

СЕЛЕКЦИЯ НА ЗЪРНЕНО-ЖИТНИ КУЛТУРИ  
CEREALS BREEDING



SELECTION OF EARLY HYBRIDS OF CORN IN UZBEKISTAN

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**Abstract**

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Soil-climatic conditions of the majority of oases of Republic Uzbekistan allow using intensively the irrigated grounds after cleaning wheat on a grain for cultivation of high crops early grain and forage crops for reception of a fodder grain, a silo and green forages prior to the beginning of autumn frosts. One of the major factors of an intensification of irrigated agriculture is deducing and introduction in manufacture of high-yielding hybrids of corn. The corn-valuable grain both fodder culture and attaches great importance to its selection (Tillaev, 2000). On the State sites on test of grades of agricultural crops have been tested the big set of early hybrids (FAO 180-400) selections the USA, Germany, France, Hungary, Slovakia and Moldova. Best of them ripened for 83-97 days at crop after cleaning grain - grains and of a grain 5.0-5.7 t/ha yielded a harvest. However now in industrial crops only are in part used Hungarian and Moldavian hybrids, and crop is carried out by extremely brought in seeds. Seed-growing of these hybrids directly in Republic restrains by virtue of low adaptable parameters of initial parental forms (Massino, 2005).

**Keywords:** Precocity – Hybrids – Selection – Parental forms – Test

**MATERIALS AND METHODS**

As material for researches samples of corn-parental forms from various selection establishments of the world served. These samples have passed introduction and preliminary adaptation to conditions of a climate of Uzbekistan. Best of them have been included in circuits of crossings as a parent component with parental forms of the Uzbek selection. The received hybrids were tested in control test in 2006-2008 on 4 rows allotments the area of 50 m<sup>2</sup>, in triple frequency. Crop carried out in the summer, in the third decade of June. Density of standing of a plant of investigated hybrids made 80000 on 1 hectare. The standard was the zoned hybrid "Uzbekistan-306".

## RESULTS AND DISCUSSION

In test of 2006 10 early hybrids of corn of the Uzbek selection and one hybrid of selection of Republic Moldova have been investigated. The early, appeared a hybrid "Moldavian-215" ripened for 81 day. Short enough vegetative period - 91 day - differed a hybrid "Uzbekistan-300". Hybrid "Karasuv-350" ripened for 3 days before the standard - for 94 days. The standard - a hybrid "Uzbekistan-306" has ripened for 97 days. The most fruitful in this test appeared hybrid "Karasuv-350" - 6.99 t/ha. Conceded to it a hybrid "Uzbekistan-300", exceeding the standard on 0.65 t/ha a little. Productivity of a grain 6.64 t/ha has been marked at a hybrid "Uzbekistan-301". One more hybrid "Uzbekistan-302" has exceeded the standard on 0.26 t/ha. Productivity of the standard has made 6.13 t/ha. The earliest hybrid "Moldavian-215" had low enough productivity of a grain - 3.27 t/ha.

In test 2007 10 early hybrids of corn of selection the USA, 6 hybrids of selection of Kazakhstan, 2 hybrids from Ukraine, one hybrid of selection of Republic Moldova and 6 hybrids of the Uzbek selection have been investigated.

From hybrids the USA were allocated on duration of the vegetative period samples "PR 39 G 12", "PR 37 D 25", "38 PO 5 D Poccul" - 89-90 days. On productivity of a grain all these hybrids on 0.11-1.45 t/ha exceeded the standard "Uzbekistan-306" with productivity of a grain 6.92 t/ha. Hybrids "PR 37 F 73", "PR 37 W 08", the grains which have shown productivity 7.95-8.37 t/ha were especially allocated.

From 6 hybrids of selection of Kazakhstan on length of the vegetative period it is possible to allocate combinations at numbers "200", "309" and "110" which plants ripened for 90-91 day. The most late-ripening appeared the hybrid "419" which have ripened for 102 days, that for 4 days after the standard. The same hybrid had the highest productivity of a grain - 8.04 t/ha, however did not represent interest for our researches because of the long vegetative period. The most interesting in this experience appeared combinations "309" and "319" generated a grain yield 7.54-7.61 t/ha, that there is more than standard on 0.62-0.69 t/ha.

Test of two Ukrainian, one Moldavian and six Uzbek hybrids has revealed the earliest hybrid in control test - a hybrid "Moldavian-215" ripened for 84 days. For 94-95 days ripened Uzbek hybrids "Uzbekistan-302", "Uzbekistan-301" and the Ukrainian hybrid "Gloria". The best on productivity of a grain in this experience appeared hybrids "Uzbekistan-302" and "Uzbekistan-300" - 7.19-7.40 t/ha. Hybrids of the Ukrainian selection conceded to the standard 2.6-3.5 t/ha, and the earliest hybrid "Moldavian-215" has shown the least productivity in experience - 2.92 t/ha.

In test 2008 18 early hybrids of corn of the Russian selection, 7 hybrids of the Georgian selection, on 1 hybrid of selection of the Ukrainian scientists and scientists of Republic Moldova and 8 hybrids of the Uzbek selection have been investigated.

From 18 Russian hybrids on productivity of a grain were allocated "Interkras-285" - 8.42 t/ha, "Krasnodar-287" - 8.43 t/ha, "Krasnodar-385" - 8.80 t/ha selections of the Krasnodar scientific research institute of an agriculture. From hybrids of selection of the Russian seed-growing firm «KOC the Maize» two combinations - "12"?16" - 8.81 t/ha and "63"?77" - 8.89 t/ha were allocated. The early appeared hybrids "Krasnodar-194", "43"?40", "Krasnodar-211", "92"?94" - 78-80 days, that for 10-12 days before the standard.

To best of hybrids of the Uzbek selection appeared "Karasuv-350" - 7.64 t/ha, ripened for 90 days. Have a little conceded to it hybrids "Uzbekistan-300", "Uzbekistan-301", "Uzbekistan-302" - 7.37-7.62 t/ha, but they ripened for 2 days earlier "Karasuv-350".

Any of hybrids Georgian, Moldavian and the Ukrainian selection could not surpass the standard on productivity of a grain.

### CONCLUSIONS

Thus, by us for three years has been investigated the new hybrids of the Uzbek selection of group of FAO 250-300 determined a set which were been investigated together with the best industrial hybrids from the USA, Russia, Ukraine, Moldova and Kazakhstan. These researches have shown, that hybrids of the Uzbek selection successfully enough compete to a number of known samples. In test of 2007 by the best there were hybrids the USA – “PR 37 F 73”, “PR 37 W 08”, “Kazakhstan-309”, “319” and a hybrid “Uzbekistan-300”. In test of 2008 two experimental hybrids “Uzbekistan-301” and “Uzbekistan-302” have well proved. These hybrids alongside with a hybrid “Uzbekistan-300” though ripened after the competitors, on a grain yield it is successful with them competed.

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