

Chief Editor

Dr. A. Singaraj, M.A., M.Phil., Ph.D.

Editor

Mrs.M.Josephin Immaculate Ruba

EDITORIAL ADVISORS

1. Prof. Dr.Said I.Shalaby, MD,Ph.D.
Professor & Vice President
Tropical Medicine,
Hepatology & Gastroenterology, NRC,
Academy of Scientific Research and Technology,
Cairo, Egypt.
2. Dr. Mussie T. Tessema,
Associate Professor,
Department of Business Administration,
Winona State University, MN,
United States of America,
3. Dr. Mengsteab Tesfayohannes,
Associate Professor,
Department of Management,
Sigmund Weis School of Business,
Susquehanna University,
Selinsgrove, PENN,
United States of America,
4. Dr. Ahmed Sebihi
Associate Professor
Islamic Culture and Social Sciences (ICSS),
Department of General Education (DGE),
Gulf Medical University (GMU),
UAE.
5. Dr. Anne Maduka,
Assistant Professor,
Department of Economics,
Anambra State University,
Igbariam Campus,
Nigeria.
6. Dr. D.K. Awasthi, M.Sc., Ph.D.
Associate Professor
Department of Chemistry,
Sri J.N.P.G. College,
Charbagh, Lucknow,
Uttar Pradesh. India
7. Dr. Tirtharaj Bhoi, M.A, Ph.D,
Assistant Professor,
School of Social Science,
University of Jammu,
Jammu, Jammu & Kashmir, India.
8. Dr. Pradeep Kumar Choudhury,
Assistant Professor,
Institute for Studies in Industrial Development,
An ICSSR Research Institute,
New Delhi- 110070, India.
9. Dr. Gyanendra Awasthi, M.Sc., Ph.D., NET
Associate Professor & HOD
Department of Biochemistry,
Dolphin (PG) Institute of Biomedical & Natural
Sciences,
Dehradun, Uttarakhand, India.
10. Dr. C. Satapathy,
Director,
Amity Humanity Foundation,
Amity Business School, Bhubaneswar,
Orissa, India.



ISSN (Online): 2455-7838

SJIF Impact Factor : 6.093

EPRA International Journal of

Research & Development (IJRD)

Monthly Peer Reviewed & Indexed
International Online Journal

Volume: 4, Issue:5, May 2019



Published By
EPRA Publishing

CC License





BIOMETRIC INDICATORS OF NEWLY CREATED HYBRID LINES OF SOFT WINTER WHEAT

Egamov Ilhomjon Urayimjonovich

Senior researcher, Candidate of Agricultural Sciences, Research Institute of Grain and Leguminous crops, Andijan, Uzbekistan

Yusupov Nasrullo Khabibullaevich

Independent Researcher, Research Institute of Grain and Leguminous crops, Andijan, Uzbekistan

Rakhimov Tojidin Abdunumanovich

Research Assistant, Research Institute of Grain and Leguminous crops, Andijan, Uzbekistan

ABSTRACT

Basing on the research results it can be concluded that the study of newly created hybrid lines in control nursery led to high biometric indicators, that is the height of plant was mean 85-105 cm, ear length 7-9,2 cm, the quantity of grains in an ear 29-40,5 pieces, the weight of 1000 pieces of grain was average 33,2-42,7 g, the highest indicators 40-42,7 g were observed in AC-2007-Д10, AC-2006-Д13, AC-2006-C20, AC-2006-C21, AC-2006-C23, AC-2006-C26, AC-2007-Д4, AC-2007-Д14, AC-2005-C210 hybrids.

KEYWORDS: *variety, line, hybrid, control nursery, grain nature, weight of 1000 pieces of grain, grain quantity, pieces, gram, percentage.*

INTRODUCTION

Wide selection processes and researches are being conducted on creating demandable and high yield producing soft and hard wheat varieties in the world grain growing under irrigated condition.

In grain and leguminous crops research institute and in its regional branches and experimental stations the selection is being performed on high yield, early-matured, drought and disease resistant and foreign brought varieties of soft and hard wheat with grain quality by hybridization in creating new variety.

In recent years as a result of global warming in most countries the rapid changes of weather conditions are causing to the loss or reduction in agricultural production. However, the need of population for nutritious and high yield products is increasing[1][2].

In the result of global warming and a rise in mean monthly temperature to 1,5°C, the creation of new varieties of productive facultative soft wheat that require less water and can give 80-100 centners of yield

per ha in irrigated lands but with less water supply, application of selection methods on this process, arranging their primary seed-breeding and elaboration of agrotechnics for their cultivation are regarded the prior tasks of today [4, 5].

MATERIALS AND METHODS

Research works were conducted in “Central” experimental plot of grain and leguminous crops research institute in Andijan region during 2015-2016, in the experiment 26 newly created hybrid lines were sown in October 1, in 4 repetitions, 1 tier, the area of each plot was 25 m². In the nursery under the sowing norm 3-4 mln. germinative seeds were placed in planned plots.

The analysis of biometric indicators of new hybrids studied in experiment was carried out in the laboratory of “Plant physiology and grain quality evaluation” institute.

Phenological observations, evaluation and records in the experiments were implemented on the basis of methodological manuals compiled by Uzbekistan Cotton-breeding research institute, Uzbekistan Plant-growing research institute and Krasnodar agricultural research institute.

Productivity indicators obtained by experiment variants and repetitions and determination indicators of experiment were defined according to dispersion analysis method of B.A.Dospekhov [3].

RESULTS AND DISCUSSION

On the 1st of October were sown 26 hybrid lines selected from F5, F6, F7 hybrid populations nursery which in its turn were selected in 2015 for hybrid lines nursery, after sowing the phenological observations were conducted.

The analysis of biometric indicators of newly created hybrids showed that the plant height indicator reached to average 89-95 cm.

It was also observed during phenological survey that some hybrids were of medium height lines, that is the plant height indicator was 90-95 cm.

The length of ear of hybrids studied in nursery made average 7,1-9,2 cm. Spikes in an ear were average 15-18,5 pieces, high indicators were observed in AC-2007-Д14, AC-2006-С26, AC-2007-Д4, AC-2007-Д4, AC-2007-Д9, AC-2007-Д10 hybrids in the experiment. Quantity of grain in one ear was average 32,4-40,5 pieces, the highest indicator was 39-40,5 pieces in AC-2005-С210, AC-2007-Д17, AC-2006-Д14 hybrids. Weight of grain in one ear made average 1,0-1,8 g, the highest indicator was observed in AC-2007-Д16, AC-2007-С5, AC-2005-С210, AC-2006-С23, AC-2007-Д4, AC-2007-Д8, AC-2007-Д9, AC-2007-Д10 hybrids.

Table

Biometric indicators of newly created hybrids (in 2016)

№	Lines	Plant height, cm	Ear length, cm	Spikes per ear, pcs	Quantity of grains in an ear, pcs	Grain weight in an ear, g	Weight of 1000 grains, g
1	AC-2005-С210	90,2	8,0	17,0	39,0	1,7	42,7
2	AC-2005-С19	95,2	9,2	18,0	37,5	1,6	39,7
3	AC-2005-С136	90,3	7,3	15,5	29,0	1,1	33,2
4	AC-2006-Д8-9	88,7	9,2	17,0	37,0	1,6	40,8
5	AC-2006-Д14	95,7	8,5	17,5	38,2	1,6	40,2
6	AC-2006-Д21	87,2	8,2	16,0	36,5	1,5	41,2
7	AC-2006-Д12	89,7	7,5	16,0	35,2	1,5	39,5
8	AC-2006-С23	93,2	9,0	17,0	37,0	1,7	42,1
9	AC-2006-Д6	105,0	7,7	16,0	33,5	1,2	34,7
10	AC-2006-Д18	95,7	7,0	15,0	30,5	1,0	35,0
11	AC-2006-С26	100,0	8,0	18,5	36,0	1,6	41,0
12	AC-2007-Д1	95,7	8,5	17,3	36,2	1,5	40,2
13	AC-2007-Д2	97,7	7,6	15,0	32,0	1,0	34,6
14	AC-2007-Д3	97,1	7,1	16,2	34,7	1,2	34,7
15	AC-2007-Д4	97,9	8,4	18,0	34,7	1,7	41,0
16	AC-2007-С5	95,7	7,6	17,0	38,6	1,8	39,7
17	AC-2007-Д6	89,3	7,7	17,0	38,0	1,7	40,5
18	AC-2007-Д7	100,2	7,9	15,0	32,2	1,0	35,0
19	AC-2007-Д8	97,7	8,2	17,1	37,5	1,7	40,3
20	AC-2007-Д9	95,5	7,9	17,5	37,2	1,7	40,6
21	AC-2007-Д10	85,0	8,1	17,5	37,0	1,7	40,0
22	AC-2007-Д11	102,0	7,1	17,0	34,0	1,0	34,2
23	AC-2007-Д13	95,0	7,9	17,0	38,5	1,6	40,0
24	AC-2007-Д14	90,0	8,2	18,5	40,5	1,8	41,5
25	AC-2007-Д15	85,5	8,3	16,5	32,4	1,2	34,5
26	AC-2007-Д16	92,6	7,9	17,5	39,0	1,8	41,2

The weight of 1000 pieces of grains showed average 33,2-42,7 g in nursery hybrids. By this indicator the highest results were determined in AC-2007-Д10, AC-2006-Д13, AC-2006-С20, AC-2006-С21, AC-2006-С23, AC-2006-С26, AC-2007-Д4, AC-2007-Д14, AC-2005-С210 testing hybrids 40-42,7 g, the lowest indicators were in AC-2005-Д136, AC-2006-Д6, AC-2007-Д2, AC-2007-Д3, AC-2007-Д15 hybrids, average 33,2-34,7 g (Table).

CONCLUSION

The research results showed that the ear length of studied hybrids made average 7,1-9,2 cm. Quantity of grains in one ear made average 32,4-40,5 pieces, the highest indicator was 39-40,5 pieces in AC-2005-С210, AC-2007-Д17, AC-2006-Д14 hybrids. The highest results on 1000 pieces of grain weight were noticed in

AC-2007-Д10, AC-2006-Д13, AC-2006-C20, AC-2006-C21, AC-2006-C23, AC-2006-C26, AC-2007-Д4, AC-2007-Д14, AC-2005-C210 hybrids, average 40-42,7 g.

According to research results hybrid lines with complete high indicators were sown in nurseries for testing competitive varieties.

REFERENCES

1. Abduraimov. D.T. "Selection and seed-breeding of grain crops". Tashkent, 2000, N.Doba public., p-399.
2. Abdukarimov D.T. Safarov T. Ostonakulov T.E. Selection, seed-breeding of field crops and basis of genetics. - Tashkent.1989. -p- 305.
3. Dospikhov B.A., Methodics on field practice. - Moscow.: Agropromizdat, 1985.p -240.
4. Jivotkova. L.A "Wheat", Kiev-Yield-1989.p- 308.
5. Ribalkin. P.N. "Wheat and triticale" Scientific-practical conference materials "Green revolution of P.P.Lukonenka" Krasnodar, May 28-30, 2001. p-790.