

Making a national plan for urchin aquaculture:

Diet development

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NUTRITION & SEAFOOD

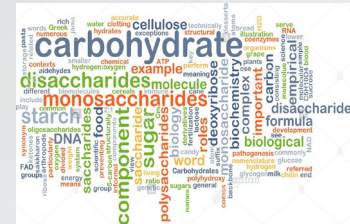
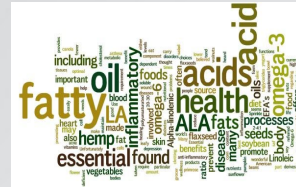
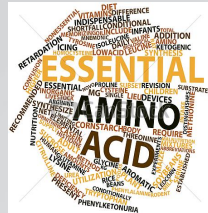


DEAKIN
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Setting the scene.....

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

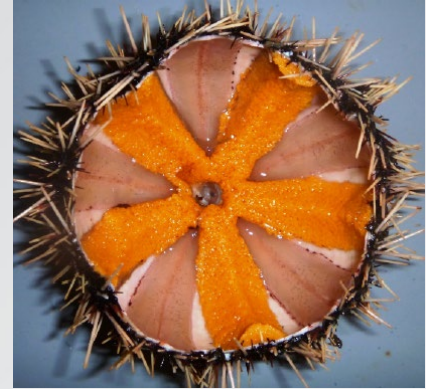
- Protein
- Lipid
- Carbohydrate
- Micronutrients



- 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