Effect of Environment Stresses on Edible Oil Content and Protein in Advanced Rapeseed Cultivars

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In order to investigate the effect of drought and cold stress reason of delay sowing date and warm stress to optain of delay harvesting, on percent and yield of Oil and Protein of advanced Rapeseed cultivars (*Brassica napus* L.), a field experiment was conducted as Factorial split-plot arranged in a Randomized Complete Block Design with three Replications in 2004/06 in karaj-Iran (at: 35 degree ,59 min Northern and 50 degree, 75 min Eastern). There were two factors: Irrigation at two levels:80% of evaporation as control(I_1), drought stress started from stem elongation stage(I_2), and planting date: normal planting date as fall(D_1) and delay planting date as winter(D_2), as main plots, cultivars were: RGS003(V_1), Sarigol(V_2), Hyola401(V_3), Hyola420(V_4), Hyola330(V_5), RGS006(V_6), RG4403(V_7), RG405/03(V_8), RGAS0324(V_9), RG405/02(V_{10}), as sub factors. Result showed that there were significant difference on percent and yield of edible Oil and Protein percent at most treatment (1%level). Also maximum Oil percent and this yield with 41.10% and 2315 kg/ha belonged to condition/cultivar of $D_1I_1V_3$ respectively. maximum Protein percent with 31.68% belonged to condition/cultivar of $D_1I_2V_1$. Also at second sowing date(D_2) and water stress(I_2) condition, V_5 c.v. with 40%; And in normal irrigation(I_1) at the same planting date (D_2), V_7 c.v. with 978 kg/ha oil , where higher cultivars in this conditions.

Key words: *Rapeseed (Brassica napus* L.*), Irrigation stress, cold and warm stress, edible Oil, Protein*