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Pekin Cabbage (Brassica Rapa Subsp. Pekinensis. L) Selection of Varietal Samples with Yield Characteristics from World Gene Pool Collections

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Annotation:

The article covers data on the selection of samples of a fertile variety using the world genafond of Pekin cabbage. Today, in the National gene pool of the Research Institute of Plant Genetic Resources, 210 specimens of Beijing cabbage are kept alive, of which 35 specimens have been involved in research. As the default variety for research, the variety "Xibinskaya" (K-54), which was zoned in our republic and grown in almost all regions, was used in 1988.

Keywords: seed, variety, template, cabbage head, early, selection, fertile, varietal samples.

Introduction. Pekin cabbage *(Brassica rapa subsp. pekinensis. L.)* is a separate independent species in the cabbage family (*Brassicaceae*). It is an annual herb originating from the East Asian countries of China, Japan, and Korea. Its productive member is the oblong, which consists of a collection of leaves. It is used to make fried and boiled dishes, soups, salads, pickles, marinades, and preserves.

It can also be frozen and dried. Beijing cabbage has been grown since the 60s and 70s of the last century, by some amateur vegetable growers in small areas.

But now the demand for it in the markets is increasing from year to year. This is due to the fact that

it has high nutritional value, dieteability and healing properties.

The bulk of Pekin cabbage contains water - 94%, 75 – 80 mg% vitamin C, vitamin B6 - 11.6%, vitamin B9 - 19.8%, vitamin K - 35.8%, vitamin A - 1.8%, vitamin B1 - 2.7%, vitamin B2 - 2.8%, and vitamin PP - 2.0%, making it an important valuable product of a healthy balanced diet. [1; 2; 3; 4; 5; 6; 7.].

Experience styles. In conducting field experiments, “Методика Государственного сортоиспытания селскохозяйственных култур” (Moscow, 1975), “Изучение и поддержание мировой коллекции капусты” (VIR, 1988), B.J.Azimov., B.B.Based on the methodological manuals of the Azimov «Sabzavotchilik, polizchilik va kartoshkachilikda tajribalar o‘tkazish metodikasi» it was carried out at the educational experimental field of the Agricultural Information and Consulting Center (Extension center) under the Tashkent State Agrarian University. [8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18.].

The geographical origin of the samples of the 35 collections involved in research is from 8 countries of the world, including: Uzbekistan, Japan, China, Korea, Rascia, Taiwan, Germany and Bangladesh, and during the period 2012-2014, the Republic was studied on the main valuable-economic signs in the soil-climatic conditions.

Results of the experiment. 35 varieties are fertile and large in 17 (0.4-18.2 t/ga and 0.09-0.44 kg) when compared to the template in terms of yield and size of the head of cabbage, in 17 (1.7-29.7 t/ga and 0.04-0.71 kg) are low and the caramboshi is tiny and in 1 K-192 "TSAO HUANG PAI" (China) it was found to have the same results. In the identification of fertile ridges from samples of 35 varieties, the template Xibinskaya ridges with a higher yield compared to the variety (35.9 t/ha) were isolated (*table 1*).

Samples were selected k-62 «Jokuvase Chiifu» (Japan); k-63 "Kyoto N3" (Japan); k-71 "untitled" (China); k-150 "Lyubasha" (race); k-184 "Sumiy" (Korea); k-188 "Puram" (Korea); k-189 "SHU HSIN CHING PAI" (China); k-191 "TUNG AN PAI TSAI" (China); K-192 "TSAO HUANG PAI" (China); K-193 "Chang pu Wan Shei" (Taiwan); K-194 "Chi Nan TA Pai hsin" (China); K-197 "Tsao Huang Pai" (China); K-198 "nomsiz" (Korea); K-202 "77 M (3) - 46" (Taiwan); K-204 "Chao Tsou Tsao-IIV" (China); K-205 "bijing 75" (China) and K-209 "tropical delight" (Japan).

1- table. Valuable economic signs of samples isolated by the mark of productivity (2012-2014.y.).

Catalog number	Sample name	Origin	Growth period day	V%	Cabbage head weight, kg	V%	Total yield, t / ga	V %	Harvest, %
k-54	Xibinskaya, st.	Uzbekistan	110	0,7	0,86±0,8	4,1	35,9±1,6	0,4	84,4
k-62	Jokuvase Chiifu	Japan	127	0,6	1,2±0,3	1,9	50,0±1,4	0,4	86,2
k-63	Kyoto N3	Japan	128	0,6	1±0,5	3	41,7±1,3	1,3	82,6
k-71	Nomsiz	Kitay	112	1,9	1,2±0,4	1,9	50,0±1,4	1,6	76
k-150	Lyubasha	Rossia	115	0,7	0,95±0,5	3,1	39,6±1,2	1	90,1
k-184	Sumiy	Korea	107	2	1,1±0,3	2	45,9±1,2	1	79,5
k-188	Puram	Korea	105	0,7	1,1±0,4	2,6	45,8±1,3	1,2	87,6
k-189	SHU	Kitay	116	0,7	1,2±0,4	2,3	51,3±1,8	1,2	74,2

	HSIN CHING PAI								
k-191	TUNG AN PAI TSAI	Kitay	114	0,7	1,2±0,5	2,4	51,0±1,9	1,6	76,3
k-192	TSAO HUANG PAI	Kitay	116	1,2	0,2±0,1	5	36,3±1,1	0,8	89,4
k-193	CHANG PU WAN SHEI	Taiwan	119	0,7	1,2±0,6	6,9	50,0±2,2	4,9	74
k-194	CHI NAN TA PAI HSIN	Kitay	102	0,8	1±0,4	4,9	41,7±1,2	1	72,3
k-197	TSAO HUANG PAI	Kitay	105	0,7	1,1±0,9	5,2	45,9±1,5	0,9	82,1
k-198	Nomsiz	Korea	113	1,2	0,95±0,6	3,4	39,6±1,4	0,9	87,3
k-202	77 M (3) - 46	Taiwan	104	0,8	1,2±0,9	5,7	49,2±1,2	1	92
k-204	CHAO TSOU TSAO-IIV	Kitay	110	0,7	1,1±0,5	2,5	47,9±1,9	1,2	84
k-205	BIJING 75	Kitay	120	1,8	1,3±0,8	3,9	54±1,4	1,4	78,2
k-209	TROPICL DELIGHT	Japan	111	1,9	1,2±0,6	1,8	50,0±1,6	1,1	87
NSR 05					**0,03**		**0,59**		
Sx,%					**3,09**		**1,28**		

A sample of this variety, K-184 "Sumiy" (Korean); K-188 "Puram" (Korean); K-194 "CHI NAN TA PAI HSIN" (Chinese); K-197 "TSAO HUANG PAI" (Chinese), showed an early ripening period of 3-8 days compared to the template variety.

The remaining k-62s were "Jokuvase Chiifu" (Japan); k-63 "Kyoto N3" (Japan); k-71 "unnamed" (China); k-150 "Lyubasha" (Russia); k-189 "SHU HSIN CHING PAI" (China); k-191 "TUNG AN PAI TSAI" (China); k-192 "TSAO HUANG PAI" (China); K-193 "CHANG PU WAN SHEI" (Taiwan); K-198 "nomsiz" (Korea); K-202 "77 M (3) - 46" (Taiwan); K-204 "Chao Tsou Tsao-iiv" (China); K-205 "bijing 75" (China) and K-209 "tropical delight" (Japan) specimens were found to ripen 1-18 days later compared to the default variety (*table 1*).

When a variety selected by yield mark is compared to the default variety by the amount of crop yield of the samples, K-62 "Jokuvase Chiifu" (Japan); k-150 "Lyubasha" (race); k-184 "Sumiy"

(Korea); k-192 "TSAO HUANG PAI" (China); k-202 "77 M (3)-46" (Taiwan) and k-209 "TROPICAL DELIGHT" (Japan it was observed that xibinskaya (K-54) showed high results with a quality yield of 1.8-7.6% compared to the variety.

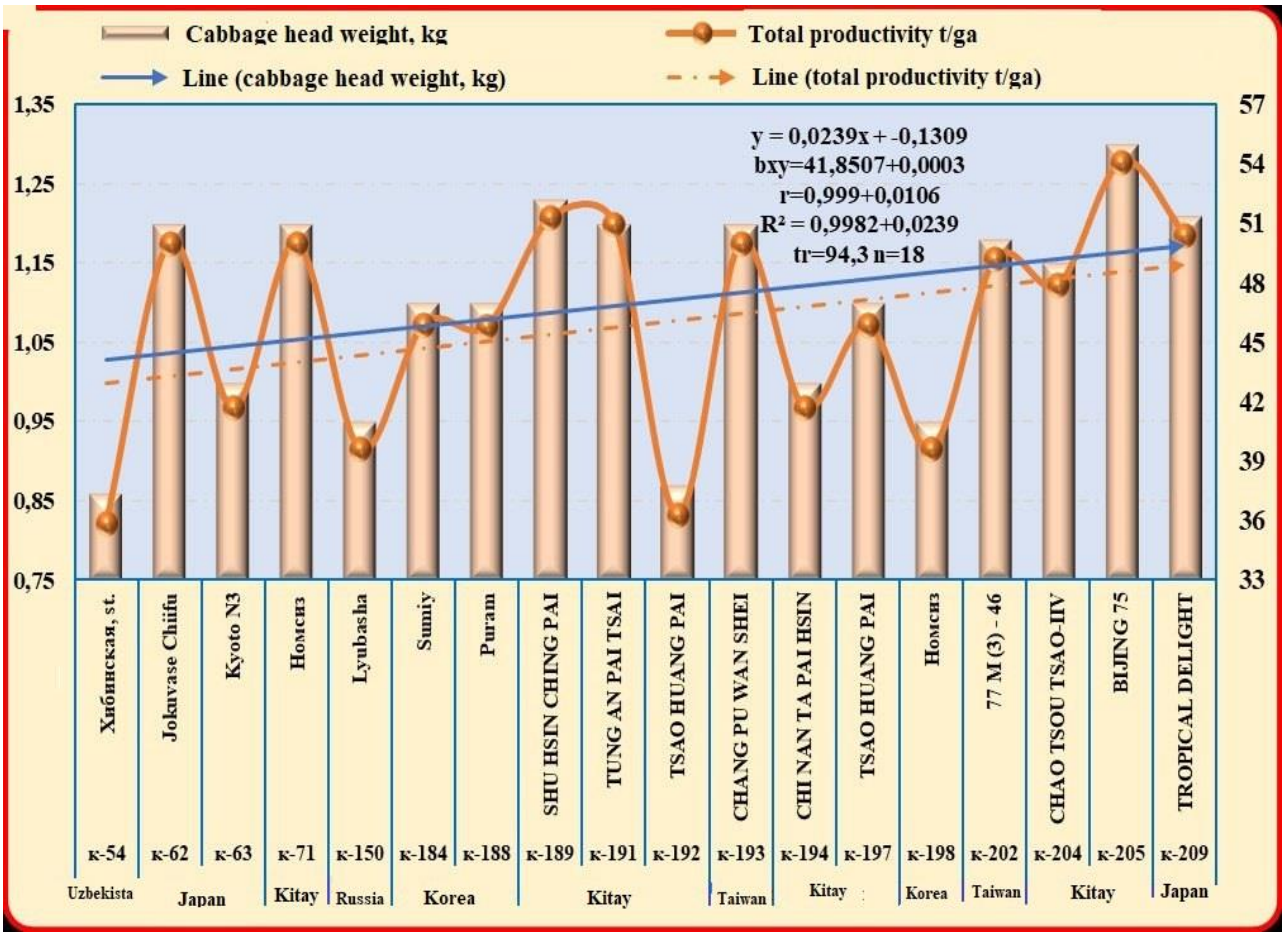

Photo 1. Valuable economic signs of samples isolated by the mark of productivity (2012-2014.y.).

From the morphological indicators of valuable farm signs of Peking cabbage variety specimens isolated by the mark of productivity, in turn, with an increase in the weight of cabbage (kg), general dressing (s/ga) was observed to increase accordingly, and when calculating the correlation relationship between these two indicators according to the Dospexov style, it was observed that there was a high level of positive correlation between these indicators. The correlation coefficient is R = 0.999 (R2 = 0.9982), and showed that there is a high degree of positive bonding (photo 1).

Conclusions

1. The Pekin cabbage collection has separated from the varietal samples by yield characteristic K-62, k-63, k-71, k-150, k-184, k-188, k-189, k-191, k-192, k-193, k-194, k-197, k-198, k-202, k-204, k-205, and K-209 catalog number of Cultivar samples, with an average template yield of these samples it was found to be 0.4-18.2 t/ga higher than the xibinskaya variety.
2. When the variety is compared to the default variety in terms of sample yield, K-62 is "Jokuvase Chiifu" (Japan); k-150 is "Lyubasha" (Russia); k-184 is "Sumiy" (Korea); k-192 is "TSAO HUANG PAI" (China); k-202 is "77 M (3)-46" (Taiwan) and k-209 is "TROPICAL DELIGHT" (Japan 54) a quality yield of 1.8-7.6% compared to the variety was found to show high results.

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