Optimizarea tehnologiei de cultură a soiei în vederea gestionarii resurselor limitate de apa

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Research was performed in a polyfactorial experiment at I.N.C.D.A. Fundulea between 2004 and 2006. Factor A (crop technology) had two graduations, factor B(irrigation regime) 6 graduations, and factor C (grown genotype) 3 graduations. The agricultural year 2004-2005 was excessively rainy, as the total rainfalls amount was 1138.7, while 2005-2006 was marked by drought, the total amount of yearly rainfalls was 494.5 mm, compared with the multiannual mean of 584.4 mm. From the viewpoint of temperature, 2004-2005 was normal, the annual mean of 10.8ºC was close to the multiannual mean of temperatures (10.6ºC), while 2005-2006 was almost normal, as the annual mean exceeded the multiannual mean by only 1.2ºC. The paper presents the average results of the two years of research. In the bacterium-treated soybean crop, the rate of N40 on P60 resulted in an insignificant yield increase, compared with the control. Out of the irrigation variants, the highest increase (7.72 q/ha) was recorded in the 50% IUA variant at a depth of 80 cm (dripping as half of the standard), compared with the non-irrigated variant, which showed a highly significant increase. Close values were also recorded in the 50% IUA irrigation varianta t 80 cm in depth (spraying as full standard), i.e. 7.28 q/ha, a statistically assured (highly significant) increase. Also, highly significant increase was recorded in the 50% irrigation variant at a depth of 80 cm (dripping 1/3 of the standard, i.e. 4.3 q/ha), compared with the non-irrigated variant; also, in the 50% IUA irrigation variant at a depth of 80 cm (sparying1/2 of the standard, i.e. 3.01 q/ha).
Out of the tested genotypes, the highest production was recorded in Triumf (6.13 q/ha), which was highly significant. Also, the Danubian variety recorded a highly significant yield (4.71 q/ha), compared with the control (Românesc 99). Thus, under market economy conditions, the careful choice of the crop technology may result in important resource economy, which leads to the optimised expenses and successful crop yields, without overlooking environmental protection.