Making a national plan for urchin aquaculture: Diet development

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Setting the scene......

- Roe formation is a highly energetic process that requires a well balanced mix of essential nutrients:
  - Protein
  - Lipid
  - Carbohydrate
  - Micronutrients

- Nutritional imbalance will result in the production of inferior products
  - Low GSI
  - Poor colour, flavour and texture
Setting the scene……

- Urchins are highly receptive of formulated feeds
- Demonstrate rapid generation of roe
- Further research required
- Tailored nutrition is essential moving forward
- But where should we be heading??
Moving forward

- Prioritising research towards the maximisation of applied outcomes

1. Elucidating key nutritional requirements for roe quantity and quality
   - Response to ‘practical’ formulations
   - Micronutrient inclusion
   - Assessment of natural products
   - Understanding wild profiles
2. Pellet stability: how stable is too stable?

- Extrusion technology
- Pellet binders
- What are the trade-offs??

- Digestibility
- Animal health
- Bacterial build-up....
Potential challenges and considerations

- Commercial scale-up
  - Low volume = high value
  - Industry uptake

- Matching flavour profiles

- Diet format should be developed in close consultation with system design and husbandry practices