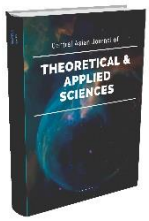

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New Promising F1 Tomato Hybrids

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Abstract: *Providing the population with fresh vegetables and the vegetable processing industry with vegetable raw materials is possible with a significant increase in the volume of vegetable production both in open ground and in closed cultivation structures (greenhouses, greenhouses, tunnels, etc.). In this case, the main emphasis should be on reducing the costs of manual labor and energy resources, that is, reducing the cost of vegetable products. Consequently, the main way to achieve these goals is to increase productivity and reduce labor and energy intensity of production. One of the stages to achieve the above is the introduction into production of modern heterotic tomato hybrids that meet the requirements of producers, namely high-yielding, resistant to biotic and abiotic factors with high stability and plasticity [1,2]..*

Keywords: *heterotic hybrid, film greenhouse, climate, yield.*

Introduction.

Conducting production tests of new heterotic tomato hybrids in greenhouses in small-volume hydroponics makes it possible to assess the genetic potential of plants, their productivity, disease resistance, and the plasticity of hybrids.

Materials and methods. The assessment of hybrids was carried out under film greenhouse conditions, grown in small-volume hydroponics in the city of Nukus (Republic of Karakalpakstan). New promising heterotic tomato hybrids of Ukrainian and foreign selection were studied. The zoned hybrids Corvinus F1 (Seminis) and Yatran F1 (Ukraine) served as control. A total of 5 hybrids were studied. The tests were carried out in accordance with existing methodological recommendations and developments [3.4]. Tomato seeds were sown on December 15 in 45x45mm cassettes in a specially prepared peat mixture. Plants were planted in the greenhouse with 30-day-old seedlings in a coconut mat of the second year of use. The plants formed into one stem. The cultivation technology is generally accepted for the study area.

Statistical processing of the obtained data was carried out according to the methods described by Dospehov [4].

Research results. The assessment was carried out on such yield elements as early and total yield, number of fruits per plant and average fruit weight. Marketability and duration of the growing season were also determined (table). The highest overall yield was characterized by hybrids KDS 28/18 - 14.9 kg/m^2, Corvinus F1 - 13.8 kg/m^2, K-629/17 and Yatran F1 - 13.3 kg/m^2. According to such an indicator as early yield, the hybrids Corvinus F1, KDS 28/18, Yatran F1 stood out, this indicator was in the range of 3.0-3.3 kg/m^2, respectively, these hybrids were more early ripening, the duration of their growing season ranged from 108 days for the KDS 28/18 hybrid to 112 days for Corvinus F1.

Table. Economically valuable traits of new heterotic tomato hybrids

Hybrid	Productivity, kg/m^2		Number of fruits per plant, pcs.	Fruit weight, g	Marketability, %	Length of growing season, days
	early	general				
Yatran F1	2,8	13,3	35	152	96	110
Corvinus F1	3,3	13,8	26	212	95	112
KDS 37/19	2,5	13,0	29	180	95	111
KDS 28/18	3,0	14,9	28	201	93	108
K-954/17	1,7	12,8	32	160	97	122
K-629/17	1,9	13,3	30	178	98	120
K-2510/16	2,0	10,9	29	151	98	118
NOR 05	0,8	1,9				

The hybrids Corvinus F1 and the new Ukrainian hybrid KDS28/18 were characterized by large fruit; breeders position them as beef tomatoes; the average fruit weight was 212 g and 201 g, respectively. One of the most important indicators in industrial tomato cultivation is marketability. When studying the hybrids, it was found that all hybrids had a marketability percentage of at least 93%. The highest marketability was for the hybrids K-2510/16, K-629/17 at the level of 98%.

Conclusions. As a result of production testing, hybrids with high indicators of economically valuable traits (total and early yield, fruit weight and marketability) were isolated, such hybrids as KDS 28/18 and K-629/17. We recommend these hybrids for introduction into production, as well as for further research.

Literature.

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