Nutritive Value of Wild Pea (*Pisum elatius*) Seed as a Dietary Protein Source for Fingerlings of Mirror Carp (*Cyprinus carpio*)

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(Received 21.10.09, Accepted 9.2.10)

Key words: wild pea, *Pisum elatius*, nutritive value, heat treatment, mirror carp, growth

Abstract

Wild pea (*Pisum elatius*) seed was examined as a dietary protein source for mirror carp (*Cyprinus carpio*) fingerlings in an 80-day laboratory growth trial. Raw or heat-treated *Pisum elatius* seed was included in fishmeal and soybean meal based diets at levels of 10%, 20%, 30%, or 40% and growth parameters were compared to those in fish fed a diet containing no *P. elatius*. Weight gain, specific growth rate, feed conversion ratio, and protein efficiency ratio in fish fed diets containing 10-30% heat-treated seed, or 10% raw seed, were similar to control fish and significantly better than in fish fed other diets. Fish fed diets containing 40% heat-treated or 20-40% raw seed had significantly reduced growth performance compared to those fed the control. Fish fed diets containing 20-40% raw *P. elatius* seed had significantly lower whole body fat content than fish fed other diets. Results show that raw and heat-treated *P. elatius* seed has potential as an alternative feed ingredient in diets for fingerling mirror carp with no adverse effect. Raw seed can be used up to 10% but *P. elatius* seed should be heat-treated if inclusion rates are to exceed 10%.

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