



# NutraFeed®

## Crustacean semi-moist maturation diet

One of the problems with shrimp (and other crustacean) culture is broodstock diets and nutrition. Currently, most hatcheries around the world are using fresh or frozen squid, worms (polychaetes), fish and other marine organisms, topped up with nutritional additives. This practice is far

from ideal, exposing the cultured animals to potential pathogens and diseases,

nutritional inconsistency and is dependent on wild fisheries. Considering

the cost of broodstock (especially

'SPF'), these are serious risks and in many cases result in

high mortality and/or reduced productivity, leading to significant financial loss.

Until now, broodstock fed maturation formulated dry diet, pelleted or extruded did not match the performances of animals fed on fresh/frozen food. The dry diets tend to break down due to the unique feeding behaviour of the animals, resulting in polluted water and very high FCR. Moreover, palatability and ingestion rates are usually low.

## NO MORE!

Recently, NutrKol developed maturation diet (NutraFeed® diet range) for crustacea that can completely replace the use of fresh/frozen feed. The diet is semi-moist and manufactured as short pellets at any length and diameter needed. The diet is stable in the water for 24 hours and will not break down when the shrimp or lobster is holding and chewing it.

NutraFeed® diets were tested with several crustaceans including; white shrimp *L. vannamei*, tiger prawn *P. monodon* (wild and domesticated), bugs (*T. orientalis*) and tropical lobster (*Panulirus ornatus*). The diet can be designed and manufactured to any crustaceans.

NutraFeed® diets are based solely on dry meals without any fresh or frozen products. They are pathogen free (all ingredients pass Gamma radiation) with a shelf life of six months (refrigerated) or 12 months (frozen).

Herbal extracts (NutraGreen® products) are incorporated into the diets. These 100% natural additives aimed at improving broodstock performances including; enhancing egg and larvae quality, sperm motility, vitellogenesis, as well as immune system and digestive system support.

Currently, three different maturation diets are manufactured according to species: NutraFeed® SM for shrimps and prawns, NutraFeed® LM for lobsters and bugs and, NutraFeed® CM for crabs.



A large experiment was conducted independently by one of the biggest shrimp producers in the world, comparing NutraFeed® SM to traditional squid, polychaetes and nutritional additive diets. The results demonstrated significant performance improvements (up to 40%) when the broodstock fed on NutraFeed® SM semi-moist diet. Moreover, using the semi-moist diet also proved to be cost effective compared to traditional diets.

200 white shrimp *L. vannamei* were fed control diet (squid, polychaetes and nutritional booster) or NutraFeed® SM diet. The broodstock were kept in identical tanks and environmental conditions. Growth, mortalities, spawning events, fecundity, hatching rates and number of nauplii were determined.

Treatment	Days	%Mort/day	Avg SR/day	Total Spawns	Egg/Female	Naupli/Female	% Hatch	Total Naupli	Food used, kg
Control	124	0.09%	3.34%	602	179,364	154,252	86%	92,860,000	288
NutraFeed®	124	0.05%	4.74%	849	186,266	160,188	86%	136,000,000	98
	<b>Difference</b>	<b>44.4%</b>	<b>29.5%</b>	<b>29.1%</b>	<b>3.7%</b>	<b>3.7%</b>	<b>0.0%</b>	<b>46.5%</b>	<b>-190</b>



## NutraFeed®

The optimal maturation diet... better, safer, effective.



**Nutra-Kol**  
NUTRITION SOLUTIONS

Western Australia, Australia    [www.nutrakol.com](http://www.nutrakol.com)  
Email: [info@nutrakol.com](mailto:info@nutrakol.com)    Tel/fax. +61-8-9403 2287



NutraGreen