

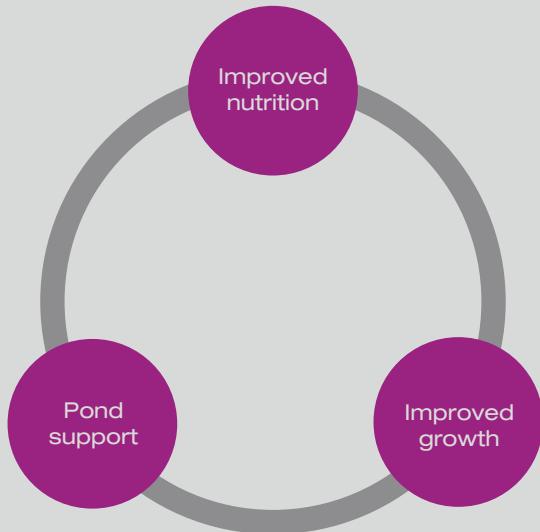
# Xpand

bigger, faster, better

## What is Xpand?

Dedicated research at Skretting Aquaculture Research Centre (ARC) has led to a new high performance feed that shortens the grow-out phase and provides more flexibility to either harvest earlier, or harvest more at the same time.

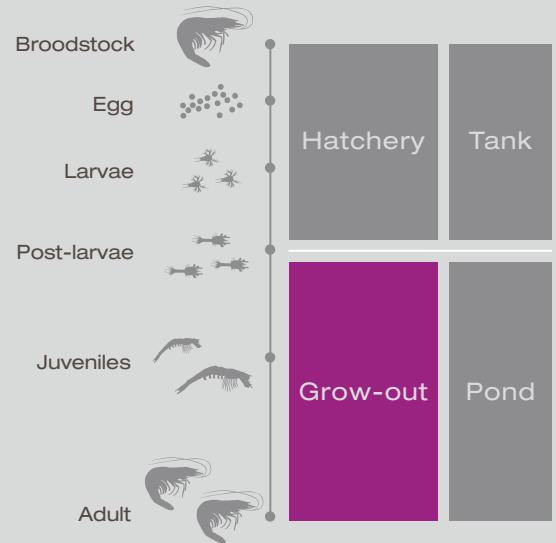
The development of Xpand has focused on three pillars:



## Challenges in shrimp production

Shrimp can be exposed to various challenges throughout the grow-out phase.

Supporting shrimp with the right nutrition and the right conditions enables improved performance and better control of production.



## Feed consumption

Skretting trials have shown that shrimp fed Xpand have a shorter feed transit time through the digestive system (Figure 1). This means that feed can be processed faster. In addition, trials have also documented that shrimp fed Xpand use less time to consume the same amount of feed compared with the control diet (Figure 2). Optimal feed consumption can be reached by providing the optimal feed quantity with the optimal feeding frequency to the pond.

## Feed utilisation

Results indicate that shrimp fed Xpand have a significantly higher feed intake (Figure 3). Feed conversion ratio is maintained (Figure 4), meaning that extra feed is converted into growth. Physical pellet properties also contribute to a better water quality and support the pond during the production cycle.

## Growth response

Growth trials were conducted in controlled conditions with shrimp larger than one gram. The results show a higher final weight for shrimp fed with Xpand compared to those fed with a control diet (Figure 5). For commercial production, better growth allows for a shorter production cycle and in turn gives more flexibility to plan a harvest.



Figure 1: Gut transit time in shrimp fed control or Xpand.

Figure 2: Time to consume control or Xpand feed rations.

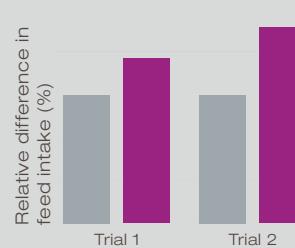


Figure 3: Feed intake of shrimp fed control or Xpand for more than 5 weeks.

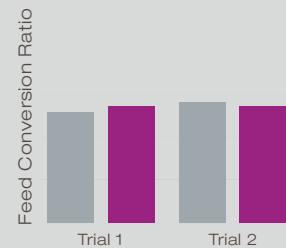


Figure 4: Feed conversion ratio (FCR) of shrimp fed control or Xpand for more than 5 weeks.

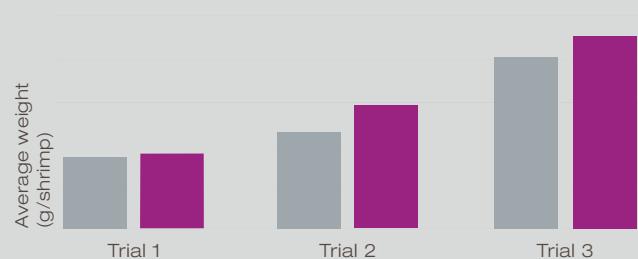


Figure 5: Average weight over three trials.

# The global shrimp package



# HIGH QUALITY FEED FOR WHITELEG SHRIMP IN VERY INTENSIVE CULTURE



XPAND is a high quality shrimp feed range optimized for the production of whiteleg shrimp in intensive farming conditions.

Dedicated research at Skretting ARC has led to a new high performance feed that provides flexibility to reduce the grow-out phase and harvest shrimp either earlier or bigger.

The development of XPAND has focused on three pillars:

- Pond support
- Improved nutrition
- Improved growth



## NUTRITION FACTS:

Code	Diameter (mm)	Package (kg/bag)	Protein (% min.)	Fat (% min.)	Fiber (% max.)	Moisture (% max.)
Xpand 0	Powder	10	40	6	4.0	10
Xpand 1	Crumble Mesh 18 - 25	10	40	6	4.2	10
Xpand 2	ϕ 1.0	10	40	6	4.5	10
Xpand 3	ϕ 1.2	20	38	6	5.0	10
Xpand 4	ϕ 1.4	25	38	6	5.0	10
Xpand 5	ϕ 1.6	25	36	6	5.0	10
Xpand 6	ϕ 1.8	25	36	6	5.0	10
Xpand 7	ϕ 2.0	25	36	6	5.0	10

## INGREDIENTS COMPOSITION:

High quality fish meal, high gluten wheat flour, vegetable protein concentrate, soybean meal, squid liver meal, fish oil, lecithin, vitamins and minerals.

## FEEDING TABLE:

Code	Shrimp size (g)	Feeding rate (% body weight/day)	Meals/day
Xpand 0	< 0.2	9 - 10	4 - 5
Xpand 1	0.2 - 1.0	7 - 9	4 - 5
Xpand 2	1.0 - 2.0	6 - 7	4 - 5
Xpand 3	2.0 - 4.0	5 - 6	4 - 5
Xpand 4	4.0 - 8.0	3.5 - 5.0	4 - 5
Xpand 5	8 - 13	3.0 - 3.5	4 - 5
Xpand 6	13 - 25	2.2 - 3.0	4 - 5
Xpand 7	> 25	2.0 - 2.2	4 - 5

Skretting is the global leader in providing innovative and sustainable nutritional solutions and services for the aquaculture industry. Skretting has production facilities in 19 countries on five continents, and manufactures and delivers high quality feeds from hatching to harvest for more than 60 species. The total annual production volume of feed is more than 2 million tonnes. The head office is located in Stavanger, Norway. Our mission is #FeedingTheFuture

[www.skretting.com](http://www.skretting.com)



Xpand



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