

	Department of Genetics and Plant Breeding N. M. College of Agriculture Navsari Agricultural University Navsari - 396 450
Dr. R. K. Patel I/c. Prof. & Head	Ph. No. (02637)-282771, Ext. – 1214
No. ACN/GPB/C-5/T.1/BOS/ /2017, Navsari, Dt. 10/03/2017	

To,
The Directorate of Research & Dean P.G. Studies,
 Navsari Agricultural University,
 Navsari-396 450

Sub: Proceeding of 7th meeting of Board of Studies of Crop Improvement Group

Respected Sir,

With reference to above cited subject, I am forwarding herewith the proceeding of the 7th meeting of board of studies of crop improvement discipline, which was held on February 08, 2017 at Main Sugarcane Research Station, NAU, Navsari. During the meeting, house has suggested several corrections for betterment of P.G. students' research outline. All the concern major guides are requested to take necessary action and submit the revised research outline (synopsis) directly to Director of Research and Dean P.G. Studies, NAU, Navsari through proper channel.

Thanking you,

Encl: Proceeding of the 7th meeting of Board of Studies for
 Crop Improvement

Yours Sincerely,
 S/d
(R. K. Patel)

F.W. respect to,

1. Hon'ble Vice-chancellor, NAU, Navsari
2. The Directorate of Research & Dean P.G. Studies, NAU, Navsari
3. The Principal & Dean, faculty of Agriculture, Horticulture and Forestry

Copy F.W.Cs. to,

1. All the members of the committee for information and to take necessary action (Concern PG Guide) as per the list circulated on www.nau.in – Circular date : 26.12.2016

Proceeding of 7th Meeting of Board of Studies - Crop Improvement discipline (Genetics and Plant Breeding), Faculty of Agriculture, NAU, Navsari

Seventh meeting of Board of studies of crop improvement group of faculty of Agriculture, NAU, Navsari was held on 08th February, 2017 at the conference hall, Main Sugarcane Research Station, NAU, Navsari.

At the outset, **Dr. K.G. Modha**, Assistant Professor, Dept. of Genetics & Plant Breeding, N.M.C.A., NAU, Navsari, welcomed Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU, Navsari, Dr. S.R. Chaudhary, Director of Research and Dean P.G. studies, Dr. P. S. Vashi, Retd. Professor and Head, Dept. of Genetics and Plant Breeding, Dr M. K. Arvadia, Principal, NMCA, NAU, Navsari, Dr. R. M. Patel, Principal, GABI College, NAU, Surat and all the members as well as students of board of studies of crop improvement group. Meeting was commenced by offering floral bouquet to the dignitaries followed by lightening of lamp as a symbol of knowledge and wisdom.

Dr. S.R. Chaudhary, Director of Research and Dean PG studies, NAU, Navsari, in his opening remarks, he congratulated all the scientists of crop improvement group for putting their excellent efforts in development of new varieties of various crops. He emphasized various thrust area of research and expectations of the farming communities from this group like new varieties with value added traits, biotic and abiotic stress tolerance, crop improvement work in horticultural and floricultural crops, research on minor crops, green manure crops etc. Considering the rate of increasing population globally as well as challenges of climate change, he underlined the key role of germplasm collections, its maintenance and their utilizations in the breeding program to overcome these problems and increase the yield at least up to 20 to 25% of various field and horticultural crops. He also gave weightage on the use of modern biotechnological tools in crop improvement programs to tackle issues like climate changes, water logging, drought, salinity, sex determination in plants in early stage using molecular marker technology etc. He advised to all recognized PG guides of crop improvement group to finalize the research problems for PG students having a practical utility, which will serve as a base for future research program.

Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU, Navsari, in his address, he appreciated the scientists of crop improvement group for developing/releasing the numbers of high yielding varieties/hybrids of various crops every year. He highlighted the importance of seed, through which transfer of technologies like Bt cotton, heat tolerance, disease resistance and nitrogen fixation by symbiotic association of nitrogen fixing bacteria etc. are being made; from this perspective, he opined that maintenance breeding is more important than actual breeding of crops. He expressed

his views on future thrust areas for research by giving special weightage on nitrogen fixation, biochemical and physiological traits, nutrient use efficiency, biotic and abiotic stress as well as issues pertaining to climate change. He also suggested to carry out the selections followed by grafting in banana, papaya and other vegetatively propagated crops for improvement in the horticultural crops. He advised to P.G. students and guides to select the research work based on the farmer's need as well as plan the Ph.D. research work in such a way that it will contribute to future research. Pertaining to quantum of P.G. research work, he recommended that research work should be less in quantum but must be quality work. He advised to P.G. students that get acquainted with breeding of all the crops despite of their single research crop and try to establish their own private enterprise. At the end, he also gave emphasis on the significance of team work for better performance and progress of organization.

Finally, the vote of thanks of inaugural session was given by **Dr. K. G. Modha**, Assistant Professor, Department of Genetics and Plant Breeding, NMCA, NAU, Navsari.

Technical Session-I

Chairman	:	Dr. P.S. Vashi	Rapporteurs	:	Dr. V. P. Patel
Co-chairman	:	Dr. B.G. Solanki		:	Dr. B. H. Kale

The action taken report of 6th Meeting of board of studies of crop improvement discipline was presented by **Dr. K. G. Modha**, Assistant Professor, Department of Genetics and Plant Breeding, N. M. College of Agriculture, NAU, Navsari. As per the report presentation, all the suggestions which were made in 6th board of studies meeting were properly incorporated by the concerns in PG research programme. Finally, the house has accepted the action taken report with the permission of chairman.

Later on, **Dr. Dinisha Abhishek**, Assistant Professor, Department of Genetics and Plant Breeding, College of Agriculture, Bharuch presented departmental activities of department of Genetics and Plant Breeding, COA, NAU, Bharuch, which includes UG teaching, work load, PG activities, skill development activities – training / symposium involvement of departmental staff and other assignments handled by departmental staff. Thereafter, **Dr. Rehana Niyariya**, Associate Professor, Department of Genetics and Plant Breeding, College of Agriculture, Waghai, presented department activities of College of Agriculture, NAU, Waghai, which covered the UG teaching, workload of staff members and other assignments handled by departmental staff.

Similarly, **Dr. Madhu Bala**, Assistant Professor, Dept. of Genetics and Plant Breeding, NMCA, NAU, Navsari presented departmental activities including UG/PG teaching, courses offered, credit distribution pattern, PG seminar delivered, new list of external thesis examiners, list of students cleared NET/JRF examinations, PG research topics, number of newly enrolled and pass out students during the year-2016, work load of departmental staff, research projects of department and other extension related activities.

Activities of department of Plant Molecular Biology and Biotechnology, ACHF, NAU, Navsari was presented by **Dr. Kiran Suthar**. In his presentation he covered UG and PG teaching, research schemes related activities, research progress in various schemes, workload of staff member, their publications, seminar and symposium related information, number of pass out PG students from department and other related items. Activities of department of Basic science and Humanities, College of Forestry, NAU, Navsari were presented by **Dr. Vipul Parekh** and it includes UG teaching, work load of teaching staff, research program and publications.

Technical Session-II

Chairman	:	Dr. P.S. Vashi	Rapporteurs	:	Dr. V. P. Patel
Co-chairman	:	Dr. P.B. Patel		:	Dr. B. H. Kale

The research work proposals of P.G. students of Dept. of Genetics and Plant Breeding, N.M.C.A. N.A.U. Navsari were presented before the house and following suggestion were made:

There were few common suggestions were made by the house are as follows:

1. The word “Number” should be removed from observations of the PG research proposal.
2. The word “Title of Research problem” should be replaced with “Title of Research work” in the PG research proposal.
3. The word “Name of Principal Investigator” should be replaced with “Name of student” in the PG research proposal.

Approved research problems of Ph. D. students of department of Genetics and Plant Breeding with corrective suggestions made by the house :

No.	Name of student	Major Guide	Research Problem	Suggestion
1.	Bineet Kaur Panesar Reg. No.- 1010116004	Dr. V.P. Patel	“Assessment of morpho-physiological and biochemical traits for drought tolerance in Rice (<i>Oryza sativa L.</i>)”	1) The research title should be changed as “Generation mean analysis for drought tolerance in rice (<i>Oryza sativa L.</i>)”. 2) 1 st objective should be removed. 3) Only 01 cross should be studied under Generation mean analysis. 4) Drought related traits should be studied under Generation mean analysis. 5) The word “selected” should be removed from 3 rd objective.
2.	Jay Prakash Reg. No.- 1010116015	Dr. D.A. Chauhan	“Genetic architecture of MYMV resistance and Yield in Urdbean”	1) No. of crosses should be reduce from 6 to 4. 2) The word “(15 days interval)” should be added to observation no. 13(A) and 13(B).
3	Naghera Yogeshkumar Vaghabhai Reg. No.- 1010116022	Dr. K.V. Vadodariya	“Generation Mean Analysis in Desi Cotton”	1) The 5 th objective should be removed. 2) The research title should be changed as “Genetic architecture of interspecific <i>deshi</i> cotton hybrids”
4.	Parmar Reena Devendrakumar Reg. No.- 1010116024	Dr. B.G. Solanki	“Genetic analysis of <i>hirsutum</i> cotton in special reference to Pink Bollworm resistance”	1) The check G. Cot-20 should be replaced with G.Cot.Hy.-14 2) The research title should be changed as “Genetic analysis in cotton (<i>G. hirsutum</i>)” 3) The 18 th observation should be changed as “Damage due to pink bollworm (%)”.

No.	Name of student	Major Guide	Research Problem	Suggestion
5.	Patel Chintan Sevantilal Reg. No.- 1010116026	Dr. S.R. Patel	“Generation Mean Analysis for yield and yield components in Rice (<i>Oryza sativa</i> L.)”	1) The observation “Days to maturity and L:B ratio” should be added in the research work. 2) The 5 th observation should be changed as “100 seed weight (g)”.
6.	Patel Poojabahen Kantibhai Reg. No.- 1010116028	Dr. P.B. Patel	“Genetic architecture for yield and its components over locations in Bio fortified Rice (<i>Oryza sativa</i> L.)”	1) No. of parents should be reduce from 12 to 10. 2) One hybrid check should be added.
7.	Solanke Anita C. Reg. No.- 1010116032	Dr. P.B. Patel	“Generation Mean Analysis in Rice (<i>Oryza sativa</i> L.)”	1) The research title should be changed as “Generation Mean Analysis in Aromatic Rice (<i>Oryza sativa</i> L.)”
8.	Vekariya Rajesh Dhanjibhai Reg. No.- 1010116034	Dr. A.I. Patel	“Genetic study and stability analysis over environments in okra [<i>Abelmoschus esculentus</i> (L.) Moench]”	1) The 3 rd objective should be removed. 2) The 3 rd objective should be combined with 2 nd objective. 3) The word “promising” should be removed from 5 th objective. 4) The evaluation should be carried out at Navsari, Waghai and Vyara locations.

Approved research problems of M.Sc. (Agri.) students of department of Genetics and Plant Breeding with corrective suggestions made by the house:

No.	Name of student	Major Guide	Research Problem	Suggestion
1.	Atul Rathva Reg. No.- 2010116003	Dr. K.V. Vadodariya	“Genetic variability and inbreeding depression for fruit yield and its attributes in F2 generations of okra [<i>Abelmoschus esculentus</i> (L.) Moench]”	1) The 4 th objective should be removed. 2) The 11 th observation should be changed as “100 seed weight (g)”.
2.	Baraiya Vipul Karshan Reg. No.- 2010116007	Dr. P.K. Jagtap	“Estimation of genetic diversity and correlation coefficient in sunflower germplasms”	1) The unit of 11 th & 14 th observation should be changed as “g”. 2) The research title should be changed as “Genetic divergence in sunflower (<i>Helianthus annuus</i> L.)”. 3) The 9 th observation should be changed as “Filled seeds/head”. 4) The word “parameters” should be removed from 1 st objective. 5) The 10 th observation (Number of unfilled seeds) should be removed
3	Bhuriya Arpitkumar Prasingbhai Reg. No.- 2010116010	Dr. B.H. Kale	“Gene tagging for determinate growth habit in Indian bean [<i>Lablab purpureus</i> (L.) Sweet]”	1) The research title should be changed as “Identification of Molecular Markers Linked to Determinate Growth Habit in Indian bean [<i>Lablab purpureus</i> (L.) Sweet]”.

No.	Name of student	Major Guide	Research Problem	Suggestion
4.	Chaudhary Pravinbhai Devjibhai Reg. No.- 2010116018	Dr. G.O. Faldu	“Genetic Diversity analysis for Yield and Quality in Fodder <i>Sorghum</i> (<i>Sorghum bicolor</i> L.)”	1) The 14 th observation (Vigour score) should be removed. 2) The 15 th observation (Protein yield per plant) should be removed. 3) The 8 th observation should be changed as “Per day productivity of green fodder (g)”. 4) The 10 th observation should be changed as “Per day productivity of dry fodder (g)”. 5) The 9 th observation should be changed as “Green fodder yield per meter row length (g)”. 6) The 11 th observation should be changed as “Dry fodder yield per meter row length (g)”.
5.	Chauhan Divyeshkumar Hasmukhbhai Reg. No.- 2010116019	Dr. M.C. Patel	“Genetic analysis of yield and its contributing Traits in Cowpea [<i>Vigna unguiculata</i> (L.) Walp.]”	1) The 2 nd observation should be changed as “Days to maturity”.
6.	Desai Tarjani Bharatkumar Reg. No.- 2010116024	Dr. Madhu Bala	“Genetic diversity analysis for green biomass and its components in sunnhemp (<i>Crotalaria juncea</i> L.)”	1) The 8 th observation (Leaflet per leaf) should be removed. 2) The growing season “ <i>Kharif</i> -2017” should be changed to “ <i>Late Kharif</i> -2017”.
7.	Dipendra kumar Ayer Reg. No.- 2010116026	Dr. K.G. Modha	“Comparative gene expression analysis for curcuminoid biosynthesis in turmeric (<i>Curcuma longa</i> L.)”	--Nil--

No.	Name of student	Major Guide	Research Problem	Suggestion
8.	Gamit Ajaykumar Mangubhai Reg. No.- 2010116029	Dr. K.N. Chaudhary	Study of “Genetic Variability, Correlation, Path analysis and Genetic divergence” in Brinjal (<i>Solanum melongena</i> L.)	<ol style="list-style-type: none"> 1) The 7th observation should be changed as “Fruit /plant”. 2) The 11th observation should be changed as “Fruit weight (g)”. 3) The 14th observation should be changed as “Phenol content (mg GAE/g)”. 4) The 13th observation (Fruit yield (t/ha)) should be removed. 5) The word “Study of” should be removed from research title.
9.	Hadiya Dilepkumar Narsubhai Reg. No.-2010116035	Dr. S.C. Mali	“Genetic architecture in Okra [<i>Abelmoschus esculentus</i> (L.) Moench]”	<ol style="list-style-type: none"> 1) The research title should be changed as “Genetic architecture of fruit yield in Okra [<i>Abelmoschus esculentus</i> (L.) Moench]”
10.	Modi Harshalkumar Maheshbhai Reg. No.-2010116051	Dr. J.P. Makati	“Half-diallel analysis study in tomato (<i>Lycopersicon esculentum</i> Mill.)”	<ol style="list-style-type: none"> 1) The word “Over parents” should be removed from 1st objective. 2) The 9th observation should be changed as “Fruit weight (g)”. 3) The word “study” should be removed from research title.
11.	Mukesh Meena Reg. No.-2010116052	Dr. P. M. Mistry	“Genetic analysis for grain yield, yield attributing traits and quality traits in rice (<i>Oryza sativa</i> L.)”	<ol style="list-style-type: none"> 1) The research title should be changed as “Genetic Analysis for grain yield and its attributing traits in rice (<i>Oryza sativa</i> L.)” 2) The check GR 4 should be replaced with GAR 13. 3) The observation “L:B ratio” should be added in the research work. 4) The 8th observation should be changed as “Test weight (g)”.

No.	Name of student	Major Guide	Research Problem	Suggestion
12.	Patel Gauravkumar Arunbhai Reg. No.- 2010116062	Dr. B.K. Davda	“Genetic architecture of seed yield and its components in Sorghum [<i>Sorghum bicolor</i> (L.) Moench]”	1) The word “seed” should be removed from research title. 2) The observation “Stover yield per plant” should be added in the research work. 3) The word “seed” should be removed from 1 st , 2 nd and 3 rd objective.
13.	Patel Himalay Rajeshbhai Reg. No. - 2010116064	Dr. D.H. Patel	“Genetic analysis of GMS based hybrids in Cotton (<i>G. hirsutum</i> L.)”	--Nil--
14.	Patel Prakash Kanjibhai Reg. No.-2010116071	Dr. K.G. Modha	“Identification of molecular marker linked to MYMV (Mungbean Yellow Mosaic Virus) resistance in green gram (<i>Vigna radiata</i> (L.) R.Wilczek)”	1) “Linkage mapping” Should be added as an objective in the research work.
15.	Patel Savankumar Narsinhbhai Reg. No.-2010116076	Dr. H.E. Patil	“Genetic diversity studies in relation to yield and its quality traits in Little millet (<i>Panicum miliare</i> L.)”	1) The word “kharif condition” should be removed from 1 st and 2 nd objective. 2) The word “its” should be removed from research title.
16.	Patel Shweta Sardarbhai Reg. No.-2010116078	Dr. V.P. Patel	“Genetic variability and stability analysis for yield and its attributes under normal and water stress condition in rice (<i>Oryza sativa</i> L.)”	1) Advice of statistician should be taken to finalize the research work. 2) No. of genotypes should be increased in the research work.
17.	Patel Umang Mahendrabhai Reg. No.-2010116081	Dr. G.O. Faldu	“Line X tester analysis in rice (<i>Oryza sativa</i> L.)”	--Nil--
18.	Prakashsinh Rathava Reg. No.-2010116087	Dr. S.R. Patel	“Heterosis and combining ability in tetraploid cotton <i>Gossypium hirsutum</i> L.”	--Nil--

No.	Name of student	Major Guide	Research Problem	Suggestion
19.	Priya Arunbhai Patel Reg. No.-2010116088	Dr. Manju Singh	“Genetic diversity analysis in turmeric (<i>Curcuma longa</i> L.) based on SSR markers”	1) The research title should be changed as “Genetic variability and molecular diversity in turmeric (<i>Curcuma longa</i> L.)”.
20.	Rathod Snehal Narendrasinh Reg. No.-2010116091	Dr. V.L. Parmar	“Study of genetic analysis for quantitative traits in F ₂ segregating population in okra [<i>Abelmoschus esculentus</i> (L.) Moench]”	1) The research title should be changed as “Genetic analysis for quantitative traits in F ₂ populations in okra [<i>Abelmoschus esculentus</i> (L.) Moench]”. 2) The word “segregating” should be removed from 1 st and 2 nd objective. 3) The word “Average” should be removed from 3 rd , 4 th and 5 th observation.
21.	Raval Vrunda Yogesh Reg. No.-2010116092	Dr. A.I. Patel	“Study of genetic variability in selected F ₂ population of okra [<i>Abelmoschus esculentus</i> (L.) Moench]”	1) The word “Average” should be removed from 3 rd , 4 th and 5 th observation.
22.	Sangani Jaydip Lakhabahi Reg. No.-2010116095	Dr. Madhu Bala	“Morphological and Molecular diversity in dhaincha (<i>Sesbania cannabina</i> L.)”	1) The word “present in the material” should be removed from 1 st objective. 2) The 17 th (No. polymorphic marker) and 18 th (No. monomorphic marker) observations should be removed.
23.	Thokchom Joydeep Singh Reg. No.-2010116106	Dr. R.K. Patel	“Assessment of genetic diversity of turmeric (<i>Curcuma longa</i> L.) germplasm based on SSR markers”	1) The word “germplasm” should be removed from research title.
24.	Upadhyay Shubham Nileshkumar Reg. No.-2010116107	Dr. D.H. Patel	“Genetic architecture in Cotton (<i>G. hirsutum</i> L.)”	2) The observation “Oil content (%)” should be added in the research work. 3) The 2 nd objective should be changed as “To study the general and specific combining ability effects.”

No.	Name of student	Major Guide	Research Problem	Suggestion
25.	Vinita Ramtekey Reg. No.-2010116109	Dr. K.G. Modha	“Molecular tagging of photoperiod insensitive flowering in Indian bean [<i>Lablab purpureus</i> (L.) Sweet]”	--Nil--
26.	Zinzala Sumita Nanabhai Reg. No.-2010116113	Dr. B.K. Davda	“Molecular diversity analysis in Sorghum [<i>S. bicolor</i> (L.) Moench”	1) The research title should be changed as “Genetic variability analysis in Sorghum [<i>Sorghum bicolor</i> (L.) Moench]”. 2) To constitute the committee to finalize the research work Members of committee: Dr. B.K. Davda, Assoc. Res. Scientist, MSRS, Surat Dr. P.B. Patel, Assoc. Res. Scientist, MRRS, Navsari Dr. Lalit Mahatma, Assoc. Professor, N.M.C.A., NAU., Navsari
27.	Rathod Ashishkumar J. Reg. No.- 2010115098	Dr. P.M. Mistry	“Genetic Variability, Correlation, Path Analysis and D ² Statistics in Rice (<i>Oryza sativa</i> L.)”	--Nil--

At the end of meeting, all P.G. research outlines were appreciated by the Chairman. Finally, meeting was ended with the vote of thanks given by **Dr. K. G. Modha**, Assistant Professor, Dept. of Genetics and Plant Breeding, NMCA, NAU, Navsari.
