Effect of **raw material** quality and characteristics on the **quality of final products**

Quality, critical parameters, managing quality, quality criteria

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Different Raw Material

- Raw material is differentiating in
  - Fat content
  - Water content
  - Dry matter

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- Reasons are different *species*, *season*, *fishing vessel*, *towing time*, *fishing waters* …

Traditional process

- **Traditional processing** in fishmeal and –oil differentiates between
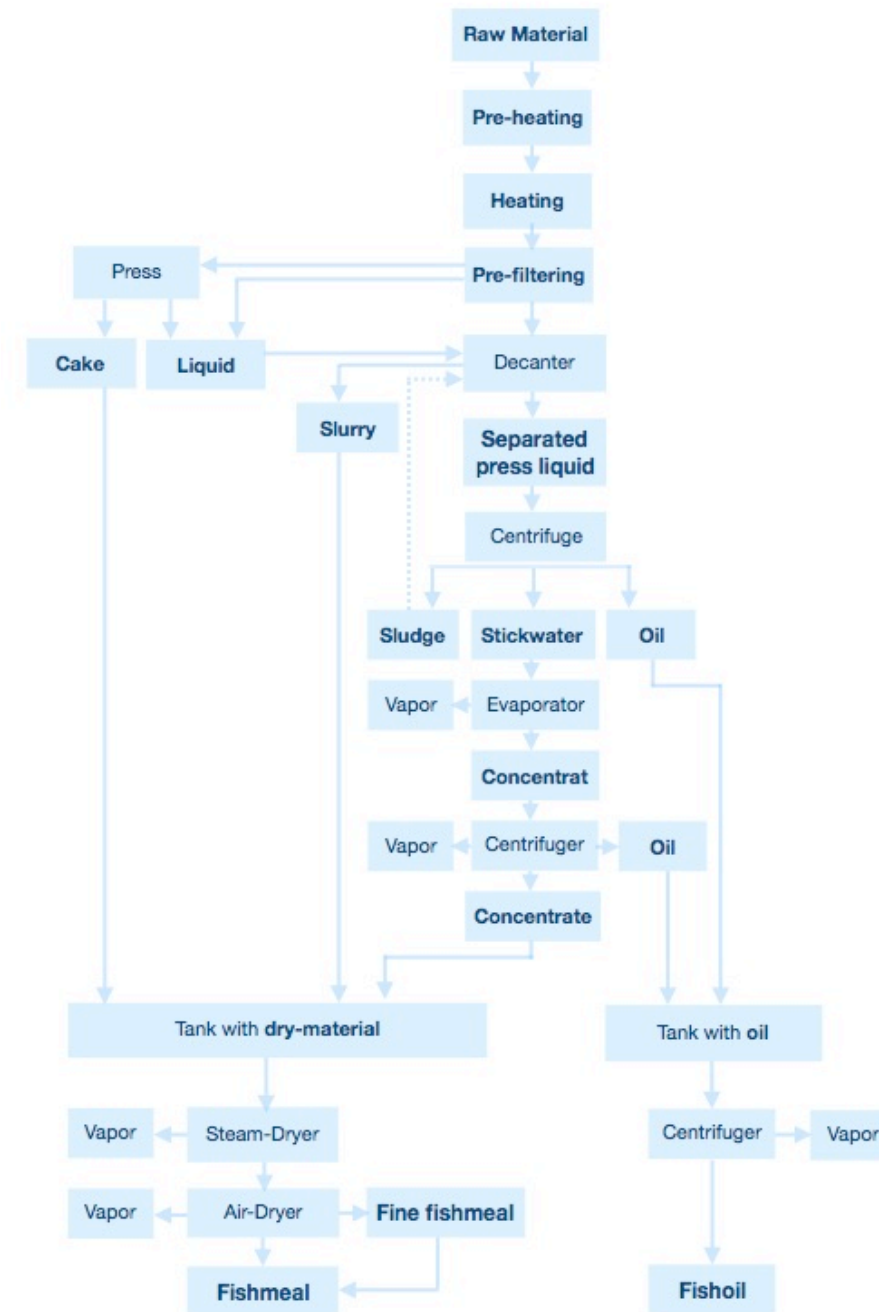 - Fat
  - Dry matter
  - Water

Traditional process

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  - Fat
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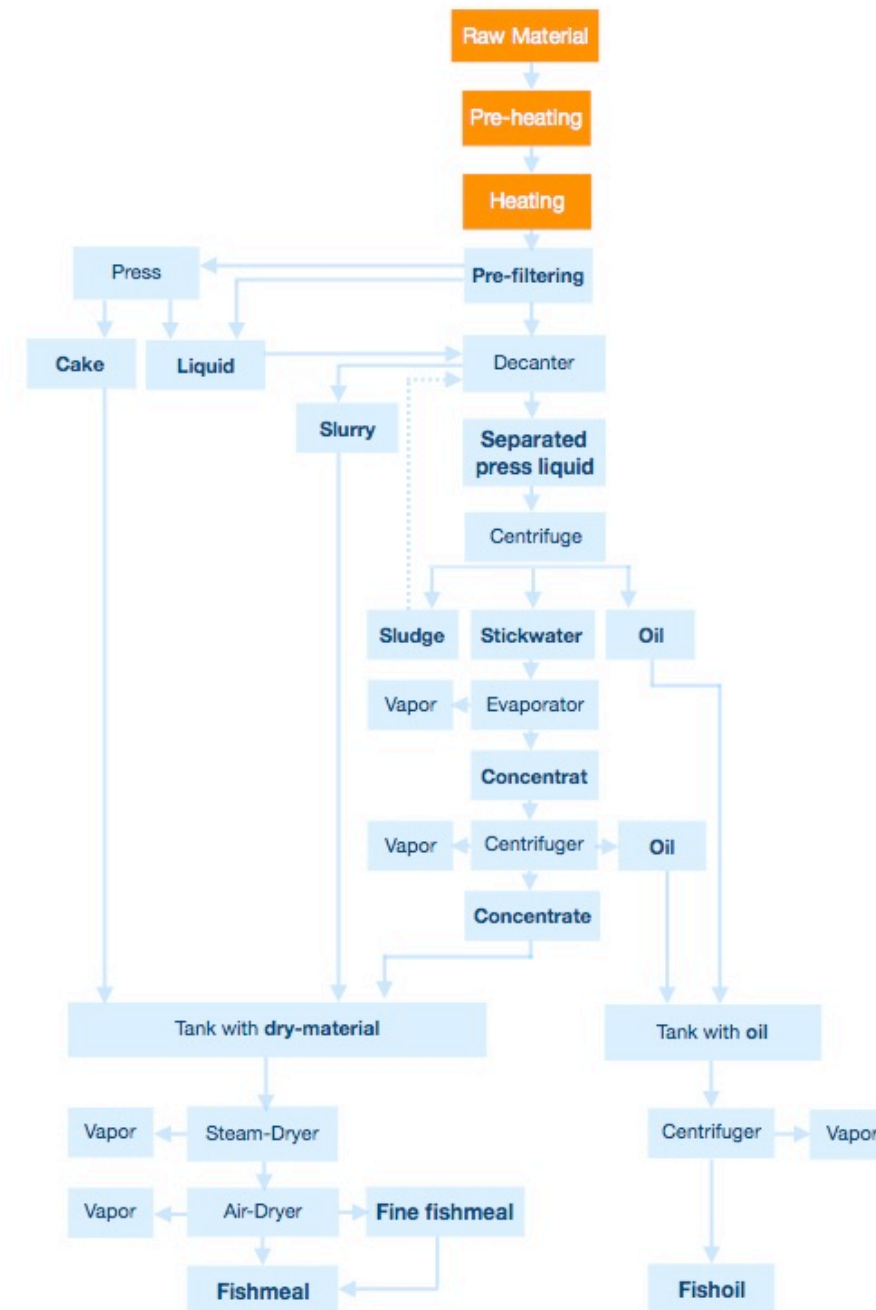- Doesn't differentiate **quality difference** within each step

- Fishmeal and -oil processing line from 2017

– First steps are crucial

– Proteins are sensitive

– Is there difference between each step?
  - What is the difference?

Different temperature in the cooker

- Would different temperature in the cooker give **better separation** between *water* and *fat*?

Re-evaluate the target group for fishmeal

- **Current process** is aimed for high digestibility
  - Feed
    - Soy protein is taking over large part of the feed

- **New methods** aimed for high functional properties of protein
  - Bioactive compounds
  - Pharmaceutical sector
  - Start feed

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Current methods - Points to improve

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- Many of the fishmeal production lines today are the same since the **1970's**

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  - *what* and *where* are the quality factors in the processing line
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- The processing line and machinery is not always complimenting the load from the ships

Research question 1

As much is known about lipids today, more focus has to be on **protein quality**

- **How do we measure protein quality throughout the fishmeal processing line**

Research question 2

To break down the material more for a better separation between fat and dry matter, **is enzymatic hydrolysis a reasonable addition** both in regards to quality and cost?

Research question 3

Are there **other methods** than heating and adding enzymes/acid **to break down the raw material** during pre-treatment?

Thank you for your attention

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