



Effect of irrigation on soybean yield and quality depending on cultivation practices

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Field trials with and without irrigation were carried out in 2005 and 2006 to study two very early soybean genotypes grown conventionally and in a double cropping system following the harvest of spring barley as the preceding crop.

In the two study years, which differed from the point of view of soybean production, the effects of weather conditions and planting date on yield and quality (oil and protein contents) of soybean grain were analyzed.

According to the obtained results, the yield of main crop soybeans depended mainly on the amount and distribution of rainfall, whereas the yield of double cropped soybeans depended to a great extent on the temperature sum during the growing period. The soybean yields decreased in proportion with the decreases in rainfall amount and temperature sum. In an average year, double cropped soybean produces a considerably lower yield than the main crop soybean, however, in dry years the former may out yield the latter when no irrigation is used. In rainy years, the yield of irrigated main crop soybean may be lower than that of non-irrigated soybean, whereas in a typical year the use of irrigation increases the yield of soybean significantly.