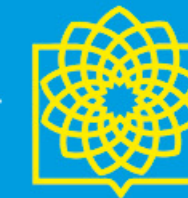




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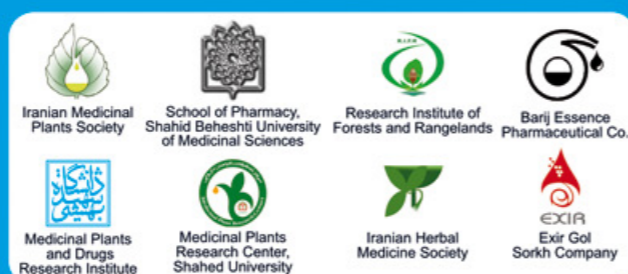
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شبکه ملی پژوهش و فناوری  
گیاهان دارویی

# کنگره ملی گیاهان دارویی

۲۷ و ۲۸ اردیبهشت ۱۳۹۱ - جزیره کیش

National Congress on Medicinal Plants



به نام خدا

گواهی می شود <sup>سرکار خانم</sup> <sub>جناب آقای</sub> دکتر امید صفری

در کنگره ملی گیاهان دارویی که در روزهای ۲۷ و ۲۸ اردیبهشت ماه سال ۱۳۹۱ در

مرکز همایش های بین المللی جزیره ی کیش برگزار گردید، شرکت نموده و مقاله خود را تحت عنوان

STUDY ON FUNCTIONAL PROPERTIES OF USING DIFFERENT LEVELS OF BLACKSEED (NIGELLA SATIVA) IN THE DIET OF RAINBOW TROUT (ONCORHYNCHUS MYKISS) ON IMMUNOLOGICAL AND GROWTH INDICES

به صورت سخنرانی ارائه نمودند.

دکتر فراز مجاب  
دبیر اجرایی کنگره

دکتر پیمان صالحی  
دبیر علمی کنگره



**STUDY ON FUNCTIONAL PROPERTIES OF USING DIFFERENT LEVELS OF  
BLACKSEED (NIGELLA SATIVA) IN THE DIET OF RAINBOW TROUT  
(ONCORHYNCHUS MYKISS) ON IMMUNOLOGICAL AND GROWTH  
INDICES**

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Knowing functional properties of native plants is an important area in fish nutrition. One of purposes of using medicinal plants in the diet of animals is to improve growth indices and flesh quality. Blackseed is a plant having antibacterial agents. Blackseed was used at five inclusion levels (1, 2, 3, 4 and 5 %) together with control diet in the isonitrogenous and isoenergetic diets of adult rainbow trout ( $56.5 \pm 3.9$  g) for 63 days. Immunological indices (lysozyme and complement) and growth performance (specific growth rate, %/day) were measured. Results showed that immunological indices including lysozyme and complement levels of the serum of fish fed the diet containing 5% blackseed increased ( $11.8 \mu\text{g/ml}$  and  $14.3 \text{ unit/ml}$ , respectively) significantly ( $P \leq 0.05$ ) compared to control diet ( $9.2 \mu\text{g/ml}$  and  $9.8 \text{ unit/ml}$ , respectively). Using 5% blackseed increased the final weight ( $158.8 \pm 4.8$  g) compared to control group ( $138.6 \pm 5.3$  g). Specific growth rate fish fed the diets containing 5% of blackseed ( $2.5\%/day$ ) increased significantly ( $P \leq 0.05$ ) compared to control diet ( $1.8\%/day$ ). Based on the results, using blackseed at 5% in the diet of rainbow trout was possible [1].

[1] Halver, H. S. (2002). Fish Nutrition. CRC Press.