

New Trials Show Potential of Including Peas at a 10% Inclusion Rate in Shrimp Feed

Field peas are becoming an increasingly attractive plant-based feed ingredient in aquafeed due to their protein and energy content and their low levels of antinutrient factors. A new study conducted at APOTEC shows that **peas can partially replace soybean meal in shrimp diets** while maintaining productivity and quality attributes.

NEW TRIAL RESULTS

Trials took place from November 2022 to February 2023 and studied four diets that included graded levels of ground yellow peas replacing soybean meal as the primary source of protein.

Location: Research Institute for Aquaculture 2, Ho Chi Minh City, Vietnam

Conducted By: Dr. Nguyen van Nguyen, Research Center for Aquafeed Nutrition and Fishery Post – Harvest Technology (APOTEC)

Sample: 3000 juvenile white-leg shrimp (*Litopenaeus vannamei*)

Timeline: 56 days

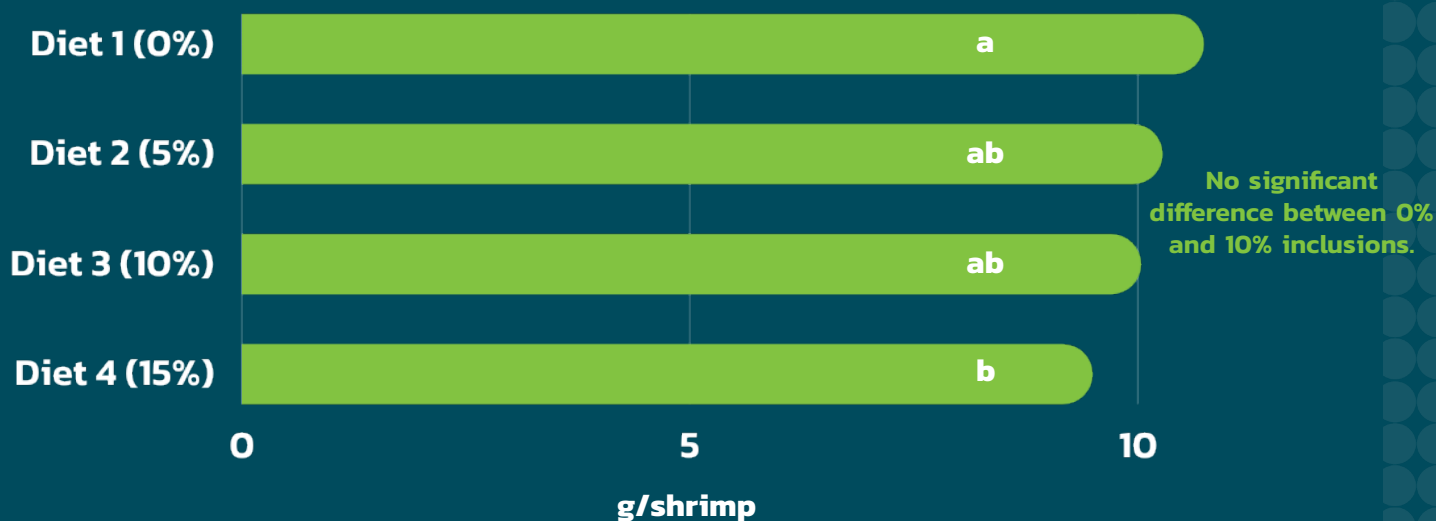
Diet: 4 treatment groups fed varying ratios of soybean meal to pea meal as the primary protein source



DIETS	GROUND YELLOW PEA (%)	SOYBEAN MEAL (%)
D1: 0% peas	0	25.0
D2: 5% peas	5	22.8
D3: 10% peas	10	20.7
D4: 15% peas	15	18.5

GROWTH PERFORMANCE

Growth performance (weight gain) of shrimp after 56 days of feeding.



SENSORY EXPERIENCE REMAINED UNCHANGED

Diets including up to 15% yellow peas produced shrimp with no significant changes to product quality across colour, texture, composition and descriptive sensory analysis.



Colour of peeled-cooked and whole-shell cooked White Leg Shrimp fed different experimental diets.

COMPOSITION

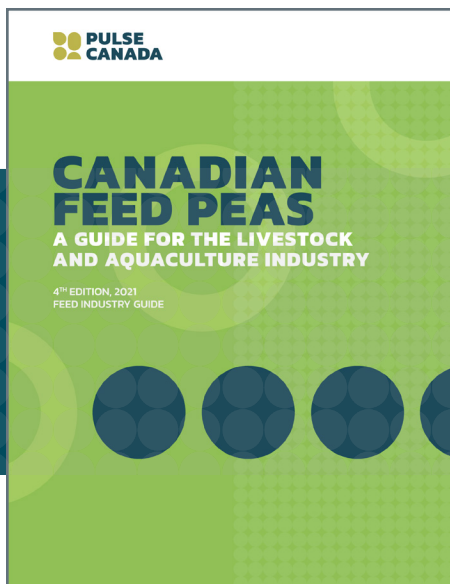
	Initial shrimp	D1 0%	D2 5%	D3 10%	D4 15%
Moisture (%)	77.88 ± 0.06	75.78 ± 1.12	75.42 ± 0.69	75.37 ± 0.80	74.95 ± 0.21
Crude Protein (%)	15.62 ± 0.03	17.71 ± 0.88	17.85 ± 0.43	17.81 ± 0.60	17.65 ± 0.51
Crude Lipid (%)	1.85 ± 0.05	1.62 ± 0.14	1.63 ± 0.07	1.67 ± 0.15	1.76 ± 0.07
Crude Ash (%)	3.24 ± 0.01	2.80 ± 0.17	2.64 ± 0.12	2.70 ± 0.14	2.75 ± 0.16
Phosphorus (%)	0.23 ± 0.01	0.24 ± 0.02	0.25 ± 0.02	0.26 ± 0.02	0.26 ± 0.01
Calcium (%)	0.75 ± 0.003	0.56 ± 0.05	0.56 ± 0.07	0.53 ± 0.06	0.56 ± 0.08

Proximate composition (% wet basis) of initial shrimp and shrimp fed for 56 days

CANADIAN PEA PRODUCTION

Canada is the world's largest producer and leading exporter of feed peas. The primary use of feed peas around the world is in swine, poultry and aquaculture diets. In addition, pea processing in Canada is expanding, increasing the availability of pea protein and pea starch. Peas, pea protein and pea starch are all excellent ingredients for aquaculture diets, providing both nutrition and pellet binding functionalities.

Peas are a multi-purpose feed ingredient due to their high protein and starch content.



**DOWNLOAD
THE GUIDE:**



READY TO GET CANADIAN PEAS WORKING FOR YOU?



Book a meeting with our team to learn how peas can provide you with operational flexibility and economic savings.

**PULSE
CANADA**
pulsecanada.com/feed