

How much FEED and FORAGE FISH is currently required to grow 1 kg of Tasmanian Atlantic salmon?



1.35 kg of feed is needed to grow 1 kg of farmed salmon



FEED CONTAINS 19% MARINE ingredients sourced from:

6.5%
Fishmeal

FORAGE FISH

are wild-caught, small bony fish, not desired by humans for direct consumption

6.2%
Fish oil

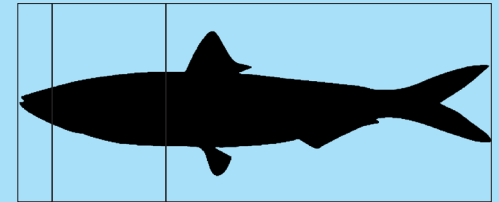
6.4%
Fishmeal

MARINE TRIMMINGS

are by-products from fish caught directly for human consumption that would otherwise be wasted

*Trimming are not included in forage fish calculation as fish are not directly caught for reduction into fishmeal and fish oil

FORAGE FISH are converted into **fishmeal & fish oil**



An **ANCHOVY** is a common forage fish made up of:

5%
fish oil

24%
fishmeal

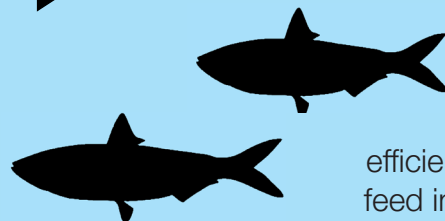
71%
water

Fish oil is the limiting ingredient (5% yield)
Amount of fish oil, plus volume of feed, determines how much forage fish is required to grow 1 kg of salmon

The following calculation is used to determine the quantity of forage fish used to source fish oil

Forage Fish Dependency Ratio	$\frac{\text{Fish Oil in Feed\%}}{\text{Fish Oil Yield (anchovy)}}$	X FCR
Forage Fish Dependency Ratio	$\frac{6.2\%}{5\%}$	X 1.35

1.67 kg of forage fish must be caught to yield 1kg of Atlantic salmon



compared to livestock **fish** are more efficient at converting feed into human food

401g of fishmeal is extracted from 1.67 kg of forage fish

(1.67kg whole forage fish x 24% fishmeal yield)

88 g fishmeal used in feed

(6.5% fishmeal in feed x 1.35 of feed)

313 g excess fishmeal

used to produce other seafood