



HORIZON

SEAWEED

Operational advantages of
sustainable wild harvesting

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SSIA CONFERENCE 2023

WHAT WE DO

Seaweed carefully sourced from remote Scottish coastline to meet immediate and future demand for quality seaweed



MARKETS

WHO WE SUPPLY



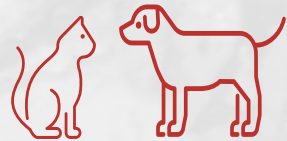
**FOOD &
DRINK**



**HUMAN
HEALTH**



COSMETICS



**ANIMAL
NUTRITION**



**BIO-
COMPOUNDS**



RESEARCH



VARIETY



PROVENANCE



QUALITY



SUSTAINABILITY



TRACEABILITY

OUR TIMELINE

INITIAL
CONCEPT
+ EARLY
R&D INTO
SEAWEED

FOOD
COMPANY
ESTABLISHED



FARM TRIALS
START IN OBAN



B2C FOOD
BRAND
LAUNCHED



ACQUISITION
OF B2C BRAND



2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

ESTABLISHING
OPERATIONS



WILD HARVEST AND PROCESSING
STARTS IN CAITHNESS



PUSH ON B2B SALES



FOCUS ON
WILD HARVEST



B2B BRAND
CREATED



SEAWEED FARMING PIONEERS

We began cultivating seaweed in Scotland in 2016, but are pausing our R&D in 2023 to focus on integrated wild harvesting and processing



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Two licenced farm sites:
one operational since 2018



Eight growing cycles
completed



OPERATIONAL ADVANTAGES OF WILD HARVESTING



SITE OPTIONS

15 unique sites over 51km of Caithness coastline licenced for harvesting



Variation of shore type and orientation minimise disruption during adverse weather



Easily accessed from land, with harvest driven back to factory in van

Harvest sites are practically maintenance free

Farm sites must be carefully chosen with wider considerations (e.g. access from land, optimum growing conditions)

SITE OPTIONS



SCARFSKERRY HARVEST SITE NORTH COAST OF CAITHNESS

2-3ft waves

✓ Viable to harvest at low water



NYBSTER HARVEST SITE EAST COAST OF CAITHNESS

20-30ft waves

✗ No harvesting for several days

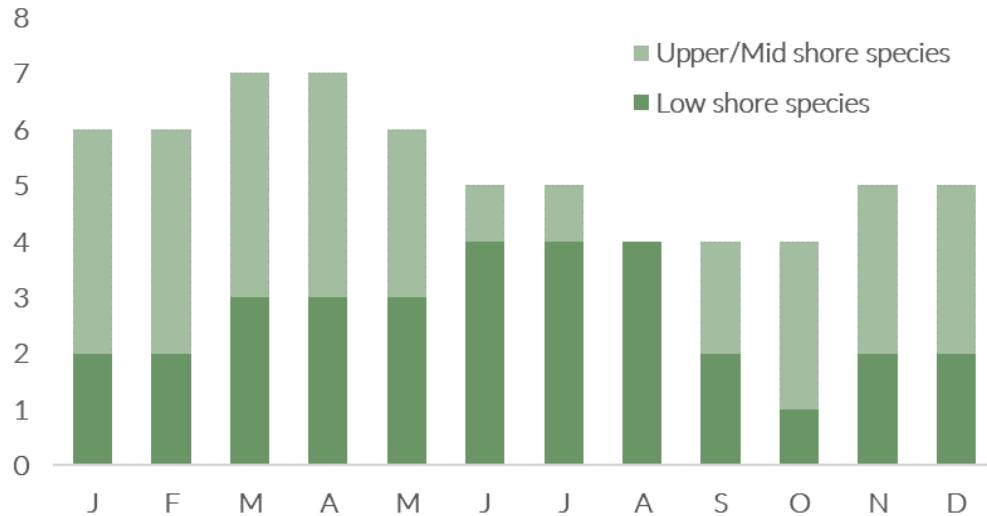
RANGE OF SPECIES

17 species within licences – 10 comprise core range

Operations scheduled around tidal cycle, prioritising low shore species on spring tides

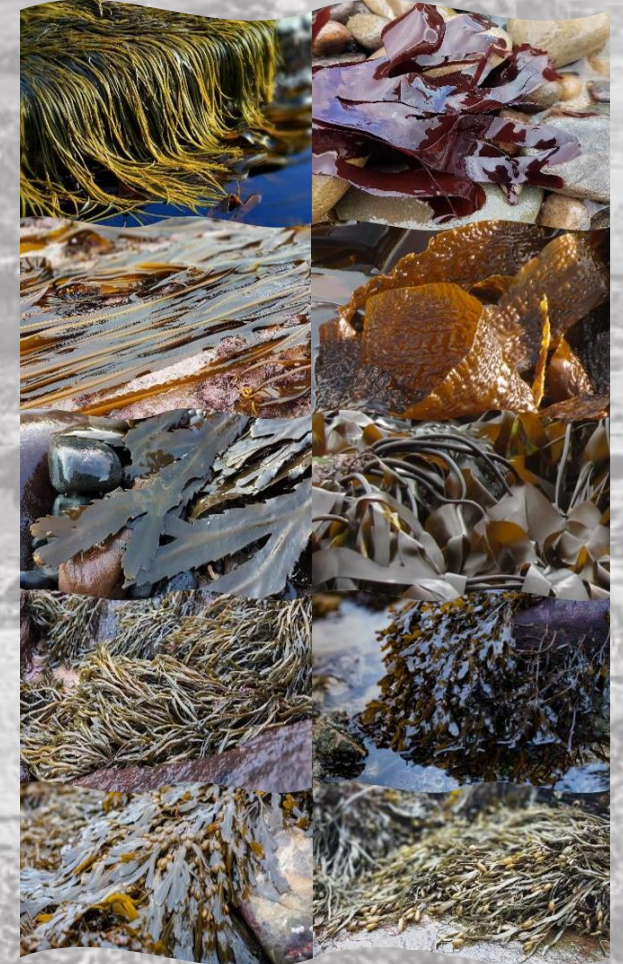
Quieter periods, but minimum four species available to harvest year round

Number of seaweed varieties in season



Variety provides opportunities to broaden customer base

Just three kelp species can be reliably cultivated currently



YEAR-ROUND PROCESSING

Producing a variety of species permits operations 12 months of the year

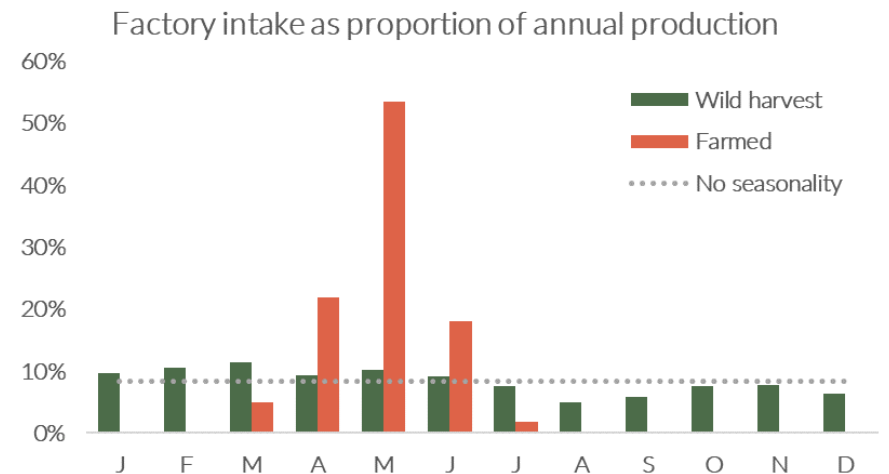
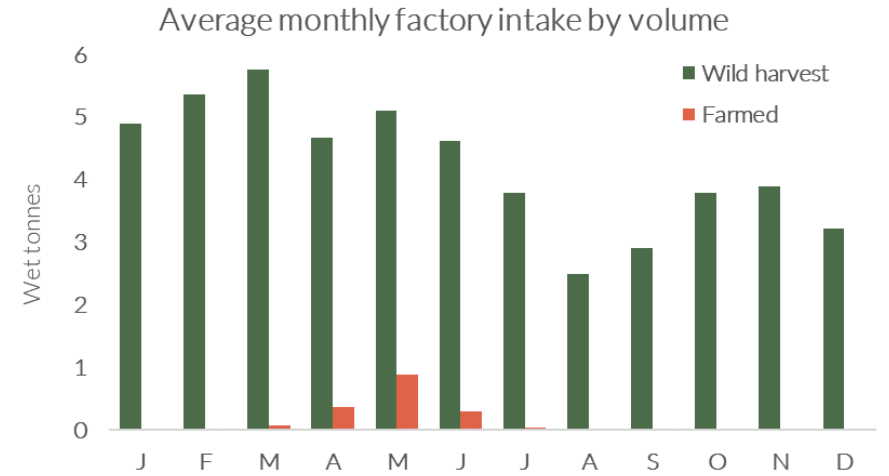
To date, 97% of production from wild harvest (50-70 wet tonnes per year)



Continuity of operations facilitates certification



Current seasonality of farming is a significant challenge for processing freshly harvested biomass



BUILDING A TEAM

Year-round operations help develop and specialise a group of dedicated people



Majority of team harvest and process



Need to schedule around tides, but workable



More difficult to grow a team for seaweed farming given lack of work outside of deployment and harvest seasons

SUSTAINABILITY



Cultivation has embodied and operational carbon emissions: especially problematic at small-medium scale



Farm structures create habitat – but for how long?

Carefully managed wild harvesting has minimal environmental impact



Longstanding industry in Scotland



SUMMARY

SITE OPTIONS

RANGE OF SPECIES

YEAR-ROUND
PROCESSING

BUILDING A TEAM

SUSTAINABILITY



THANK YOU



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