


## CV of Dr. Akarsh

|           |  |  |   |   |                                     |
|-----------|--|--|---|---|-------------------------------------|
| <b>1.</b> | <b>Name and Address</b>                    | :  | <b>Dr. Akarsh Parihar</b><br>Department of Genetics & Plant Breeding,<br>B. A. College of Agriculture, AAU,<br>Anand-388110   |  |                                     |
| <b>2.</b> | <b>Designation</b>                         | :  | Professor and Head  |   |                                     |
| <b>3.</b> | <b>E-mail ID</b>                           | :  | akarsh@aau.in<br>hodgpb@aau.in  |   |                                     |
|           | <b>Telephone Number/<br/>Mobile Number</b> | :  | Office:02692-261134<br>Mobile:9879442267  |   |                                     |
| <b>4.</b> | <b>Academic Qualifications:</b>            |  |   |   |                                     |
|           | <b>Degree</b>                              | <b>Subject</b>   | <b>University</b>   | <b>Year</b>   | <b>Division /<br/>Grade</b>         |
|           | Graduation<br><b>B.Sc.(Ag.)</b>            | Agriculture  | CCS Haryana<br>Agricultural<br>University, Hisar  | 1999  | First                               |
|           | Post Graduate<br><b>M.Sc.(Ag.)</b>         | Genetics and<br>Plant Breeding                                     | RBS College,<br>Dr. B. R. Ambedkar<br>University, Agra<br>(U.P)   | 2001  | First<br>(Topped the<br>merit list) |
|           | Doctorate<br><b>Ph.D.(Ag.)</b>             | Genetics and<br>Plant Breeding                                     | Anand Agricultural<br>University  | 2006  | First                               |
|           | ASRB NET                                   | Genetics and<br>Plant Breeding                                     | --  | 2004  | -                                   |
|           | PG<br>Certificate                          | <b>Introduction<br/>to Genomic<br/>Technologies</b>                | Johns Hopkins<br>University,<br>Baltimore, U.S.   | 2020  | Qualified<br>Successfully           |
|           | International<br>Exposure                  | Advanced<br>training under<br>world bank<br>NAHEP/ICAR<br>project. | Three weeks<br>advanced training at<br>International Rice<br>Research Institute<br>(IRRI) on<br>“Enhanced/ Rapid<br>Genetic Gain<br>through advanced<br>breeding<br>techniques” | March<br>11-30, 2023  | --                                  |

| 5. Teaching /Research/Extention Experience   |   |        |  |             |             |             |   |             |                                 |
|--|---|--------|--|-------------|-------------|-------------|---|-------------|---------------------------------|
| Position   |   |        | University   |             |             |             | Period  |             | Year/Months                     |
| Professor and Head (I/c.)  |   |        | Dept. of Genetics & Plant Breeding, BACA, Anand Agricultural University, Anand             |             |             |             | 15.07.2021 onwards continue   |             | continued                       |
| Unit Officer & Professor and Head (I/c.)   |   |        | Dept. of Agricultural Biotechnology, Anand Agricultural University, Anand                  |             |             |             | 01.01.2019-14.07.2021   |             | 2.7 years                       |
| Associate Research Scientist   |   |        | Dept. of Agricultural Biotechnology, Anand Agricultural University, Anand                  |             |             |             | 01.02.2013-31.12.2018   |             | 4.11 years                      |
| Associate professor  |   |        | C.P. College of Agriculture, SD, Agricultural University, Dantiwada (Gujarat)              |             |             |             | 01.09.2012-31.01.2013   |             | 0.6 years                       |
| Assistant Research Scientist   |   |        | Main Pulses Research Station, SD, Agricultural University, Dantiwada (Gujarat)             |             |             |             | 01.05.2008-31.08.2012   |             | 4.3 years                       |
| Lecturer   |   |        | Sardar Patel University, V.V.Nagar, Anand  |             |             |             | 01.04.2005-31.04.2008   |             | 3.1 years                       |
| 6. Academic Achievement  |   |        |  |             |             |             |   |             |                                 |
| (a) Teaching:  |   |        |  |             |             |             |   |             |                                 |
| 1 Details of Teaching (year-wise for both UG and PG)   |   |        |  |             |             |             |   |             |                                 |
| UG Teaching  |   |        |  |             |             |             |   |             |                                 |
| Sr. No.  | Course No   | Credit | @ 2.0 years (T+P=4+10=14) =14x2=28 hrs@0.5   |             |             |             |   |             | U.G + P.G = 28.0+89.0= 117.0    |
| 1.   | GPB 3.3   | 2+1=3  | marks for each credit=14.0 hrs   |             |             |             |   |             |                                 |
| PG Teaching  |   |        |  |             |             |             |   |             |                                 |
| Sr. No.  | Course No   | Credit | 2017-18  | 2018-19     | 2019-20     | 2020-21     | 2021-22   | Total       | Total credits =117.0 @ 0.5=58.5 |
| 1.   | GP 503  | 2+1=3  | --   | --          | --          | 4.0         | 4.0   | 8.0         |                                 |
| 2.   | GPB 506   | 2+1=3  | --   | --          | --          | --          | 4.0   | 4.0         |                                 |
| 3.   | GP 509  | 2+1=3  | 4.0  | 4.0         | 4.0         | 4.0         | --  | 16.0        |                                 |
| 4.   | MBB 602   | 3+0=3  | 3.0  | 3.0         | 3.0         | 3.0         | --  | 12.0        |                                 |
| 5.   | MBB 510   | 2+0=0  | 2.0  | 2.0         | 2.0         | 2.0         | 2.0   | 10.0        | Theory 1 Credit = 1hr           |
| 6.   | MBB 512   | 2+1=3  | --   | --          | --          | --          | 2.0   | 2.0         | Practical 1 Credit = 2hr        |
| 7.   | GP 603  | 2+1=3  | 4.0  | 4.0         | --          | 4.0         | --  | 12.0        |                                 |
| 8.   | PGS 503   | 1+1=2  | 2.0  | 2.0         | 2.0         | 2.0         | 2.0   | 10.0        |                                 |
| 9.   | Genetic And Biological Basis of Mutation under Radiation and Radioisotope Applications-I" | 15 hrs | Visiting faculty (M. Tech. in Nuclear Programme) at PDEU, Gandhinagar (M. Tech. Programme) | 15.0        | 15.0        | 10.         | Genetic And Biological Basis of Mutation under Radiation and Radioisotope Applications - I" | 15 hrs      |                                 |
| <b>Total</b>   |   |        | <b>15.0</b>  | <b>15.0</b> | <b>11.0</b> | <b>19.0</b> | <b>29.0</b>   | <b>89.0</b> |                                 |
| Acting as Seminar Coordinator from even Semester 2021 onwards for crop improvement group@ 2 hrs per weeks (4 hrs in 2 semesters)<br>Involved and Assigned the job of corrections, suggestions/recommendations in the BSMA syllabus by Principal and Dean, BACA, AAU, Anand (e-mail dated 4 Oct. 2022) for all the courses of Genetics & Plant Breeding Subject (letter Attached) |   |        |  |             |             |             |   |             |                                 |

| <b>2. Details of Postgraduate research guided</b>                              |                                | 10<br>(6+4=10)  |             |
|--|--------------------------------|---|-------------|
| <b>(No. of Students/Title of thesis/year-wise)</b>                             |                                |   |             |
| M.Sc. and Ph.D students guided as <b>major guide (Total students =7+14=21)</b> |                                |   |             |
| <b>M.Sc. Students (Total-10)</b>   |                                |   |             |
| <b>Sr. No</b>  | <b>Name of Students</b>        | <b>Title of thesis</b>  | <b>Year</b> |
| 1.   | Akshay R. Bhutaraddi           | Floral morphology, Reproductive biology and cytological studies in different species of cotton ( <i>Gossypium</i> species)  | 2019-21     |
| 2.   | Patel Rohinikumari Mitthalbhai | Nutraceutical and molecular characterization in cowpea  | 2018-20     |
| 3.   | Solanki Gautambhai Veljibhai   | Identification and classification of various OYVMV ( <i>Okra Yellow Vein Mosaic Virus</i> ) isolates from different Agro-climatic zones of Gujarat using Next Generation Sequencing | 2017-19     |
| 4.   | Bhatt Kunj Dilipbhai           | Next Generation Sequencing based identification and classification of TLCV (Tomato Leaf Curl Virus) isolated from different Agro-climatic zones of Gujarat                          | 2016-18     |
| 5.   | Patel Rumit Jagdishbhai        | Phenotyping and Identification of molecular marker linked to TLCV (Tomato Leaf Curl Virus) resistance in tomato ( <i>Solanum lycopersicum</i> L.)                                   | 2016-18     |
| 6.   | Monikaben Arvindbhai Makwana   | Floral Morphology, reproductive biology and diversity analysis through molecular markers in tomato species( <i>Solanum Section lycopersicum</i> )                                   | 2015-17     |
| 7.   | Kanjariya Ketan Govindbhai     | Interspecific Hybridization in Tomato ( <i>Solanum Section lycopersicum</i> )   | 2014-16     |
| 8.   | Ketan Patel                    | Genetic diversity and molecular characterization in Grain Amaranthus  | 2011-13     |
| 9.   | Babasahel Walunjkar            | Molecular Characterization of the diverse species of Pigeonpea  | 2010-12     |
| 10.  | Mehul Patel                    | Molecular characterization and genetic diversity in Noni  | 2011-13     |

| <b>Ph.D. Students (Total-15)</b> |                                  |  |             |
|----------------------------------|----------------------------------|--|-------------|
| <b>Sr. No</b>                    | <b>Name of Student</b>           | <b>Title of thesis</b>   | <b>Year</b> |
| 1.                               | Chirag Radhadiya<br>(Continue)   | Newly admitted   | 2023-26     |
| 2.                               | Rajeshwari Rathava<br>(Continue) | GWAS in Sorghum  | 2022-25     |
| 3.                               | Ankit Yadav                      | Functional and molecular characterization of CCoAOMT gene for Alternaria blight resistance in cumin using tobacco as a model plant                 | 2021-23     |
| 4.                               | Dimple Vasant Gor                | CRISPR/Cas9 mediated targeted mutagenesis to elucidate parthenocarp in cucumber ( <i>Cucumis sativus L.</i> )                                      | 2021-23     |
| 5.                               | Balar Vidyut Sureshbhai          | CRISPR/Cas9 mediated knock-out study of gene involved for male sterility in tomato ( <i>Solanum lycopersium L.</i> )                               | 2021-23     |
| 6.                               | Acharya Vishwas Rajeshkumar      | Genetic architecture of various Quantitative traits and inheritance of Parthenocarp in Cucumber ( <i>Cucumis sativus L.</i> )                      | 2019-23     |
| 7.                               | Suthar KinjalKumar Jasvantlal    | Genetic analysis of grain yield, its component characters and quality parameters in Durum Wheat ( <i>Triticum durum Desf.</i> ) over environments. | 2017-23     |
| 8.                               | Nanasaheb Raosaheb Markad        | Identification of molecular markers for shelf life and lycopene content in tomato ( <i>Solanum lycopersicum L.</i> )                               | 2019-22     |
| 9.                               | Shiwani                          | CRISPR/Cas9 Mediated Genome Editing to Enhance Shelf life in Tomato  | 2018-22     |
| 10.                              | Rukhsar                          | Diallel analysis in interspecific lines of mustard ( <i>Brassica spp.</i> ) and identification of molecular markers linked to aphid resistance     | 2016-19     |
| 11.                              | Bhutaka Kinjal Haribhai          | Interspecific Hybridization in cotton through embryo rescue  | 2016-19     |
| 12.                              | Kinjal Kulshrestha               | Transcriptome analysis for nematode resistance in cultivated and wild tomato   | 2015-19     |
| 13.                              | Zaman Mariya Shabbir             | Interspecific hybridization for YVMV resistance in okra through Embryo rescue and Somatic hybridization  | 2014-18     |
| 14.                              | Patel Sunil Ghanshyambhai        | Genetic architecture for grain yield, its component and quality traits in rice ( <i>Oryza sativa L.</i> )  | 2013-17     |
| 15.                              | Anmol Kalekar                    | Identification of sex linked DNA marker in castor  | 2010-13     |

**M.Sc. and Ph.D students guided as Committee member (Total students =10+14=24)**

| <b>M.Sc. Students</b> |                            |   |             |
|-----------------------|----------------------------|---|-------------|
| <b>Sr. No</b>         | <b>Name of Students</b>    | <b>Title of thesis</b>  | <b>Year</b> |
| 1.                    | Parth Rathod K.            | Assessment of genetic parameters and character association in fodder cowpea | 2021-23     |
| 2.                    | Kavya S.                   | Screening of Aloe barbadense Mill. Accessions based on pollen traits        | 2021-23     |
| 3.                    | Borkhatariya Tejaskumar H. | GxE interaction and molecular characterization in forage maize              | 2020-22     |
| 4.                    | Parmar Sumit V.            | Genetic variability, correlation and path analysis in forage bajara         | 2019-21     |
| 5.                    | Venna Santosh              | Morphological, Biochemical and molecular characterization of ashwagandha    | 2018-20     |
| 6.                    | Madastu Saikrishna         | Effect of sprouting on nutritional quality of chickpea and mungbean         | 2020-22     |
| 7.                    | Vadee Dhruvin              | Study on water stress and melatonin in tomato                               | 2018-20     |
| 8.                    | Vishalakshi T.P            | Invitro mutagenesis in cumin  | 2019-21     |
| 9.                    | Ujval Solanki              | Line x Tester analysis in rice  | 2017-19     |
| 10.                   | Venkata Yashvant           | Molecular characterization of potato cultivars                              | 2020-22     |

| <b>Ph.D. Students</b> |                        |  |             |
|-----------------------|------------------------|--|-------------|
| <b>Sr. No</b>         | <b>Name of Student</b> | <b>Title of thesis</b>   | <b>Year</b> |
| 1.                    | Parmar Shraddha        | Comparative study of melatonin and nematicide against root-knot nematode                             | 2019-23     |
| 2.                    | Darshani M.S.          | GxE interaction and differential expression of genes in different aged seeds of soybean              | 2018-20     |
| 3.                    | Dobaria Jalpa          | Effect of biostimulants on brinjal   | 2017-19     |
| 4.                    | Prajapati Pragtiben J  | Heterosis and inbreeding depression in tomato  | 2019-22     |
| 5.                    | Priyanka m. Pandya     | Transcriptome analysis in kalmegh  | 2018-22     |
| 6.                    | Solanki Urja           | Identification of linked marker for Leaf curl virus resistance in chilli                             | 2020-23     |
| 7.                    | Patel Priyankaben      | Molecular characterization of potato leaf roll virus infecting potato and its management             | 2019-22     |
| 8.                    | Patel Rumit J          | GWAS in maize  | 2018-21     |
| 9.                    | Bedse Tushar           | Evaluation of antioxidants and differential gene expression in response of melatonin in bottle gourd | 2016-19     |
| 10.                   | Vaibhav Kumar C        | Genetic diversity and Population dynamics and management of pinkboll worm in Bt cotton               | 2019-23     |
| 11.                   | Rupal Dhoot            | Genetic variation in cluster bean ( <i>Cyamopsis tetragonoloba</i> ) through induced mutations       | 2016-19     |
| 12.                   | Amit Mehta             | Evaluation of antioxidants and differential gene expression in response of melatonin in rice         | 2018-21     |
| 13.                   | Kulkarni V.            | Genetic analysis of fruit yield and quality traits over the environments in okra                     | 2017-20     |
| 14.                   | Kanjariya Ketan        | Diallel analysis in bottle gourd   | 2016-21     |

|                        |   |   |
|------------------------|---|---|
| <b>3.</b>              | Students who obtained P.G degree under your guidance as major guide and got placement in public/private sector (Reputed or Registered company) OR Cleared SRF/JRF/GATE/NET 1.0 mark for each student. |   |
| <b>M.Sc. Students</b>  |   |   |
| <b>Sr. No.</b>         | <b>Name of Students</b>   | <b>Placement in Public/Private Sector/SRF/JRF/GATE/NET</b>  |
| 1.                     | Patel Rumit Jagdishbhai   | ASRB NET (2020), Research Associate at Dept. of Agricultural Biotech, AAU, Anand                      |
| 2.                     | Monikaben Arvindbhai Makwana  | 1.ASRB NET (2017)<br>2. Seed Officer, GOG   |
| 3.                     | Kanjariya Ketan Govindbhai  | 1.ASRB NET (2018)<br>2.Asst. Professor, NAU, Navsari  |
| <b>Ph. D. Students</b> |   |   |
| <b>Sr. No</b>          | <b>Name of Student</b>  | <b>Title of thesis</b>  |
| 1.                     | Ankit Yadav   | 1.ASRB NET (2021),<br>2.UGC NET (2020),<br>3.Selected as Scientist in VNR Seeds Ltd., Raipur (2023).  |
| 2.                     | Dimple Vasant Gor   | 1.ASRB NET,<br>2.SLET(2022)<br>3.Prime Minister Fellowship (2021).                                    |
| 3.                     | Balar Vidyut Sureshbhai   | 1.ASRB NET (2022)<br>2. UGC NET (2021)  |
| 4.                     | Acharya Vishwas Rajeshkumar   | ASRB NET (2022), SRF at RRS, Anand.   |
| 5.                     | Suthar Kinjalkumar Jasvantlal   | ASRB NET (2017)<br>Asst. Research & Unit Head, AAU, Anand   |
| 6.                     | Shiwani   | 1.ASRB NET (2018)<br>2.SRF, NBPGR   |
| 7.                     | Rukhsar   | 1.ASRB NET (2017)<br>2.ASRB NET (2018)<br>3.Teaching Associate, College of Agriculture, AAU, Jabugam. |
| 8.                     | Kinjal Kulshrestha  | Asst. Manager B D, Virchow Biotech, Hyderabad   |
| 9.                     | Zaman Mariya Shabbir  | ASRB NET (2020)   |
| 10.                    | Patel Sunil Ghanshyambhai   | ASRB NET (2013)   |
| 11.                    | Rumit Patel   | 1.ASRB NET<br>2.Research Assoc.Dept. of Agri. Biotech., AAU   |

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|-----------|--|--|--|--|
| <b>4.</b> | <b>No. of thesis selected for award recognition etc. if any (As Major Guide)</b> |  |  |  |
|           | 1.   | Ketan Kanjaria   | BACA, Alumini Gold Medal   | University level   |
|           | 2.   | Rumit Patel  | Best Thesis Award  | <b>National level</b><br>(National Seminar at SKUAST, Jammu)   |
|           | 3.   | Monika Makwana   | Chancellor Gold Medal for Best Research  | University level   |
|           | 4.   | Shiwani  | Best Ph.D Thesis Award   | <b>National level</b><br>(National Seminar at SDAU, SK Nagar)  |
|           | 5.   | Bhatt Kunj Dilipbhai   | Gold Medal,<br>Best M.Sc. Research in Agri. Biotechnology  | University level   |
|           | 6.   | Solanki Gautambhai<br>Veljibhai  | Gold Medal,<br>Best M.Sc. Research in Agri. Biotechnology  | University level   |
|           | 7.   | Dimple Vasant Gor  | CRISPR/Cas9 mediated targeted mutagenesis to elucidate parthenocarpy in cucumber ( <i>Cucumis sativus L.</i> ) | <b>National Level</b><br>Prestigious Prime Minister Fellowship |
|           | 8.   | Shivani  | CRISPR/Cas9 Mediated Genome Editing to Enhance Shelf life in Tomato  | <b>National Level</b><br><b>Best Thesis Award</b>              |
| <b>5.</b> | <b>No. of publications from P.G. thesis under guidance</b>                       |  |  |  |
|           | <b>Sr. No</b>  | <b>List of Publications</b>  | <b>NAAS rating</b>   |  |
|           | 1.   | MS Zaman, and <b>A Parihar</b> (2023). Development of novel interspecific hybrid between cultivated and wild species of okra [ <i>Abelmoschus esculentus</i> (L.) Moench through embryo rescue, <b>Indian Journal of Genetics and Plant Breeding</b> 83 (03), 422-432  | <b>7.68</b>  |  |
|           | 2.   | Mariya Zaman and <b>Akarsh Parihar</b> (2022). Somatic hybridization in okra, <b>Indian J. Biotechnol.</b>   | <b>6.3</b>   |  |
|           | 3.   | Nisha B Patel, Rajendra R Acharya, Vishwas R Acharya, <b>Akarsh Parihar</b> , Sneha M Macwana, Dinesh D Parmar (2023). Genetic variability, correlation and path analysis for seed yield and yield contributing traits in sesame ( <i>Sesamum indicum L.</i> ) germplasm, <b>The Pharma Innovation Journal</b> ,12(2): 3781-3786 | 5.23   |  |
|           | 4.   | Mayur Kumar Sonagara, BN Patel, RR Acharya, <b>Akarsh Parihar</b> , Rumit Patel and Unnati Vaghela (2022). Assessment of genetic variability, heritability and genetic advance in brinjal ( <i>Solanum melongena L.</i> ), <b>The Pharma Innovation Journal</b> , 11(12): 1981-1983  | 5.23   |  |
|           | 5.   | Nisha B Patel, Rajendra R Acharya, Vishwas R Acharya, <b>Akarsh Parihar</b> , Sneha M Macwana, Dinesh D Parmar (2023). Stability analysis over different environments for seed yield and its contributing traits in sesame ( <i>Sesamum indicum L.</i> ), <b>The Pharma Innovation Journal</b> , 11(11): 346-350                 | 5.23   |  |

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|---|--|------------------------|
| 6.  | Monika Makwana, <b>Akarsh Parihar</b> , Runit Patel (2022). Insight into floral diversity using comparative morphological approaches in different species of tomato ( <i>Solanum</i> section <i>Lycopersicum</i> L. Mill.)- <b>Indian Journal of Plant Genetic Resources Accepted</b>  | <b>(5.77)</b>          |
| 7.  | R Patel, <b>A Parihar</b> , MA Makwana, K Kulshreshtha (2021). Validation of known ToLCV markers associated with ToLCV resistance in tomato through Bulk Segregant Analysis. <i>Indian J. Genet</i> 81 (3), 466-468  | <b>(6.55)</b>          |
| 8.  | K Kulshreshtha and <b>Akarsh Parihar</b> (2020). Next Generation Based transcriptome analysis for nematode resistance in three different species of tomato ( <i>S. lycopersicum</i> , <i>S. habrochaites</i> & <i>S.arcanum</i> ). <i>Plant Gene</i> (2020)  |                        |
| 9.  | Runit Patel <sup>1*</sup> , Rukhsar <sup>1</sup> , <b>Akarsh Parihar 2</b> , Dipanki Patel <sup>1</sup> and Dinesh J. Parmar <sup>3</sup> (2019). Genetic Analysis and Trait Association in F <sub>2</sub> Interspecific Population in Tomato ( <i>Solanum lycopersicum</i> L.) using Third and Fourth Degree Statistics <i>International Journal of Current Microbiology and Applied Sciences</i> ISSN: 2319-7706 Volume 7 Number 12 (2018) | <b>7.67</b><br>(1.67)  |
| 10.   | KG Kanjariya, <b>Akarsh Parihar</b> (2017). Joint analysis of qualitative and molecular diversity provides new insights on the genetic variability of the wild species of tomato ( <i>Solanum</i> section <i>lycopersicum</i> ) for quality. <i>Journal of Pharmacognosy and Phytochemistry</i> 6 (3), 421-426.(2017)  | <b>5.38</b><br>(0.37)  |
| 11.   | Makwana M. And <b>Akarsh Parihar</b> (2017). Stigma receptivity test in diverse species of tomato. <i>International Journal of Agricultural Science and Research (IJASR)</i> 7 (5) (2017)  | <b>4.13</b><br>(0.5)   |
| 12.   | Zaman Mariya S., Jadeja G.C., <b>Parihar Akarsh</b> and Patel Ankita (2017). Comparative analysis for seed protein profiling and SSR markers in Rice cultivars ( <i>Oryza sativa</i> L.). <i>Research Journal of Biotechnology</i> , Vol. 12 (5) (2017).   | <b>5.0</b><br>(0.5)    |
| 13.   | Mithil J. Parekh., Sushil Kumar., Harshvardhan N. Zala., Ranbir S. Fougat., Chandni B. Patel., Tejas C. Bosamia., Kalyani S. Kulkarni., <b>Akarsh Parihar</b> (2016). Development and validation of novel fiber relevant dbEST-SSR markers and their utility in revealing genetic diversity in diploid cotton ( <i>Gossypium herbaceum</i> and <i>G. arboreum</i> ), <i>Industrial Crops and Products</i> . (2016).                          | <b>10.19</b><br>(1.5)  |
| 14.   | BC Walunjkar, <b>Akarsh Parihar</b> , NK Singh, LD Parmar (2015). Genetic diversity of wild and cultivated genotypes of pigeon pea through RAPD and SSR markers - <i>Journal of Environmental Biology</i> (2015).  | <b>6.56</b><br>(0.375) |
| 15.   | Bhaumic R Patel, B.R.Patel, <b>A. Parihar</b> , Ramesh and Dixita Patel (2015). Heterosis in CGMS and GMS based chilli ( <i>Capsicum annum</i> L.) hybrids for green fruit yield, its components and quality traits- <b>The Bioscan</b> (2015).  | <b>5.26</b><br>(0.375) |
| <b>*Number in Bold=NAAS rating, Under Parenthesis=Impact Factor</b> |  |                        |



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|-----------|--|
| <b>6.</b> | <b>Details of Laboratory Manuals and other activities</b>  |
|           | <b>Laboratory manual = 2</b>   |
|           | <b>Guest lectures / Invited lectures =18</b>   |
| 1.        | “Novel plant breeding techniques for tomato improvement” at “3 <sup>rd</sup> Indian Horticulture Summit-cum-International Conference-2024”with a theme ‘ <b>Technological Intervention for Boosting Horticultural Production</b> ’ organized at the Rajasthan Agricultural Research Institute (S K N Agriculture University, Jobner), Durgapura Campus, Jaipur, Rajasthan, India, in collaboration with Division of Vegetable Science, ICAR-IARI, New Delhi; Gautam Kalloo Research and Development Foundation, Varanasi; Dr Y. S. R. Horticultural University, West Godawari District, Andhra Pradesh; and ICAR-Directorate of Medicinal and Aromatic Plants, Anand, Gujarat during <b>February 1-3, 2024</b> |
| 2.        | Gender Biodiversity and food security at 21 days winter school on “Gender sensitization: A step towards agricultural development” at department of Extension Education, BACA, AAU, Anand during 18 January to <b>7 February, 2024</b>  |
| 3.        | Status, Scope and Constraints in Crop improvement of Medicinal and Aromatic Plants during Winter School at DAMPRI, Boriavi ( <b>18 Dec, 2023 to 7 Jan, 2024</b> )  |
| 4.        | CPBG, TNAU, Coimbatore ( <b>22.12.2023</b> )Genetic improvement in medicinal and Aromatic Plants: Status, Scope and Constraints during   |
| 5.        | Delivered a guest lecture on "Role of public private partnership in rural development" under One Week Training Program on "Agri-Rural Institutional Arrangement for Rural Prosperity" organized from 1st November to 7th November, 2023 by NAHEP, AAU in collaboration with Department of Agril. Economics, BACA, AAU, Anand, from 09:30 to 11:00 hrs on <b>2nd November, 2023</b> .   |
| 6.        | Delivered a guest lecture on “Crop Genetic Resources (CGRs) for genetic improvement and mitigating climate change : A hope for tomorrow” at Centre for Plant Breeding & Genetics, TNAU, Coimbatore on <b>25.08.2023</b>  |
| 7.        | Delivered a Lead Lecture on “Molecular breeding for sustainable crop improvement and climate resilience” in 21 Days Summer School on Emerging Challenges and Opportunities in Biotic and Abiotic Stress Management (ECOBASM-2023) during <b>10-30 August, 2023</b>   |
| 8.        | Delivered a lead lecture on 'Protection of Plant Varieties and Farmers Rights under one day IPR workshop at DMAPR, Boriavi, Anand Gujarat on <b>14.07.2023</b>   |
| 9.        | ‘Next-Generation Breeding Strategies for Sustainable and Climate-Ready Crops’ in an "International Conference on Precision Agriculture" organized by "Vaishnodevi Vidyapeeth Vishvavidhalya, Indore held during <b>26-27 September, 2022</b>   |
| 10.       | CRISPR based genome editing: A way forward to achieve zero hunger in a national symposium on "Emerging Innovations in Plant Molecules for Achieving Food and Nutritional Security Organized by Department of Plant Molecular Biology and Biotechnology, ACHF, NAU, Navsari & Division of Biochemistry, ICAR-IARI, New Delhi in association with Society for Plant Biochemistry and Biotechnology, IARI, Pusa Campus, New Delhi during <b>22-23 September, 2022</b> at NAU, Navsari   |

|     |  |
|-----|--|
| 11. | “Distant Hybridization in Horticulture Crops” in the national Horticulture Summit-2022 “Horticulture for prosperity and Health security” organized jointly by “Society for Horticultural Research and Development” and NAU, Navsari during <b>27-29 April, 2022</b> .  |
| 12. | “ <b>Recent advances in Vegetable Breeding</b> ” organized by Department of Genetics and Plant Breeding, College of Agriculture, Junagadh Agricultural University during five days vocational training programme under NAHEP-IDP project during February 20-24, 2023   |
| 13. | “Patent Filing in India: Practical perspectives” in one day national Workshop on IPR management organised jointly by AAU, Anand and RGNIIIM, Nagpur ( <b>27 October, 2021</b> )  |
| 14. | “The Road to Food and Nutrition Security through Biotechnological interventions in Agriculture” in national seminar on “Biochemical and Molecular Biology Intervention for Nutritional Security and Food Safety” organized by NAU, Navsari during <b>December 12 to 13, 2019</b>   |
| 15. | Delivered lead lecture on “Biotechnological interventions for distant hybridization in crops” in International Conference on “Sustainable Agriculture Development in Changing Global Scenario” jointly organized by Banaras Hindu University, Varanasi and RASSA, <b>New Delhi held on 11-13 October, 2019 at BHU</b>  |
| 16. | Delivered invited lecture on "Genome editing for Crop Improvement: Recent Advancements" in special lecture series organised by Dr. Ram Manohar Lohia Avadh University, Faizabad on <b>09 April, 2018</b> .   |
| 17. | Delivered lead/ invited lecture on “Speed Breeding: A promising tool for new green revolution” in National Seminar on “Smart Technologies to Boost Farm Profitability and Socio-Economic Status of Rural India at Sher-e-Kashmir University of Agricultural Sciences & Technology-Jammu during <b>19-20, November, 2018</b> .  |
| 18. | Delivered lead lecture on “Consumer Safety and Genetically Modified Foods: Truth and Myths in the “National Seminar on "Consumer Protection and Food Safety" jointly organized by The Maharaja Sayajirao University of Baroda, Vadodara and Indian Institute of Public Administration, New Delhi, Sponsored by Department of Consumer Affairs, Ministry of Consumer Affairs, Food & Public Distribution, Government of India held on <b>7-8, September, 2018</b> |
| 19. | Delivered invited lecture on “GM crops: current status and prospects in pretext to doubling farmers income in “ICAR sponsored short course training programme “Techniques for estimation of nutraceutical properties from crops” held at AAU, Anand from <b>16-25 Jan., 2018</b> .   |
| 20. | Delivered lead lecture on “Breeding for seed spices crops: present status and future strategies in National seminar on “Seed Spices for enhancing farmers prosperity and Lively hood Security” held on <b>21-22 Jan, 2017</b> at NRCSS, Ajmer  |
| 21. | “An Efficient and Rapid Regeneration System for recalcitrant crop Okra ( <i>Abelmoschus esculentus</i> L.) through direct shoot organogenesis from petiole” in International Conference on Nutraceutical and Functional Foods–The Challenges and Opportunities, held on <b>December 6-8, 2016</b> at AAU, Anand.   |
| 22. | Delivered lead lecture on “Abiotic stress management through genetic improvement under changing climate” in International Conference on Food, water, Energy Nexus in Arena of Climate Change during <b>October, 14-16, 2016</b> .  |

| 7. | <b>Co-curricular activities</b>  |                                    |  |
|----|--|------------------------------------|--|
|    | <b>Particulars</b>   | <b>Place where you have worked</b> | <b>Duration &amp; Period</b>   |
|    | Farm Manager / Drawing Disbursing Officer  | DDO                                | 01.01.2019 - 31.07.2021<br>2.7 years   |
|    | Administration Eke DDO / Officer-in-Charge of ICAR or other Research Schemes, Technical Officer, Nodal Officer, Registrar Assistant Registrar, Head of Office / Sub Unit Head etc. | Unit Head                          | 01.01.2019 - 31.07.2021<br>2.7 years   |
|    | Other (specify)<br>Incharge IPR Cell, AAU  | Incharge IPR Cell                  | 2014 - till today  |
|    | Incharge IBSC, AAU   | IBSC, AAU                          | 2020-till today  |
|    | Working as seminar coordinator for crop improvement group  | seminar coordinator                | Since 2022   |
|    | Member of the committee formulated by the Hon'ble vice Chancellor for fixing rates for molecular, biological and Biotechnological analysis provided by AAU, Anand                  | Committee member                   | (Office Order No.AAU/DR/RES/T-3/5276-80/2019, dated 13/09/2019)                |
|    | Member of university level committee for coordinating the trial of GM crops  | Committee member                   | (Office Order No.AAU/DR/RES/T-3/11120-21/2021, dated 27/01/2021)               |
|    | Member of Board of Studies nominated by Director of research & Dean PG Studies   | member                             | (Office Order No.AAU/Reg/ACA/PG studies (49)/5534-5541/2021, dated 20/04/2021) |
|    | Committee member for reviewing the work carried out under NABL accredited Food Testing Laboratory at College of Food Processing Technology & Bioenergy for last five years         | Committee member                   | (Office Order No.AAU/DR/RES/T-3/2079-84/2021, dated 12/05/2021)                |
|    | Member of anti-ragging committee   | Committee member                   | (Order No. BACA/UGT/Hostel/50/2021, dated 30.09.2021)                          |
|    | Convener of Basic Sciences AGRESCO sub committee   | Convener (2019-22)                 | (Order No. AAU/DR/T3/435/2022, dated 27.04.2022)                               |
|    | Coordinator for NET coaching for the subject of Genetics & Plant Breeding  | Coordinator                        | (Order No. AAU/FPTBP/T&P/895/2020, dated 26.08.2020)                           |

|     |  |   |   |   |
|-----|--|---|---|---|
| (b) | <b>Research Achievements</b>   |   |   |   |
|     | <b>Sr. No.</b>   | <b>Particular</b>   |   |   |
|     | <b>1</b>   | <b>Research Projects completed / ongoing</b>  |   |   |
|     | <b>Sr. No</b>  | <b>Research Project Name (PI/Co-PI)</b>   | <b>Funding Agency and Period</b>  | <b>Major Achievements</b>   |
|     | 1.   | Green house facility for mass multiplication and demonstration of interspecific hybrid of fruits and vegetables (PI)                                  | NHM, GoI<br>2 years   | As a PI, developed Green house facility for mass multiplication and demonstration of interspecific hybrid of fruits and vegetables where mass multiplication and Rapid Generation Advancement of mandated crops is going on successful. |
|     | <b>As Unit Head, Project Incharge of the following Research projects /schemes 01.01.2019-31.07.2021 (2.7 years)</b>  |   |   |   |
|     | 2.   | Strengthening of Tissue culture R & D at AAU, Anand(Scheme Incharge)  | GoG   | Developed invitro regeneration of many mandate crops  |
|     | 3.   | Centre of Excellence in Agricultural Biotechnology at Anand (Scheme Incharge)   | GoG   | Research including molecular biology, DNA fingerprinting has led to many achievements regarding transcriptme, metablome , and genome analysis. DNA fingerprinting of mandated crops   |
|     | 4.   | Strengthening of Department of Nanotechnology at Anand(Scheme Incharge)   | GoG   | Infrastructure development  |
|     | 5.   | Allele Mining for fragrance and colour principles from saffron ( <i>Crocus sativus</i> L.) and sandalwood ( <i>Santalum album</i> ) (Scheme Incharge) | GoG   | Genes for fragrance and principle components have been cloned from saffron  |
| 6.  | Research Centre for Distant Hybridization in Field and Fruit crops (PI)  | GoG   | Collected, maintained, and utilized various landraces, Crop Wild relatives, Germplasm, improved and unimproved lines from different places in Gujarat, national centres under ICAR-NBPGR, SAUs, AVRDC, Taiwan; and TGRC California etc. |   |
| 7.  | Production and demonstration of tissue culture raised plants under three locations and collection and maintenance of elite germplasm of date palm(Scheme Incharge) | ICAR, GoI   | Under operation   |   |
| 8.  | Center for Advanced Research in Plant Tissue Culture(Scheme Incharge)  | GoG   | Infrastructure development and advance researches   |   |

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| <b>2. Publication – Attach the list of publications excluding publication from student’s thesis work</b> |  |  |
| <b>Sr. No</b>  | <b>List of Publications</b>  | <b>NAAS rating</b>                       |
| 1.   | V Santhosh, BP Kumar, B Pratibha, L Sampath, <b>A Parihar</b> (2023). Genetic analysis for yield and quality contributing parameters in ashwagandha [ <i>Withania somnifera</i> (L.) Dunal], <i>Electronic Journal of Plant Breeding</i>   | <b>5.58</b>                              |
| 2.   | Hemangini A. Chaudhari., Mahesh Kumar Mahatma and <b>Akarsh Parihar</b> (2023). Ethrel-induced release of fresh seed dormancy causes remodelling of amylase activity, proteomics, phytohormone and fatty acid profile of groundnut ( <i>Arachis hypogaea</i> L.), <b>Physiology and Molecular Biology of Plants</b> , 29(6): 829–842             | <b>9.02</b>                              |
| 3.   | <b>Akarsh Parihar</b> , M. B. Vaja, J. J. Dhruve (2020). Identification of useful recombinants from interspecific hybrids of <i>Citrullus lanatus</i> and <i>C. colocynthis</i> . <i>Vegetos - An International Journal of Plant Research and Biotechnology</i> (130) 8 (2020)   | Vegetos - Springer<br><b>6.10</b> (0.10) |
| 4.   | <b>A Parihar</b> , K Pachchigar, ZS Mariya (2015). Protoplast isolation and fusion in cultivated <i>Cajanus cajan</i> (L.) Millsp and wild species of Pigeonpea - <i>Research Journal on Biotechnology</i> (2015)  | 5.57                                     |
| 5.   | K Kulshrestha and <b>Akarsh Parihar</b> (2020). A Decade of Tomato Transcriptomics: Status and Perspectives. <i>Int. J. Curr. Microbiol. App. Sci</i> 9 (3), 2026-2056 (2020).   | <b>5.38</b>                              |
| 6.   | <b>KG Kanjariya</b> , <b>A Parihar</b> (2017). Prime-Ome: A Molecular Approach towards Defence Mechanisms. <i>Int. J. Curr. Microbiol. App. Sci</i> 6 (8), 3606-3610 (2017).   | <b>5.38</b><br>(0.37)                    |
| <b>Books</b>   |  |  |
| 1.   | <b>Plant Genomics for Sustainable Agriculture</b> by Ram Lakhan Singh, Sukanta Mondal, Akarsh Parihar, Pradeep Kumar Singh published by <i>Springer</i>  | <b>Springer</b>                          |
| 2.   | Babasaheb Changdeo Walunjkar, <b>Akarsh Parihar</b> , Pravin Berad (2017). <i>Molecular Characterization of Pigeonpea [Cajanus Cajan (L.) Millsp", LAP LAMBERT Academic Publishing, 2017 (ISBN 3330344113)</i>   | LAMBERT Academic Publishing              |
| <b>Book chapters</b>   |  |  |
| 1.   | Akarsh Parihar* and Shiwani (2021). Molecular Breeding and Marker Assisted Selection for Crop Improvement, In book “Plant Genomics for Sustainable Agriculture (Springer)”.  | Springer                                 |
| 2.   | Akarsh Parihar*, Shiwani, Sukanta Modaland R.L Singh (2021). Introduction, scope, and applications of biotechnology and genomics for sustainable agricultural production, In <i>Plant Genomics for Sustainable Agriculture (Springer)</i> .  | Springer                                 |
| 3.   | K.B. Kathiria, <b>Akarsh Parihar</b> and K.V. Prabhu (2019). Impact of genetically modified crops and potential future benefits for increasing farmers’ income in India In: <i>Strategies for Doubling the Farmers' Income (A Gujarat Perspective)</i> by Satish Serial Publishing House, Delhi-110033 (India) ( <b>ISBN 978-81-94252-56-6</b> ) | Satish Serial Publishing                 |

| <b>Paper presented in Conference/Seminar/Symposia etc with participation certificate</b> |   |
|--|---|
| <b>Guest lecturers / Invited lectures</b>  |   |
| <b>1</b>   | <b>Papers presented in International Conference/Seminar/Symposia etc</b>  |
| 1.   | Delivered <b>Dr. B.P.Pal Memorial lecture – 2022</b> on ‘ Next-Generation Breeding Strategies for Sustainable and Climate-Ready Crops’ in an "International Conference on Precision Agriculture" organized by "Vaishnodevi Vidyapeeth Vishvavidhalya, Indore and The Society of Tropical Agriculture, New Delhi, India held during 26-27 September, 2022 at The Exotica Grand Hotel, West Patel Nagar, New Delhi-110008   |
| 2.   | “Biotechnological interventions for distant hybridization in crops” in International Conference on “Sustainable Agriculture Development in Changing Global Scenario” jointly organized by Banaras Hindu University, Varanasi and RASSA, New Delhi held on 11-13 October, 2019 at BHU.   |
| 3.   | “An Efficient and Rapid Regeneration System for recalcitrant crop Okra ( <i>Abelmoschus esculentus</i> L.) through direct shoot organogenesis from petiole” in International Conference on Nutraceuticals and Functional Foods – The Challenges and Opportunities, held on December 6-8, 2016 at AAU, Anand.  |
| 4.   | “Abiotic stress management through genetic improvement under changing climate” in International Conference on Food, water, Energy Nexus in Arena of Climate Change during October 14-16, 2016.  |
| <b>2</b>   | <b>Papers presented in national Conference/Seminar/Symposia etc</b>   |
| 1.   | CRISPR based genome editing: A way forward to achieve zero hunger in a national symposium on "Emerging Innovations in Plant Molecules for Achieving Food and Nutritional Security Organized by Department of Plant Molecular Biology and Biotechnology, ACHF, NAU, Navsari & Division of Biochemistry, ICAR-IARI, New Delhi in association with Society for Plant Biochemistry and Biotechnology, IARI, Pusa Campus, New Delhi during 22-23 September, 2022 at NAU, Navsari |
| 2.   | “Distant Hybridization in Horticulture Crops” in the national Horticulture Summit-2022 “Horticulture for prosperity and Health security” organized jointly by “Society for Horticultural Research and Development” and NAU, Navsari during 27-29 April, 2022.   |
| 3.   | “Patent Filing in India : Practical perspectives” in one day national Workshop on IPR management organised jointly by AAU, Anand and RGNIIIM, Nagpur (27 October, 2021)   |
| 4.   | “The Road to Food and Nutrition Security through Biotechnological interventions in Agriculture” in national seminar on “Biochemical and Molecular Biology Intervention for Nutritional Security and Food Safety” organized by NAU, Navsari during December 12 to 13, 2019   |
| 5.   | "Genome editing for Crop Improvement: Recent Advancements" in special lecture series organised by Dr. Ram Manohar Lohia Avadh University, Faizabad on 09 April, 2018.   |
| 6.   | “Speed Breeding: A promising tool for new green revolution” in National Seminar on “Smart Technologies to Boost Farm Profitability and Socio-Economic Status of Rural India at Sher- e-Kashmir University of Agricultural Sciences & Technology- Jammu during 19-20, November, 2018.  |
| 7.   | “Consumer Safety and Genetically Modified Foods: Truth and Myths in the “National Seminar on "Consumer Protection and Food Safety" jointly organized by The Maharaja Sayajirao University of Baroda, Vadodara and Indian Institute of Public Administration, New Delhi, Sponsored by Department of Consumer Affairs, Ministry of Consumer Affairs, Food & Public Distribution, Government of India held on 7-8, September, 2018   |
| 8.   | “GM crops : current status and prospects in pretext to doubling farmers income in “ICAR sponsored short course training programme “Techniques for estimation of nutraceutical properties from crops” held at AAU, Anand from 16-25 Jan., 2018.  |
| 9.   | “Breeding for seed spices crops: present status and future strategies in National seminar on “Seed Spices for enhancing farmers prosperity and Lively hood Security” held on 21-22 Jan, 2017 at NRCSS, Ajmer.   |

**(a) Patents, Products, Technologies & Intellectual Property Rights**

| Sr. No. | Product/Technology/IPR  | Reference   |
|---------|---|---|
| 1.      | Core Plant Breeder in development of novel ornamental interspecific hybrid variety released in okra-A success story for harnessing genetic diversity in CWRs  | AGRESKO report of AAU, Anand-2022   |
| 2.      | Core Plant Breeder in development of novel cucumber variety developed through interspecific hybridization released in cucumber  | AGRESKO report of AAU, Anand-2023   |
| 3.      | Parihar Akarsh, Kinjal Bhutaka, Kathiria K.B. and Patel B.R. (2019). Development of novel method for rescuing embryo to develop interspecific hybrid in cotton.( <b>Patent</b> )  | <b>Patent ID.</b><br>201921010447 A   |
| 4.      | Parihar Akarsh, Zaman Mariya S., Patel B.R. and Kathiria K.B. (2017). A complete paradigm for regeneration of YVMV resistant interspecific hybrid between <i>Abelmoschus esculentus</i> L. and <i>Abelmoschus moschatus</i> subsp. <i>tuberosus</i> through embryo rescue technique ( <b>Patent</b> ).  | <b>Patent ID.</b> 201721004984  |
| 5.      | Total 25 interspecific hybrids developed from the interspecific crossing among different species of custard apple ( <i>Annona squamosa</i> , <i>Annona reticulata</i> , <i>Annona cherimoya</i> and <i>Annona atimoya</i> ) are established in the farm. Seven elite Interspecific hybrids are under trial  | AGRESKO report of AAU, Anand-2020   |
| 6.      | Developed a protocol for embryo rescue for development of synthetic interspecific hybrid (F <sub>1</sub> ) for the first time between <i>G. barbadense</i> and <i>G. raimondii</i> .  | AGRESKO report of AAU, Anand-2020   |
| 7.      | There are 24 lines developed through inter-specific hybridization in Cotton ( <i>G. herbaceum</i> × <i>G. arboreum</i> ) having fibre length >28 mm and are currently under state trial   | AGRESKO report of AAU, Anand-2018   |
| 8.      | Developed and identified of useful recombinants from interspecific hybrids of <i>Citrullus lanatus</i> and <i>C. colocynthis</i>  | <a href="https://doi.org/10.1007/s42535-020-00131-8">https://doi.org/10.1007/s42535-020-00131-8</a> |
| 9.      | <ul style="list-style-type: none"> <li>• Developed 12 improved lines in cowpea resistant for YVMV by crossing between released variety AVC-1 and land race from Ratanmahal, Dahod and three improved lines are under trial.</li> <li>• Procured 46 different lines / accessions of cowpea including <i>V. unguiculata</i> (19) and <i>V. unguiculata</i> subsp. <i>Sesquipedalis</i> (Yard Long Bean) (27) collected from NBPGR, Thrissur and developed 18 successful crosses.</li> </ul> | AGRESKO report of AAU, Anand-2020   |
| 10.     | Total 48 interspecific improved lines of cucumber utilizing released variety GCU-1 and wild relative ( <i>C. melo</i> subsp. <i>agretis</i> ) have been developed and evaluated against fruit fly and leaf minor. Out of 48 lines, top 03 lines from BC <sub>1</sub> F <sub>7</sub> generation are being evaluated under PET trial.   | AGRESKO report of AAU, Anand-2020   |
| 11.     | Developed interspecific hybrids in mustard (juncea x napus, juncea x rapa, juncea x carinata), developed RILS and utilized for identification of linked marker for aphid resistance.<br>Selection for interspecific hybrids in mustard, generation advancement (presently F <sub>8</sub> ) for resistance against powdery mildew, aphids and yield improvement.   | AGRESKO report of AAU, Anand-2020   |

**(b) Other Publication / Popular Articles**

|     |                               |   |
|-----|-------------------------------|---|
|     | 1.                            | Vishvas Acharya, Akarsh Parihar and Mahesh B. Vaja (2020). કાકડી-ગ્રીનહાઉસમાંથીની સફળ ખેતી (Green house cucumber farming) in Krishi Govidha-University Publication) <a href="https://www.researchgate.net/publication/343481684_Green_house_cucumber_farming">https://www.researchgate.net/publication/343481684_Green_house_cucumber_farming</a>   |
|     | 2.                            | Rukhsar, Runit Patel and Akarsh Parihar (2018). GM crops: A way to boost the farmers' income, Readers Shelf, Vol 14 (4).  |
|     | 3.                            | Reviewer Panel - 2019 May (Volume # 40 Number # 3 ) for Journal of Environmental Biology  |
| (c) | <b>Extension Achievements</b> |   |
|     | <b>Sr. No.</b>                | <b>Particular</b>   |
|     |                               | ---   |
| 7.  | <b>Award/Recognitions</b>     |   |
|     | <b>Sr. No.</b>                | <b>Particular</b>   |
|     | 1.                            | <b>(a) International Awards/Recognition</b>   |
|     | 1.                            | <b>“Best Teacher Award</b> in Higher Agricultural Education” among all the faculties of the university by Anand Agricultural University during 20 Annual convocation held on 23 February, 2024  |
|     | 2.                            | <b>Dr. GautamKalloo Award forExcellence in Horticultural Research</b> for the innovative research work done by Society for Horticultural Research and Development (SHRD), which also publishes a Journal “ <i>Current Horticulture</i> ”. The award is given by the Society in recognition of outstanding contributions related to Distant Hybridization, molecular breeding and biotechnological interventions for horticultural crops. Theaward is bestowed up during “ <b>3<sup>rd</sup> Indian Horticulture Summit-cum-International Conference-2024</b> ” with a theme ‘ <b>Technological Intervention for Boosting Horticultural Production</b> ’ organized at the Rajasthan Agricultural ResearchInstitute (S K N Agriculture University, Jobner), Durgapura Campus,Jaipur, Rajasthan, India, in collaborationwith Division of Vegetable Science, ICAR-IARI, New Delhi; GautamKalloo Research and Development Foundation, Varanasi;Dr Y.S.R.Horticultural University, West Godawari District, Andhra Pradesh; andICAR-Directorate of Medicinal and Aromatic Plants, Anand, Gujarat during <b>February 1-3, 2024,</b> |
|     | 3.                            | Conferred with Springer Nature Award “ <b>Subodh Bhatnagar Innovation Award-2023</b> ” in a national Conference on Future of Agriculture and Agriculture for future: Indian Perspective organized jointly by the Society for Plant Research (VEGETOS) and Division of Vegetable Science, Sher-e- Kashmir University of Agricultural Sciences and Technology of Kashmir, Shalimar during September 4-6, 2023.  |
|     | 4.                            | Conferred <b>Dr. B.P.Pal Memorial Award – 2022</b> from The Society of Tropical Agriculture, New Delhi, India in 14th International Conference of Agriculture, Horticulture and Food Sciences, December 17-18 , 2022 , VENUE: The Exotica Grand Hotel, West Patel Nagar, New Delhi-110008   |
|     | 5.                            | <b>Conferred “Eminent Scientist Award-2022”</b> in 7 <sup>th</sup> International Conference on “Opportunities and Challenges in Agriculture, Environmental & Biosciences for Global Development (OCAEBGD-2022)” held on October 29-31, 2022 organized by Agro Environmental Development Society (AEDS) Rampur, Uttar Pradesh, India & Goa University, Goa in joint collaboration with <b>College of Horticulture and Forestry, Central Agricultural University Pasighat-Arunachal Pradesh &amp; School of Environment and Sustainable Development, Central University of Gujarat, Gandhinagar, Gujarat India</b> organised at GOA.  |
|     | 6.                            | <b>Conferred as fellow of International Society for Noni Science</b> , for the year 2019 by “International Society for Noni Science and World Noni Research Foundation.”  |

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| 7. | <b>Award/Recognitions</b> |
|----|---------------------------|



| Sr. No. | Particular   |  |   |
|---------|--|--|---|
| 2       | (b)  | <b>National Awards/Recognition</b>   |   |
|         | 1.   | Awarded “Young Scientist Award-2019” by RASSA, New Delhi in an “International Conference” on “Sustainable Agriculture Development in Changing Global Scenario” jointly organized by Banaras Hindu University, Varanasi and RASSA, New Delhi held on 11-13 October, 2019 at BHU |   |
|         | 2.   | <b>Member of task force Committee</b> constituted in 2021 as per the suggestions of the PM review meeting for Agro-climatic Zone-XIII  |   |
|         | 3.   | <b>Acted as Co-chairman of the technical</b> session of crop improvement in the 29th group meeting of AICRP on “Medicinal and Aromatic Plants Research” held on 02/12/2021 at DMAPR, Boriavi (Anand)   |   |
|         | 4.   | <b>Acted as Co-chairman of the technical</b> session of crop improvement in the 30th group meeting of AICRP on “Medicinal and Aromatic Plants Research” held on 02/11/2022 at DMAPR, Boriavi (Anand)   |   |
|         | 5.   | Reviewer Panel - 2019 May (Volume# 40 Number# 3 ) for Journal of Environmental Biology   |   |
|         | 6.   | Reviewed a research paper of ISPGR (MS-IJPGR-20-03) - Development of interspecific hybrids ( <i>Abelmoschus esculentus</i> × <i>A. tetraphyllus</i> ) in okra using embryo rescue approach   |   |
|         | 7.   | Acting as Subject Editor of Vegetos- An international Journal of Molecular Biology and Biotechnology   |   |
|         | 8.   | Committee member for reviewing the work carried out under NABL accredited Food Testing Laboratory at College of Food Processing Technology & Bioenergy for last five years (Office Order No.AAU/DR/RES/T-3/2079-84/2021, dated 12/05/2021)                                     |   |
| 9.      | Member of anti-ragging committee (Order No. BACA/UGT/Hostel/50/2021, dated 30.09.2021) |  |   |
| 8.      | <b>Membership of professional societies</b>  |  |   |
|         | <b>Sr. No.</b>   | <b>Particular</b>  |   |
|         |  | <b>Life membership</b>   |   |
|         | 1.   | 1.   | Indian Society of Genetics & Plant Breeding, New Delhi                          |
|         |  | 2.   | Indian Society of Plant genetics Resources, New Delhi                           |
|         |  | 3.   | Society for Plant Research (Vegetos)  |
|         |  | 4.   | Gujarat Society of Genetics & Plant Breeding                                    |
|         |  | 5.   | SPBB – The Society for Plant Biochemistry and Biotechnology, IARI, New Delhi    |
|         |  | 6.   | Royal Association for Science-led Socio-cultural Advancement (RASSA), New Delhi |
|         |  | 7.   | Agro Environmental Development Society (AEDS), Rampur, U.P. India               |
| 8.      |  | Society for Horticultural Research and Development (SHRD), Ghaziabad , U.P. India  |   |
| 9.      |  | International Society for Noni Science, Chennai  |   |
| 10.     |  | Gujarat Association for Agricultural Sciences (GAAS), Ahmedabad  |   |

**Contribution in Characterization, evaluation, conservation, utilization, documentation, DNA fingerprinting**

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| 1. | Collected, maintained and successfully utilized the germplasms of cotton, okra, tomato, custard apple from different national and international research centres like <b>IHR, Bangalore, IIVR,</b> |
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| <p><b>Varanasi; NBPGR, New Delhi; NBPGR, Thrisur; NBPGR, Akola; CICR, Nagpur; TGRC, California (USA) and AVRDC, Taiwan</b> and different parts of Gujarat including few tribal areas like Dahod, Chota-Udaipur, Godhra, Rattangadh, Vaghai, Amirgadh, Iqbalgadh, Khedbrahma, Danta etc. and is extensively under use in ongoing breeding programme.</p> |  |
| 1.  | <b>OKRA</b>  |
| 1.  | Screened and characterized 87 genotypes / Accessions of Okra including 78 wild accessions and 09 wild species against Yellow Vein Mosaic Virus and these all accessions were maintained successfully. Molecular characterization / DNA fingerprinting has been done for all the accessions.  |
| 2.  | Different wild germplasm of Okra have been screened on the basis of naturally infection, net house and DNA based study against YVMV. The result revealed that two accessions <i>A. moschatus subsp. tuberosus</i> (IC 470750) and <i>A. moschatus subsp. tuberosus</i> (IC 413569) are highly resistance against YVMV and are advised to use in pre-breeding programme.  |
| 3.  | Developed an YVMV resistant interspecific hybrid (F <sub>1</sub> ) for the first time between <i>Abelmoschus esculentus</i> L. and <i>Abelmoschus moschatus</i> subsp. <i>tuberosus</i> through embryo rescue technique.   |
| 2.  | <b>TOMATO</b>  |
| 1.  | Collected, maintained and screened 37 different Accessions of tomato including <b>11</b> different species <i>S.lycopersicum</i> , <i>Solanum chilense</i> (WIR 5032), <i>Solanum chielewskii</i> (EC-520047), <i>Solanum pipinellifolium</i> (IIHR 1966), <i>S. hirsutum</i> , <i>S. habrochaites</i> (IIHR 2101), <i>S.esculentum</i> var. <i>cerasiforme</i> , <i>S.arcanum</i> (LA 2157) , <i>S. penneli</i> , <i>S.peruvianum</i> and <i>S.pipinellifolium</i> (LA 3859) against TLCV and Root not nematode |
| 2.  | The seed material of 17 different wild and introgressed cultivated species of tomato have been imported from TGRC, California. The material has been evaluated against TLCV, nematode and drought in tomato. A line <i>S. arcanum</i> (LA-2157) was found highly resistant for both <i>M. incognita</i> and <i>M. javanica</i> whereas <i>S.haibrochaites</i> found highly resistant for TLCV.   |
| 3.  | <b>TOMATO, SOYABEAN, CHILLI AND BITTERGOURD FROM AVRDC, TAIWAN</b>   |
| 1.  | Eight tomato, one chilli, three soyabean and 8 bittergourd lines procured from AVRDC, Taiwan and are maintained and exploited successfully in breeding programme.  |
| 2.  | Developed improved lines in tomato for high TLCV resistance and high lycopene content making use of wild species / germplasm and currently in F <sub>6</sub> , F <sub>7</sub> , F <sub>8</sub> and under testing.  |
| 4.  | <b>COTTON</b>  |
| 1.  | <b>Sixteen(16)</b> different species of cotton including <i>G. raimondii</i> , <i>G. herbaceum</i> , <i>G.arboreum</i> , <i>G. stockii</i> , <i>G. nelsonii</i> , <i>G. capitis-viridis</i> , <i>G. hirsutum</i> , <i>G. barbadense</i> , <i>G. triphyllum</i> , <i>G. robinsoni</i> , <i>G. thurberi</i> , <i>G. tomentosum</i> , <i>G. sturtianum</i> , <i>G. brasiliense</i> and <i>G. trilobum</i> , have been successfully established in the field for evaluation and germplasm maintenance.               |
| 2.  | Developed synthetic interspecific hybrid (F <sub>1</sub> ) for the first time between <i>G.barbadense</i> and <i>G. raimondii</i> through embryo rescue.   |
| 3.  | There are 24 lines developed through inter-specific hybridization in Cotton ( <i>G. herbaceum</i> × <i>G.arboreum</i> ) having fibre length >28 mm and are currently under state trial.  |
| 5.  | <b>CUCUMBER</b>  |

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|    | 1.   | Total 48 interspecific improved lines of cucumber utilizing wild relative have been developed and evaluated against fruit fly and leaf minor. Out of 48 lines, top 03 lines from BC <sub>1</sub> F <sub>7</sub> generation are being evaluated under PET trial.   |
| 6. | <b>COWPEA</b>  |   |
|    | 1.   | Developed 12 improved lines in cowpea resistant for YVMV by crossing between released variety AVC-1 and land race from Ratanmahal, Dahod and three improved lines are under trial.  |
|    | 2.   | Procured 46 different lines / accessions of cowpea including <i>V. unguiculata</i> (19) and <i>V. unguiculata</i> subsp. <i>Sesquipedalis</i> (Yard Long Bean) (27) collected from NBPGR, Thrissur and developed 18 successful crosses.   |
| 7. | <b>WATERMELON</b>  |   |
|    | <b>Developed and identified useful recombinants from interspecific hybrids of <i>Citrullus lanatus</i> and <i>C. colocynthis</i></b> |   |
|    | <b>CUSTARD APPLE</b>   |   |
|    | 1.   | Collection of local germplasm of custard apple from areas like Devgadh baria and development of distant hybrids / wide crosses in Custard Apple ( <i>Annona species</i> ) has been carried out. There are 25 interspecific hybrids established in the field. Interspecific hybrids developed from the interspecific crossing among different species of custard apple ( <i>Annona squamosa</i> , <i>Annona reticulata</i> , <i>Annona cherimoya</i> and <i>Annona atimoya</i> ) are established in the farm. Seven elite Interspecific hybrids are under trial. |
| 8. | <b>MUSTARD</b>   |   |
|    | 1.   | Developed interspecific hybrids in mustard (juncea x napus, juncea x rapa, juncea x carinata), developed RILS and utilized for identification of linked marker for aphid resistance.  |
|    | 2.   | Selection for interspecific hybrids in mustard, generation advancement (presently F <sub>8</sub> ) for resistance against powdery mildew, aphids and yield improvement.   |

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