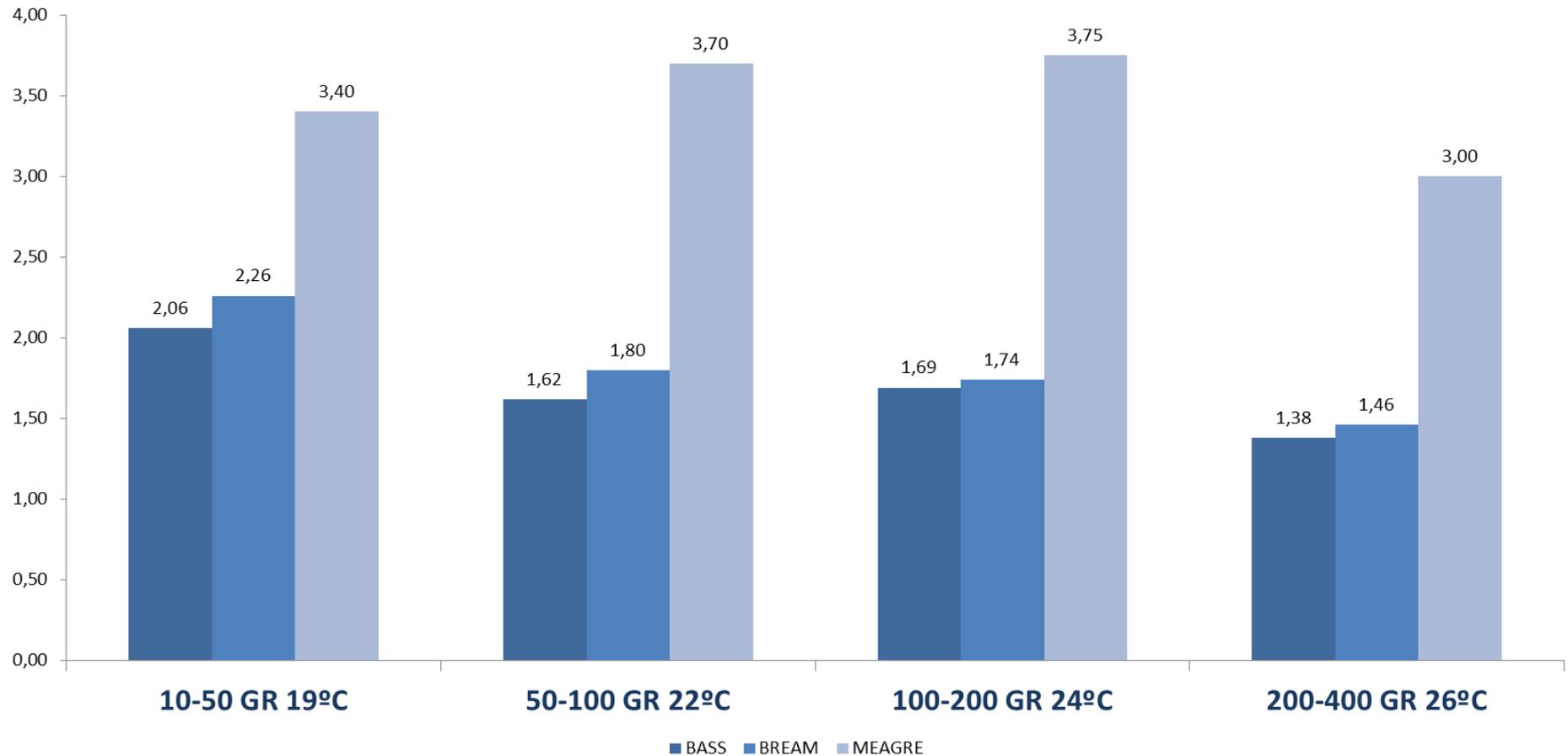
FEEDING BEHAVIOUR



300 gr. meagre feeding at 13°C in Spain. March 2014

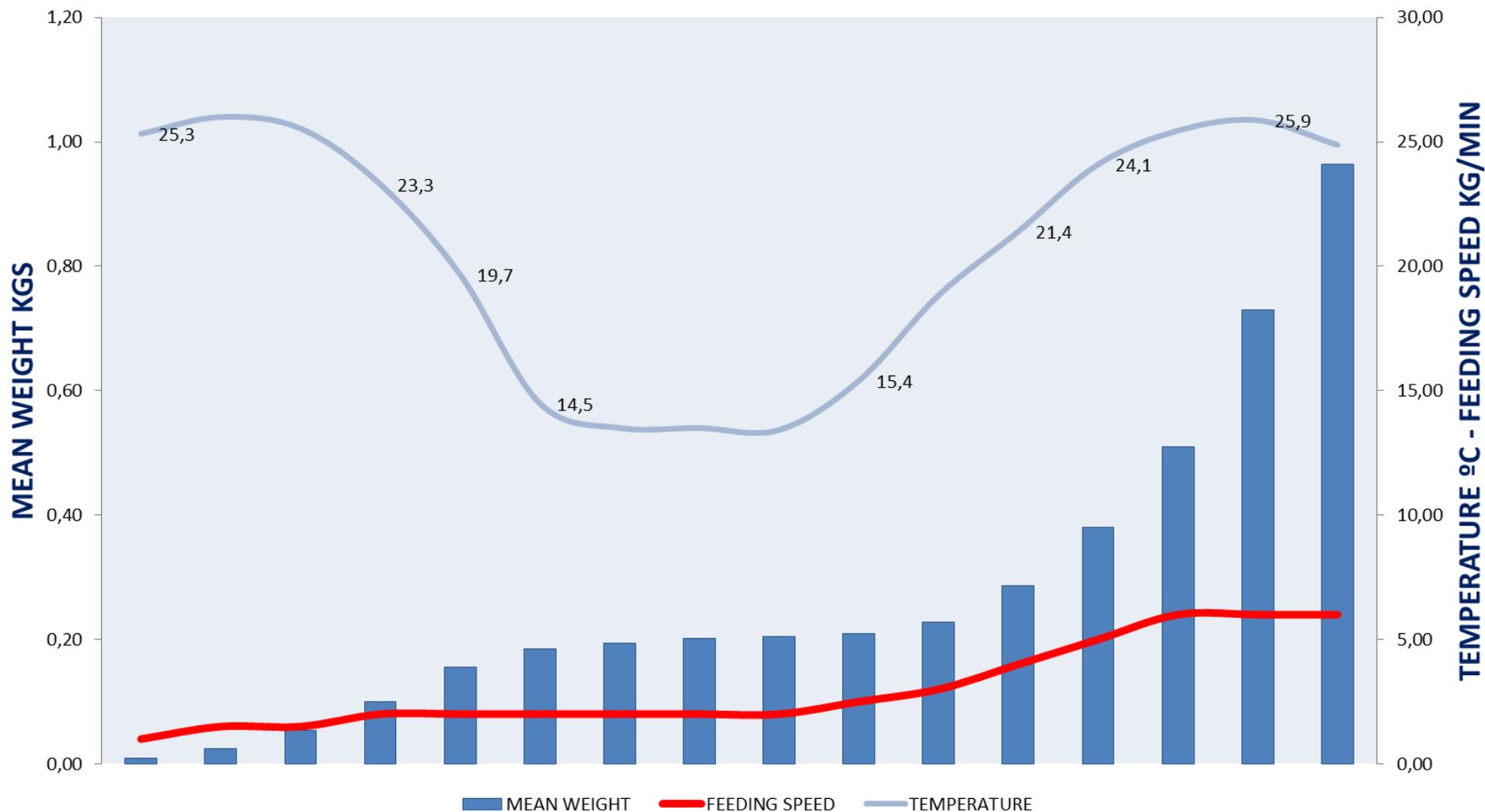
FEEDING PATTERN

Meagre mean SFR%_{day} at different temperatures and sizes

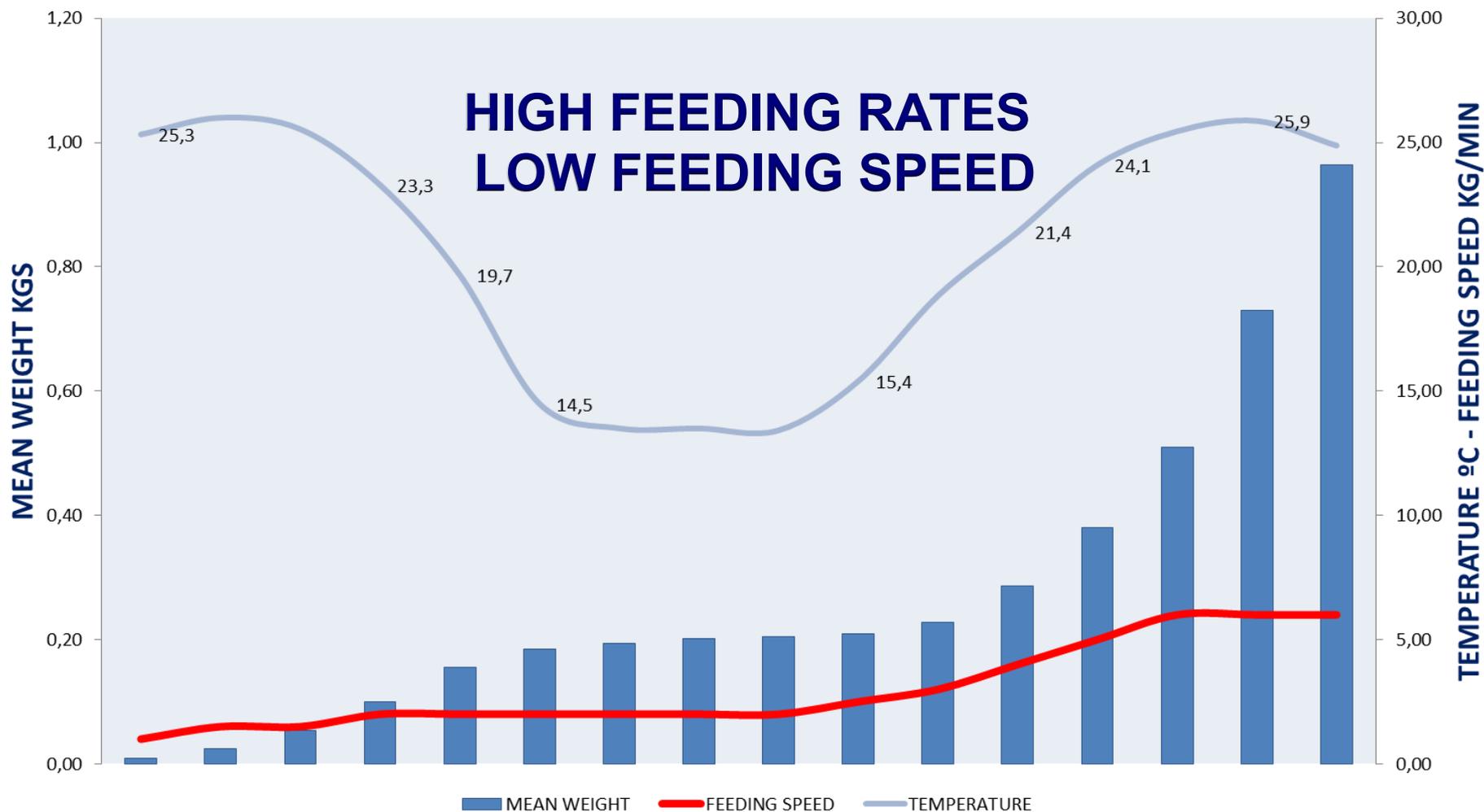


Meagre VS bass & bream

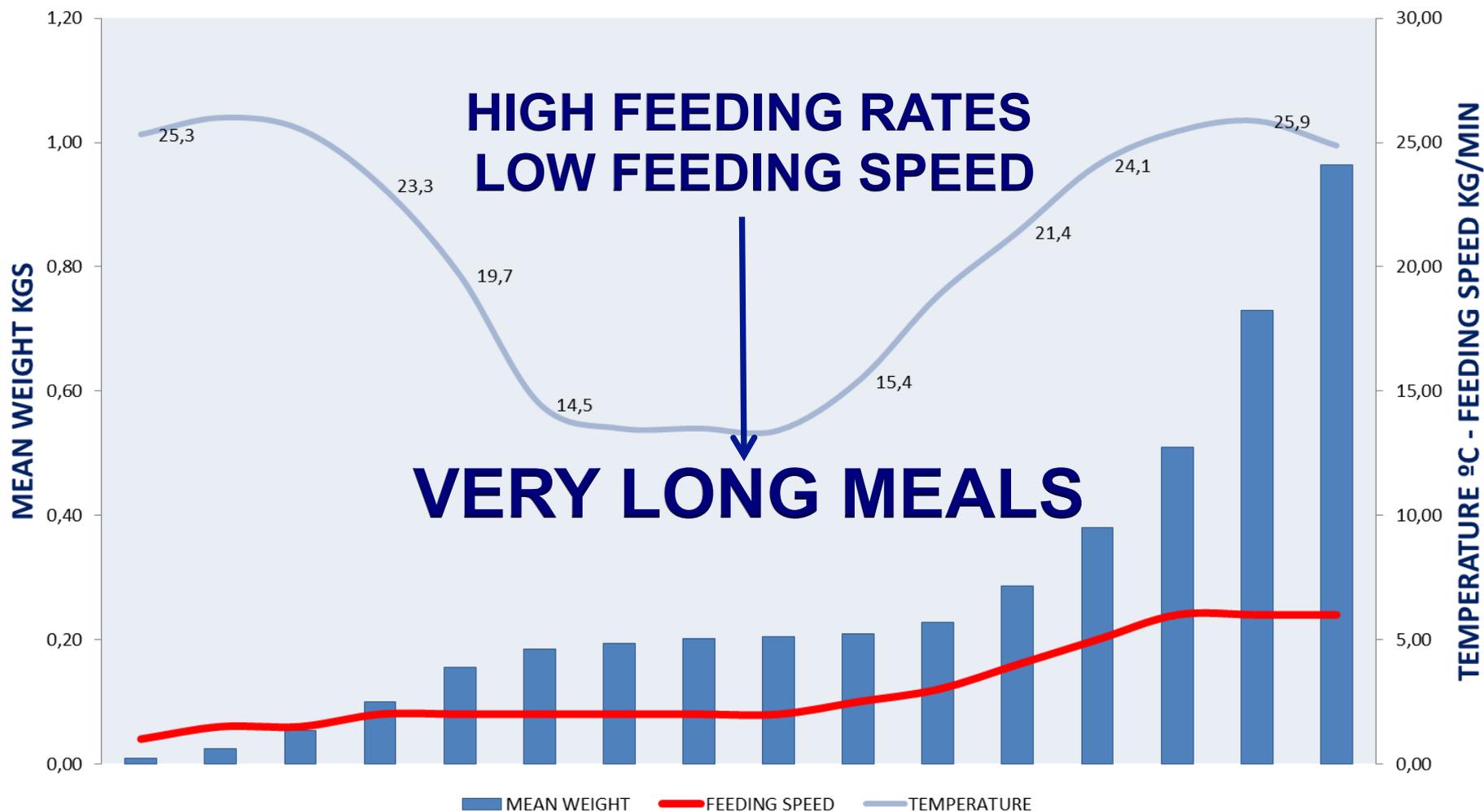
FEEDING PATTERN



FEEDING PATTERN



FEEDING PATTERN





FEEDING STRATEGY: KEY POINTS

- **Focus efforts during first stages after sea transfer**



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- *Hand feeding recommended*



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- *Hand feeding recommended*



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*
- *Small cages to promote pellet accessibility. Transfer when shoal volume fits cage surface*



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*
- *Small cages to promote pellet accessibility. Transfer when shoal volume fits cage surface*
- Provide a shaded feeding surface



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- Provide a shaded feeding surface
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*
- *Small cages to promote pellet accessibility. Transfer when shoal volume fits cage surface*
- *Promote use of small mesh top nets*



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*
- *Small cages to promote pellet accessibility. Transfer when shoal volume fits cage surface*
- Provide a shaded feeding surface
- *Promote use of small mesh top nets*
- Avoid any source of stress during feeding



FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*
- *Small cages to promote pellet accessibility. Transfer when shoal volume fits cage surface*
- Provide a shaded feeding surface
- *Promote use of small mesh top nets*
- Avoid any source of stress during feeding
- *Reduce as much as possible operations around the cage*

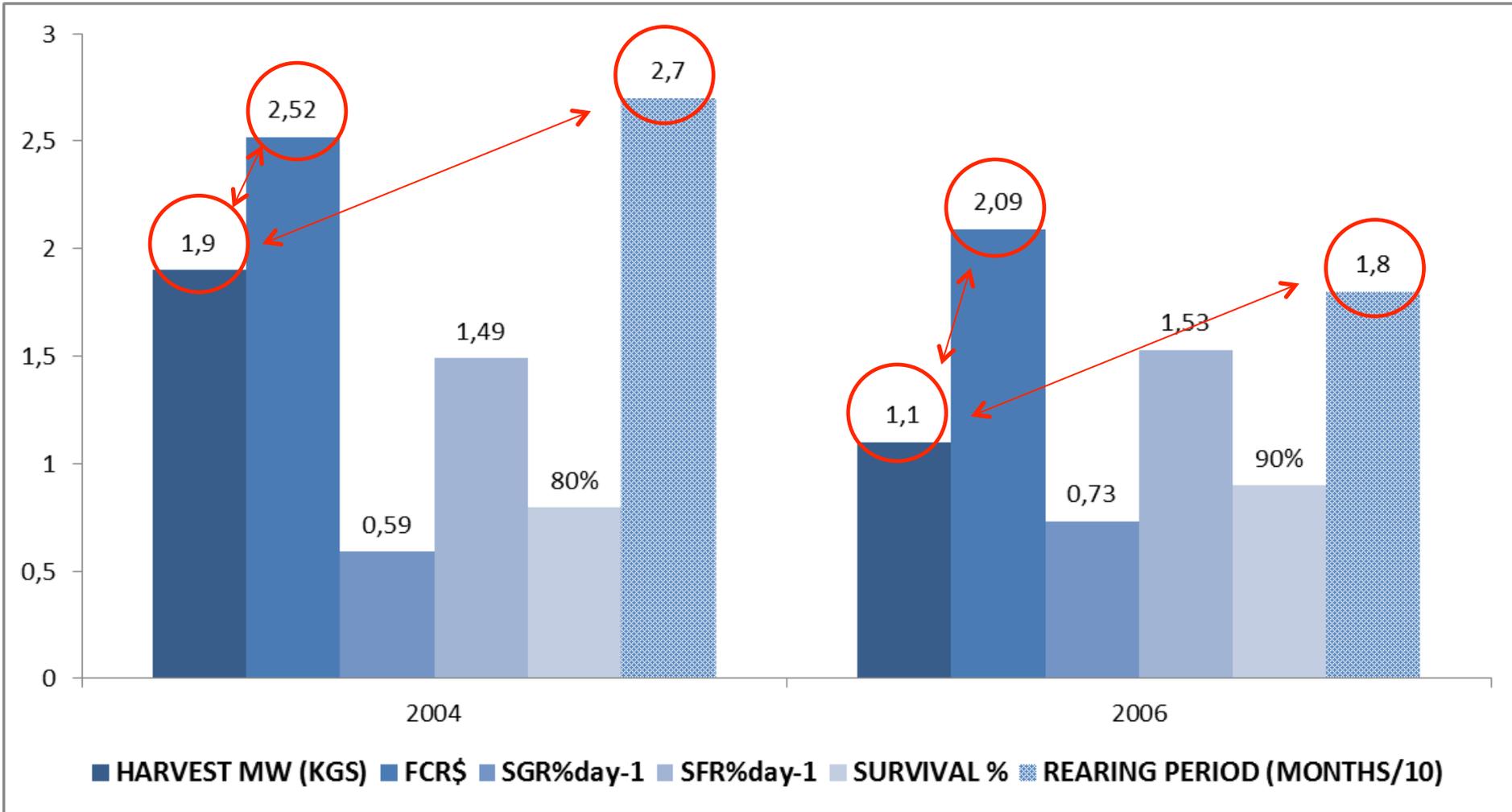
FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*
- *Small cages to promote pellet accessibility. Transfer when shoal volume fits cage surface*
- Provide a shaded feeding surface
- *Promote use of small mesh top nets*
- Avoid any source of stress during feeding
- *Reduce as much as possible operations around the cage*
- Allow long enough meals

FEEDING STRATEGY: KEY POINTS

- Focus efforts during first stages after sea transfer
- Ensure low feeding speed
- Ensure easy access to feed
- *Hand feeding recommended*
- *Around 1 kg/min first weeks*
- *Small cages to promote pellet accessibility. Transfer when shoal volume fits cage surface*
- Provide a shaded feeding surface
- *Promote use of small mesh top nets*
- Avoid any source of stress during feeding
- *Reduce as much as possible operations around the cage*
- Allow long enough meals
- *Automatic/Demand systems “ad libitum” feeding using feeding cameras*

2. PREVIOUS EXPERIENCES



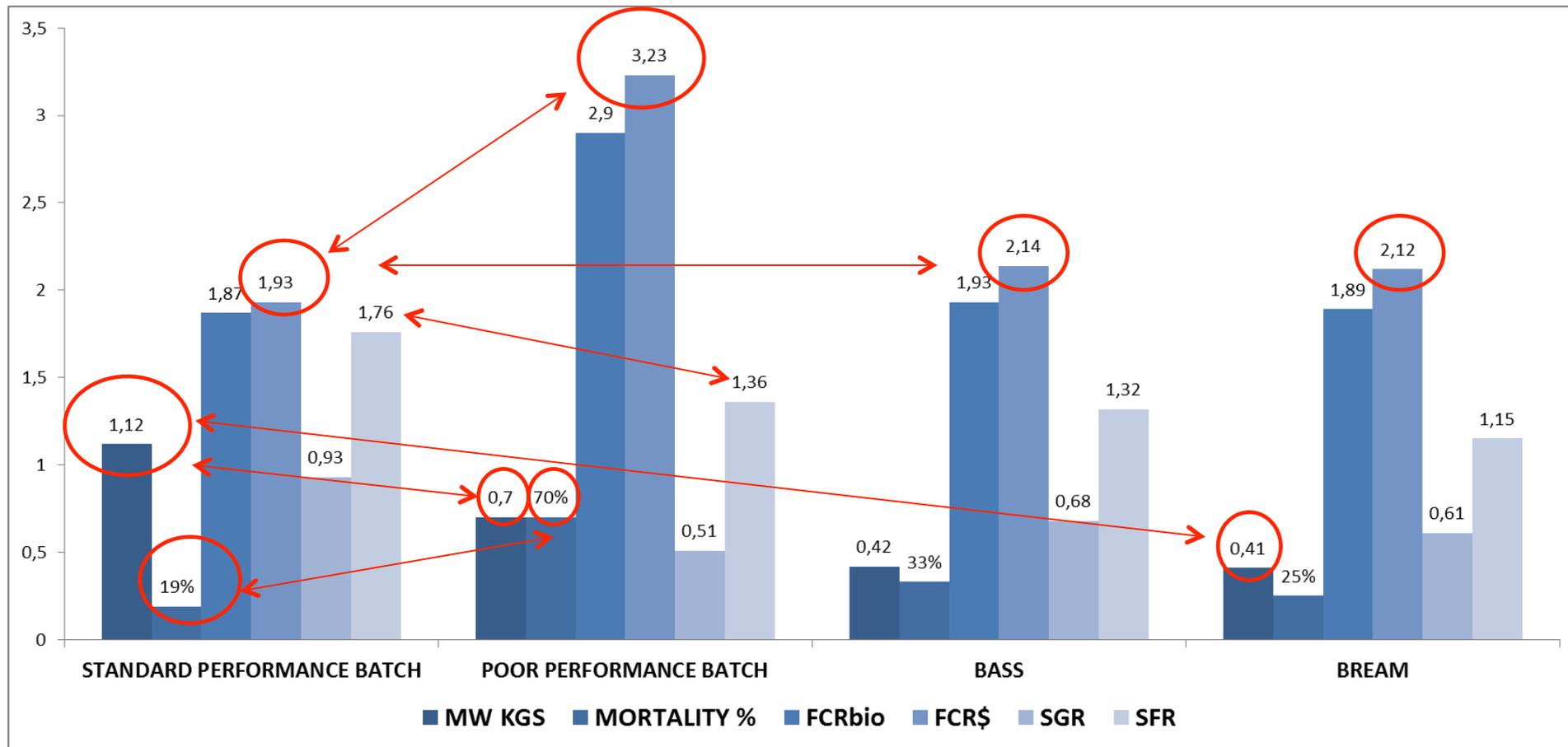
**Performance @ 1,9 kgs harvest MW
2004 batches**

**Performance @ 1,1 kgs harvest MW
2006 batches**

2013 PERFORMANCE vs bass & bream

Actual performance of two 2013 batches after 16 rearing months . Spain

Harvested bass & bream 2013 batches (3+3) after 17 & 20 months. Spain



Possible differences between the groups?

■ Different groups of juveniles

- Do different grades of juveniles grow differently?
- Genetic differences?***

■ Different transfer dates and different environmental parameters

- Later dates, shorter day, lower temperatures
- Lower appetite, slower initial feeding response

■ Differences in stock and feeding management

- Different sites different sea conditions
- Different feeding methods
- Different management practices

3.WORK PACKAGE 20

■ Sub-task 20.3.4 (CULMAREX)

Hand and industrial demand type feeding in cages

- 2 standard commercial cages for 2 rearing periods
- Demand type feeder
 - Includes a controller that when not eaten feed is detected the feeding stops

Aims:

- Growth performance will be evaluated
- Feeding behaviour will be monitored with video recordings
- Feed intake will be estimated
- At the end of each trial fast and slow growing fish will be genetically characterized

Thank you!

