



Disease Resistance of Corn Hybrids Using No-Till Cultivation Technology in the Conditions of Southern Ukraine

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Abstract: Resistance of corn hybrids to diseases under No-till cultivation technology in the conditions of southern Ukraine. Corn plants are affected by a significant number of fungal diseases, of bacterial and viral origin, which significantly affects its productivity and grain quality. One of the measures to combat diseases plants have a selection of hybrids. Field research was carried out during 2022–2023 in the conditions of southern Ukraine. DKS corn hybrids were grown 4795 (FAO 380) and DKS 3730 (FAO 280). Damage to plants by diseases was evaluated on a 9-point scale, where 0–10% plant damage corresponded to 9 points of stability; 10,1–14,0% – 7 points, 14,1–25,0% – 5 points, 24,1–50,0% – 3 points, more than 50% - 1 point. It was established that the spread of diseases in corn was affected by high temperature (25–28°C) and air humidity under the flowering time of the crop, which contributed to damage to the panicle and cobs. It was determined that the investigated corn hybrids were resistant to volatile slag the percentage of damage to plants of hybrid DKS 4795 (control) was 12,1%. Lower development of the disease by 1,5% was observed in the hybrid DKS 3730. The development of bubbly soot in the phase of full maturity was insignificant - 5,4–5,8%. No significant differences between the hybrids were determined, the difference was in within the margin of error. The intensity of the development of fusarium head blight was 14,5% (DKS 4795) and 14,9% (DKS 3730). According to the degree of damage to the cobs of hybrids belonged to medium-resistant - 25,4–28,1% Highest the percentage of disease damage was observed in 2022 with a large amount of precipitation during June-September. More resistant to the causative agent of flying soot the hybrid DKS 3730 was identified, and the hybrid DKS 4795 was identified for Fusarium head blight.

Keywords: corn, hybrids, plant diseases.