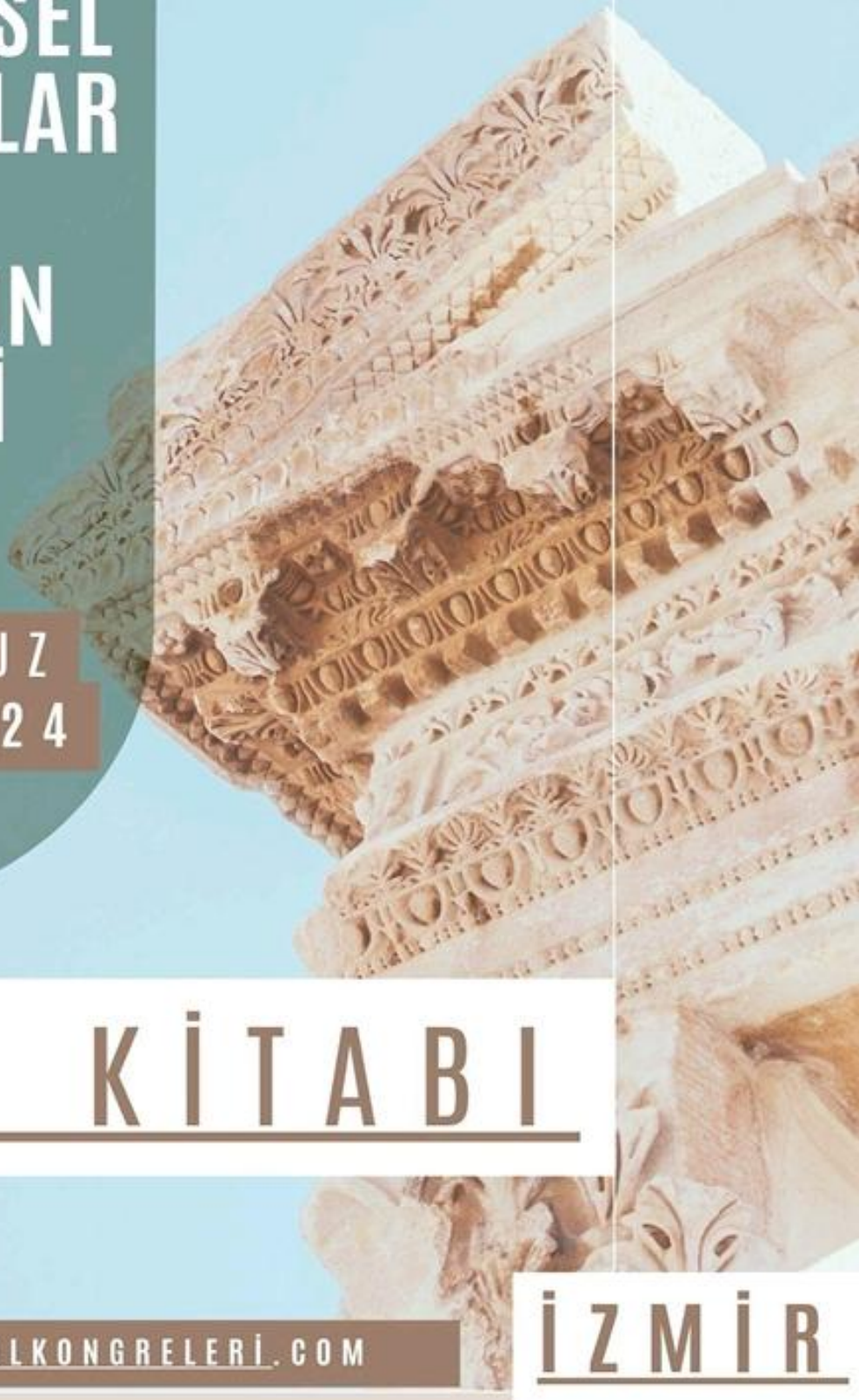
BİLSEL CONGRESS

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IV. BİLSEL ULUSLARARASI EFES BİLİMSEL ARAŞTIRMALAR VE İNOVASYON KONGRESİ



27-28 TEMMUZ 2024

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4. BİLSEL INTERNATIONAL EFES SCIENTIFIC RESEARCHES AND INNOVATION CONGRESS

DATE and PLACE

27/28 JULY, 2024-İZMİR TÜRKİYE

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HEAD OF SESSION: **Prof. Dr. Yusuf Konca**

SESSION-1 HALL-10

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Prof. Dr., Ceyhan ÖZBEYAZ Dr., Afşin KOCAKAYA	*Ankara Üniversitesi,*	*FARKLI YAŞ VE GENOTIPTEKI TOSUNLARIN DEĞERLI ET ORANLARI BAKIMINDAN KARŞILAŞTIRILMASI*
Mustafa Başarı	*Selçuk Üniversitesi,*	*BAZI YETIŞTIRME ORTAMLARININ ALBION ÇILEK ÇEŞIDINDE BITKI GELIŞIMI ÜZERINE ETKILERI*
Doç. Dr. İdris DURUSOY	*Düzce Üniversitesi,*	*ODUN DIŞI ORMAN ÜRÜNLERİ SERTİFİKASYONU: DEVLET ORMAN İŞLETMECİLİĞİ ODAKLI BİR DEĞERLENDİRME*
Doç.Dr. Abdullah ÖZKAN	*Iskenderun Technical University,*	*APPLICATION OF MULTI-WALLED CARBON NANOTUBES FUNCTIONALIZED WITH GOLD NANOPARTICLES FOR ADSORPTIVE DESULFURIZATION OF CRUDE OIL*
Tayfun Coşkun, Dr. Öğr. Üyesi Ümit Yırtıcı, Prof. Dr. Aysun Ergene,	*Kırıkkale Üniversitesi,*	*BORLU TOPRAKTAN ALKALEN PROTEAZ ÜRETEN MİKROORGANİZMA İZOLASYONU*
Arş. Gör. Dr., Güney AKINOĞLU Dr., Songül RAKICIOĞLU Doktora Öğrencisi, Zerrin CİVELEK	*Ondokuz Mayıs Üniversitesi,*	*TUZLULUĞUN DOMATES MEYVESİNİN NUTRASÖTİK KALİTE ÖZELLİKLERİNE ETKİSİ*
Ahmed Ali Sheikh Elmi Rifat Ullah Khan Yusuf Konca	*Erciyes University, The University of Agriculture,*	*EFFECTS OF HEMPSEED MEAL PROCESSING TECHNIQUES ON PRODUCTIVE PERFORMANCE OF LAYING HENS*
Qali Mohamed Yusuf Hasan Yalçın Yusuf Konca		*EFFECTS OF ADDITION OF MICROALGEA ON FATTY ACID COMPOSITION OF HEN EGG*

EFFECTS OF HEMPSEED MEAL PROCESSING TECHNIQUES ON PRODUCTIVE PERFORMANCE OF LAYING HENS*

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ABSTRACT

Thermal processing technics have been applied to feeds for a long time in order to increase the digestibility and hygienic quality of feeds. However, it is well known that thermal processes applied during oil extraction cause the damage of the beneficial active substances in seeds, especially medicinal plants. On the other hand, in the case of pressing at low temperatures, more oil remains in the seeds and the oil production efficiency decreases. This study was conducted to determine the effects of hempseed meal production temperature on productive performance of laying hens. A total of 60, 37-weeks of age Super Nick white laying hens were divided into 3 groups and placed in cages with 10 replications and 2 animals in each replication and fed for 112 days. The groups were formed as follows; 1: Control (C, no hempseed meal addition), 2 and 3 group 15% cold (CHSM) and hot (HHSM)pressed hempseed meal addition to the laying hen diets. There were no significant effect of CHSM and HHSM addition to diets on final body weight (BW), gain and BW change ratio of hens. Addition of 15% HHSM to the feed of hens significantly reduced feed intake (FI) and feed efficiency (FCR) compared to the C and CHSM group in the 28-42 day period ($P<0.01$), but did not significantly affect the mean FI values in the other periods. The mean FCR value was found to be significantly lower in the CHSM group than in the C group ($P<0.05$). The CHSM and HHSM addition caused an increase in egg yield in the 0 to 14 period and whole experimental period compared to C group C ($P<0.01$). Egg weight (EW) values of the HHSM added group in the 14 to 28 and 28 to 42 day periods were found to be significantly higher than the C and CHSM groups ($P<0.05$). Egg mass values of the groups were not significantly affected by the treatments. As a result, it was observed that hemp seed meal addition to cold and hot processing methods of laying hen diets could provide improvements in egg laying performance and egg weight values, except for egg weight, compared to group C.

Keywords: laying hen, hemp seed, egg quality, meal processing temperature

**This study was supported by Erciyes University Scientific Research Coordination Office with project number fyl-2023-12612.*

EFFECTS OF ADDITION OF MICROALGEA ON FATTY ACID COMPOSITION OF HEN EGGS*

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ABSTRACT

Omega-3 is one of the essential fatty acids in human nutrition and must be taken with food. Docosahexaenoic acid (DHA, 22:6) is an essential fatty acid and it can be synthesized omega-3 fatty acid. DHA is a component of the human brain, cerebral cortex, retina and skin. It can be obtained from milk, fish oil, and algae oil. The aim of this study was to reveal the effects of microalgea DHA to laying hen diets on the egg fatty acid composition. For this purpose, a total of 24 Super nick white laying hens at 54 weeks of age were divided into 2 different treatment groups with 12 replicated. Treatment groups as follows; 1) Control with sunflower oil (SFO) addition to hen diets (C), and 2) 1.5% microalgae (MALG) addition to hen diets. Egg samples were collected 28, 56 and 84 days and analyzed egg yolk fatty acid composition by using gas chromatography. On d 28, MALG addition to diets did not affect myristic, palmitic, palmitoleic, stearic, oleic, linoleic, alpha-linolenic and arachidonic fatty acid concentrations, however, decreased in eicosatetraenoic (EPA, $P<0.01$) and but increased in DHA ($P<0.01$) concentrations of egg yolk. On d 56 and 84, with addition of MALG the stearic acid (only on 56 d) and DHA concentrations increased ($P<0.01$), but other fatty acids were not affected in egg yolk by the MALG addition. In conclusion, MALG addition as a DHA source can be increased DHA concentration in egg yolk of laying hens.

Keywords: laying hen, microalgea, egg yolk, fatty acids, Docosahexaenoic acid

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