



Nasjonal og global tilgang på fôrråvarer til akvakultur

Startkonferanse 6 oktober 2020
Trygve Berg Lea, Sustainability Manager



Our mission
*feeding
the future*



30
PRODUCTION
PLANTS IN 18
COUNTRIES



>2.3M
TONNES OF
FEED



>3,500
EMPLOYEES



11
RESEARCH
& VALIDATION
STATIONS IN 9
COUNTRIES



€15M
ANNUAL
INVESTMENT
IN R&D

SKRETTING
a Nutreco company

Our mission

feeding
the future

In 2019,
Skretting produced
feed to support

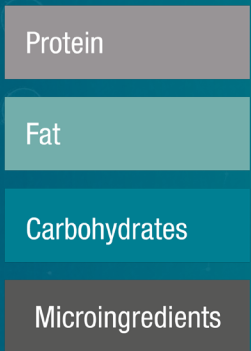
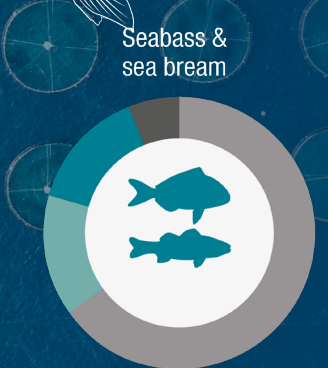
21.5
million

seafood meals
every day globally

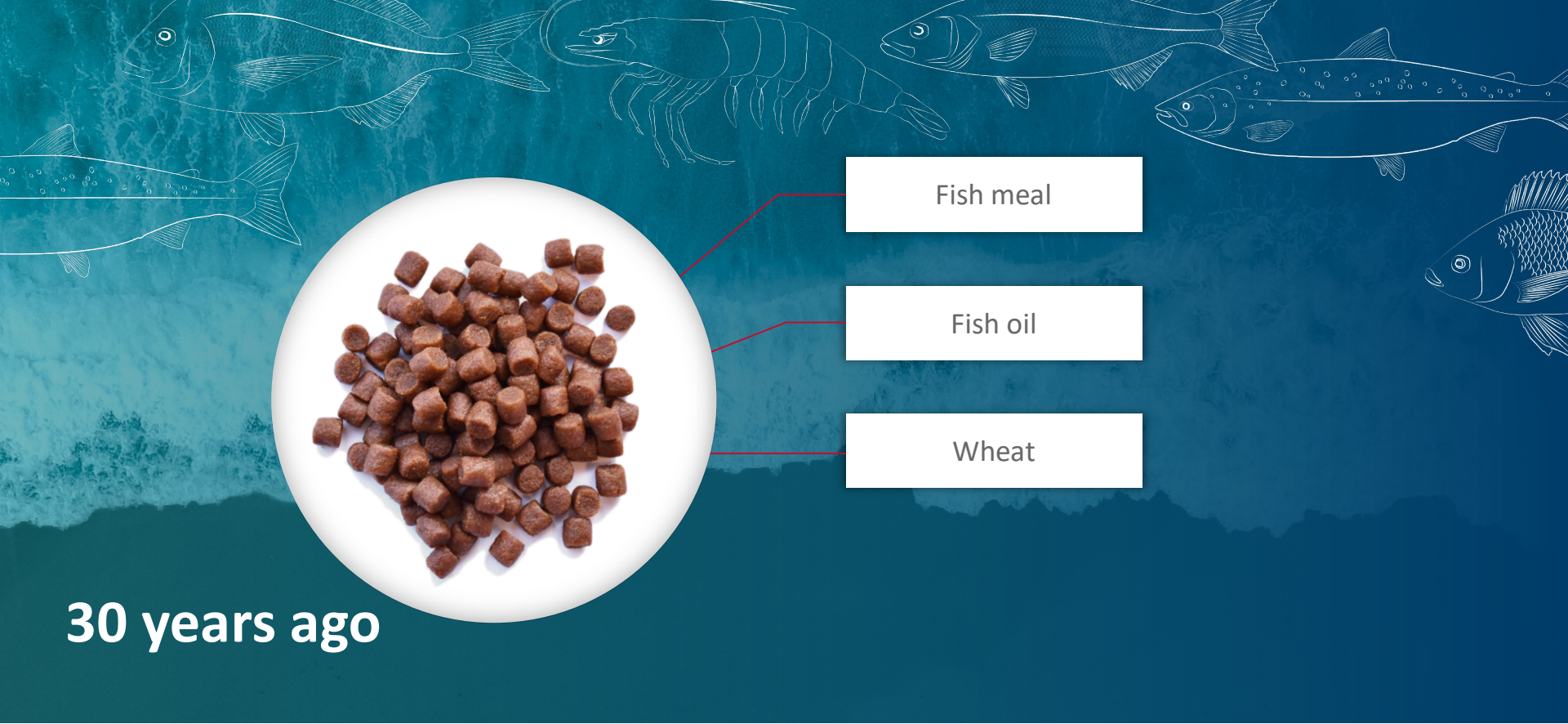
SUSTAINABLE
DEVELOPMENT
GOALS

2
ZERO
HUNGER





What ingredients are in fish and shrimp feed?



Fish meal

Fish oil

Wheat

30 years ago

INCREASE IN
AQUACULTURE PRODUCTION FROM
2018 - 2030

+ 26 million tonnes



+ 40 million tonnes

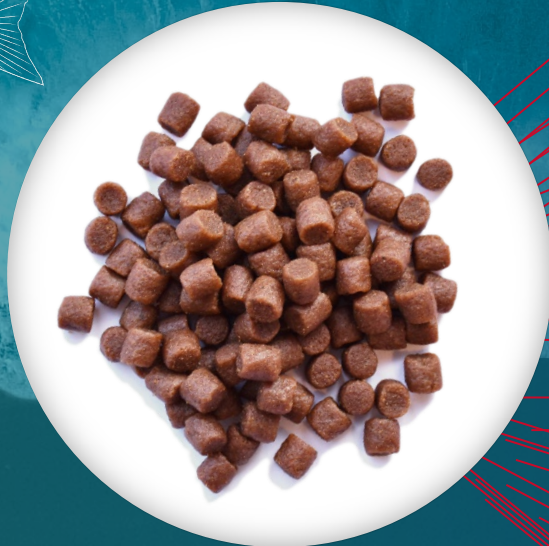
INGREDIENTS

These must be sourced responsibly,
contributing to fulfilling the UN
sustainable development goals



Source: FAO SOFIA Report 2020

Today



Soybean oil

Rice

Up to 50 ingredients per feed

Functional ingredients

Potato starch

Distillers grains

Tapioca starch

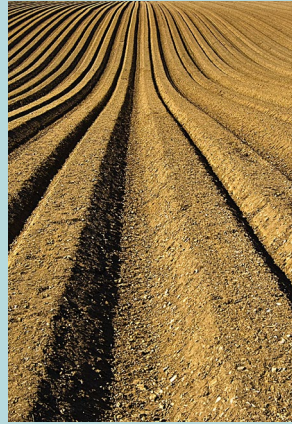
Linseed oil



Deforestation



Water use



Arable land



Pesticides



Carbon emissions



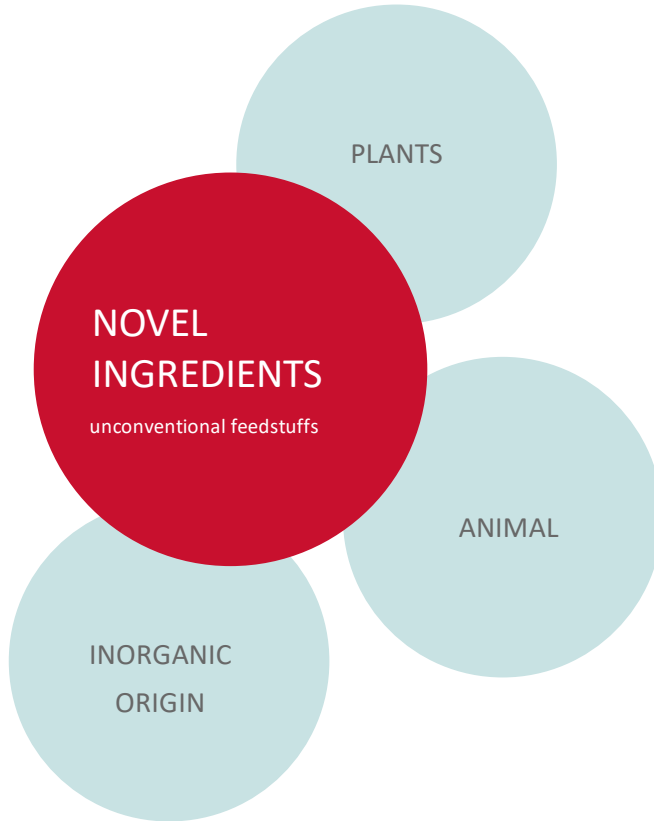
Fertilisers

NOVEL
INGREDIENTS
USAGE



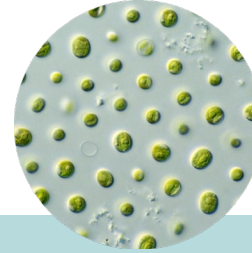
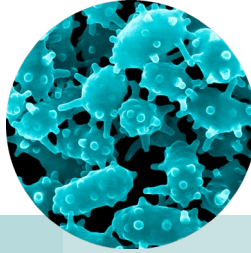
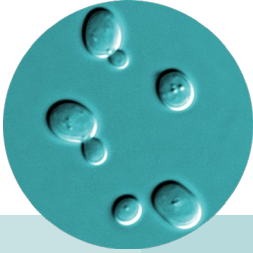
Reduction
ENVIRONMENTAL OR SOCIAL
FOOTPRINT OF TRADITIONAL
INGREDIENTS

What do we mean by 'novel' ingredients?



They **provide nutrients** using **less environmental or social footprint** than traditional feed ingredients

What characterises novel feed ingredients?



The valorisation of food waste streams from the human food industry into nutritious ingredients



Protein, fat and other nutrients produced from single cell organisms such as; bacteria, yeast, algae, plus also insects



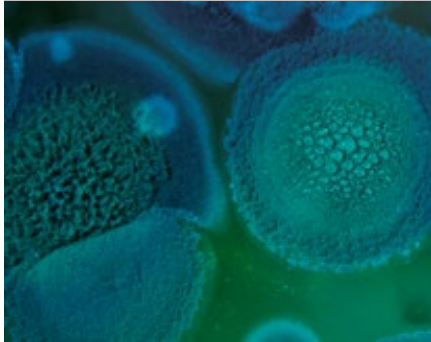
Plants and single cell organisms that can be modified to produce valuable nutrients



The feed stock for the production of a novel ingredient can come from a variety of different sources, such as human food waste streams and by-products from other primary industries



MICROBIAL PROTEINS



Skretting testing Unibio's novel SCP, with purchase contract potential prize

By Jane Byrne

07-May-2020 - Last updated on 07-May-2020 at 13:10 GMT

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Unilprotein © Unibio

RELATED TAGS: Single cell protein, shrimp, Saudi arabia, Russia

Danish single cell protein innovator, Unibio, has announced collaborative engagement with leading fish feed producer, Skretting.

Skretting is to begin testing Unibio's novel protein, Unilprotein, as a feed ingredient for fish and shrimp feed.



FEEDING FISH THROUGH CO₂

CO₂ AQUAFEED is a revolutionary new form of feed that is produced through carbon capture and transformation.





Thank you