

O.range

The **ULTIMATE**
fish hatchery
dry feed line



KEY BENEFITS

- Perfectly suits the nutritional needs of the fish throughout the different hatchery stages
- Optimal $\Sigma\omega 3$ HUFA and DHA/EPA profiles
- Excellent stability and floatability in the water
- Formulated using top quality raw ingredients



CHARACTERISTICS

START

Small, Large

- Optimal digestibility and attractability, initiating fish larvae to formulated feeds.
- Ideal particle size distribution for partial rotifer and *Artemia* substitution.
- Especially designed for excellent particle floatability and stability.
- Contains medium chain fatty acids & natural emulsifiers for improved digestibility.

WEAN

Small, Large

- Perfectly in balance as partial *Artemia* substitution for the early weaning.
- Unique early weaning formulation for optimal digestibility and attractability.
- Contains fresh, top quality marine protein sources, peptides and carefully selected attractants for improved palatability.
- Contains free nucleotides to promote cell growth & regeneration.

GROW

Small, Large

- Maximizes fry growth explosion, contains free nucleotides + peptides.
- Formulated to ensure a smooth transition from weaning to post-weaning diet.
- Contains betaglucons & mannans, as well as high levels of antioxidant & vitamins.
- A high level of protein and lipid compared to other commercial diets in this range (high energy expenditure is needed for the synthesis of body components).

NURSE

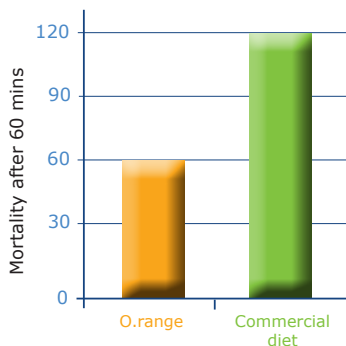
Small, Large, Extra Large

- Assured fat digestibility through the use of quality marine ingredients.
- Highly nutritional raw materials for optimal digestibility.
- Use of digestible lipid matrix limits oil leaching & results in better digestibility of the fat.
- High inclusion of marine protein (60% of total formula).
- Cost-benefit balance for easy transition from hatchery to juveniles.

PERFORMANCE

Stress resistance

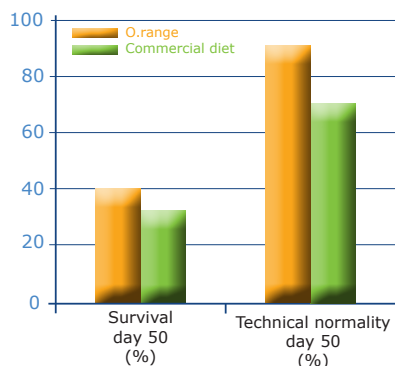
Sea bream stress test
60 dph - 71 ppt



Stress test performed on 60 days old seabream postlarvae (3 replicates). After one hour, **O.range** shows a better resistance (50% less mortality) compared to a commercial diet.

Survival

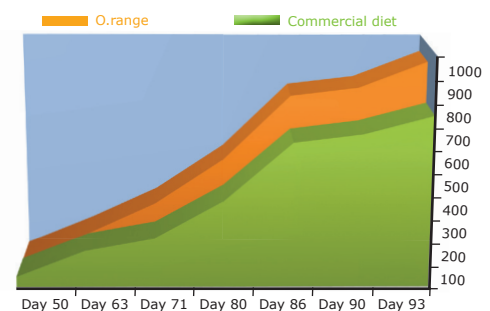
High survival and low deformities



At 60dph, higher survival rates (32%) are obtained with **O.range** compared to other diets (23%) and also the % of fish without any abnormality is higher in the **O.range** treatment.





Growth

Exponential growth



When weaning was successful, the larvae show an exponential growth. **O.range** is specially formulated as one nutritional profile to secure a smooth transition from weaning to post-weaning diet in order not to limit growth. The graph shows clearly that **O.range**, compared to a control diet, performs better and keeps a constant growth tendency without interruptions during the post-weaning phase.

USE

| DIET | SIZE | USE |
|---|-------------|---|
|  | Small | For co-feeding during the rotifer feeding phase. |
| | Large | An early dry diet during the last rotifer phase and during the start of the <i>Artemia</i> feeding. |
|  | Small | A first dry diet during the last rotifer phase and the early <i>Artemia</i> feeding. |
| | Large | A nutritionally rich weaning diet for early weaning during the enriched <i>Artemia</i> phase. |
|  | Small | A well balanced diet during the enriched <i>Artemia</i> phase. |
| | Large | A well balanced diet for use at the end of the weaning and post-weaning phases. |
|  | Small | From the post-weaning phase and during all the nursery phases. Will allow for a smooth transition between the different phases. |
| | Large | |
| | Extra large | |

Notes:

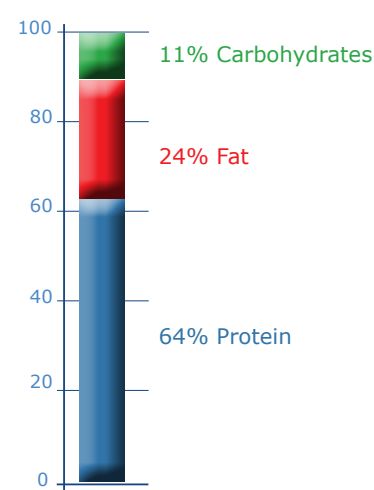
Gradually switch to a different nutritional block from larvae to juvenile according to larval development, mouth opening and fish size.

The feeding regime and feeding strategy should be adapted to your local conditions and specific technology. Contact your local INVE Aquaculture support team to fine-tune the optimal solution for you.

TYPICAL COMPOSITION

| | START WEAN | GROW | NURSE |
|------------------------------------|---------------|--------------|--------------|
| Crude protein | 56 % | 55 % | 55 % |
| Crude oils and fats | 13 % | 13 % | 13 % |
| Crude ash | 10 % | 10 % | 13.5 % |
| Ash insoluble in hydrochloric acid | 2.4 % | 2.4 % | 3 % |
| Phosphorus | 1.2 % | 1.3 % | 1.8 % |
| Crude fibre | 1 % | 1 % | 1 % |
| Σω3 HUFA | 40 mg/g dwt | 35 mg/g dwt | 30 mg/g dwt |
| DHA/EPA ratio | 2 | 2 | 2 |
| Vitamin A | 20,000 IU/kg | 20,000 IU/kg | 15,000 IU/kg |
| Vitamin D3 | 2,500 IU/kg | 2,500 IU/kg | 2,500 IU/kg |
| Vitamin E | 700 mg/kg | 700 mg/kg | 150 mg/kg |
| Vitamin C | 2,000 mg/kg | 2,000 mg/kg | 1,000 mg/kg |

Distribution of Gross Energy (4843 kcal/kg)



O.range is...

... SPECIFICALLY DESIGNED

One common diet profile with three specific formulations, learning from the industry experience to follow larvae and fry development needs during all hatchery production phases.

... NUTRITIONALLY BALANCED

Easily to digest, leading to perfect growth and health. Formulated with top quality raw ingredients and adequate $\Sigma\omega 3$ HUFA and DHA/EPA profiles.

... RELIABLE

Optimal behavior in the water: excellent stability and floatability. Highly attractable for the fish.

... DESIGNED TO PERFORM

Made to work under the specific needs of the different hatchery phases from co-feeding to nursery and accordingly with the requests of the larvae, postlarvae and juveniles.

... EASY

Off-the-shelf available in a wide range with a flexible choice among size, formulation and cost for an optimal balance between quality and economy.

Packaging

| Diet | Size | Particle size | Packaging |
|---|-------------|-------------------------|--------------------------------|
|  | Small | 100-200 μm | Case of 10 x 1 kg alufoil bags |
| | Large | 200-300 μm | Case of 5 x 3 kg alufoil bags |
|  | Small | 200-400 μm | Case of 5 x 3 kg alufoil bags |
| | Large | 300-500 μm | Case of 5 x 3 kg alufoil bags |
|  | Small | 300-500 μm | Case of 2 x 10 kg alufoil bags |
| | Large | 500-800 μm | Case of 2 x 10 kg alufoil bags |
|  | Small | 500-800 μm | 20 kg bag |
| | Large | 800-1200 μm | 20 kg bag |
| | Extra large | 1200-2000 μm | 20 kg bag |

Storage

Store in a dry place (max. 25°C).

For prolonged storage, refrigeration (4°C) is advised.

Once opened, the product should be used within 1 month, kept well closed and stored in a refrigerator.