

Assessment of Potential Yield and Fruit Quality Of 10 Hybrids of Tomato (*Lycopersicon esculentum* Mill.) in a Greenhouse in the PreAral Sea Region

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Abstract:

Tomato is popular fresh vegetable and main crops for greenhouse cultivation worldwide. Greenhouse technologies for growing tomatoes are constantly being improved, to realize the potential of plant productivity. The most important factor in the intensification of greenhouse tomato production is varieties. Variety testing is important research that allows you to determine which varieties are better adapted to the conditions of the region, resistant to diseases and pests. Therefore, 10 tomato hybrids were tested at the Korkyt Ata Kyzylorda University using a randomized complex block design with three repetitions. Hybrids Belle, Lidenza, Umagna, Mahitos, Attiya, Alumina, Lilloc (St) Rosario, Kyoto, Yugra were grown on a substrate of sawdust and rice husk (75:25) in prolonged cycle. Harvest data and quality indicators were collected. Results showed that hybrids Alamina, Attiya and Umagna had early harvest by 10.1-12.5% (LSD05=8.2%), total - by 7.4-10.6% (LSD05=2.4%) compared to the standard sample Lilos with productivity 2.18 and 31.2 kg/m² respectively. The organoleptic quality parameters of the fruits of all studied hybrids (appearance, degree of maturity, presence of damage, taste and smell) corresponded to the requirements of GOST -1725-85 – Fresh tomatoes, TC. The hybrids Alumina F1, Atria F1, Mania F1 and Lidenza F1 had the highest yield of standard products (96.1-96.7%). The dry matter content was 5.69-6.17%, total sugar - 2.72-2.95%, ascorbic acid - 15.10-16.91 mg/100 g, and the ratio of sugar to ascorbic acid ranged from 1:5.37 to 1:5.88, which determined the high taste qualities of the hybrids studied.

Keywords:

Greenhouse, tomato hybrids, yield, fruit quality.

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