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COMPARATIVE ASSESSMENT OF NEW EARLY-MATURING CORN HYBRIDS BY YIELD AND ADAPTABILITY

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Information on their adaptive capacity can contribute to the successful cultivation of early maturing corn hybrids in various environmental conditions. In 2018 and 2019, 30 new early maturing hybrids of the breeding of All-Russian RSI of corn were tested in the conditions of the foothill zone of the North Caucasus (Pyatigorsk) and the forest-steppe zone of the Central Black Soil Region (Voronezh). Based on the results of variance analysis, the prevailing influence of environmental conditions (56.99%) on the variability of grain yield was established, the influence of the genotype was 30.20% and the share of factor interaction was 10.64%. The analysis of ecological plasticity and stability made it possible to distinguish 4 groups of hybrids: plastic (flexible) and stable hybrids; plastic with low stability; hybrids with high yield stability, but poorly responsive to changes in environmental conditions and neutral hybrids. Hybrids have been identified that are of practical value for intensive conditions, combining increased productivity with the stability of its manifestation: PM 17008, PM 17010, PM 17013. For extensive conditions, stable hybrids PM 17019 and PM 17025 with increased yield are recommended. The use of having plasticity, but not stable hybrids PM 17016 and PM 17022 with a high potential for grain productivity is possible under irrigation conditions.

Keywords: corn, early maturing hybrids, environmental conditions, plasticity, stability, grain yield, harvesting moisture content of grain.

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