#### PLANT GERMPLASM REGISTRATION COMMITTEE (Indian Council of Agricultural Research) ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi

#### **Proceedings of the**

#### XXXXIV<sup>th</sup> Meeting of Plant Germplasm Registration Committee(PGRC) Held at ICAR-NBPGR, New Delhi (June 30, 2021)

The **XXXXIV**<sup>th</sup> meeting of PGRC was held on **June 30, 2021** from 03:00 hrs. onwards in virtual mode at ICAR-NBPGR, New Delhi. The following members/invitees were present:

| 1.  | Dr.TR Sharma       | DDG (CS), Indian Council of Agricultural Research,<br>New Delhi                                      | Chairman |
|-----|--------------------|--|----------|
| 2.  | Dr. DK Yadava      | ADG (Seeds), Indian Council of Agricultural Research,<br>New Delhi                                   | Member   |
| 3.  | Dr. YP Singh       | ADG (F&FC), Indian Council of Agricultural Research,<br>New Delhi                                    | Member   |
| 4.  | Dr. RK Singh       | ADG (CC), Indian Council of Agricultural Research,<br>New Delhi                                      | Member   |
| 5.  | Dr. Sanjeev Gupta  | ADG (O&P), Indian Council of Agricultural Research,<br>New Delhi                                     | Member   |
| 6.  | Dr. V Pandey       | ADG (HortI), Indian Council of Agricultural Research,<br>KAB-II, Pusa Campus, New Delhi              | Member   |
| 7.  | Dr. BK Pandey      | ADG (HortII), Indian Council of Agricultural Research,<br>KAB-II, Pusa Campus, New Delhi             | Member   |
| 8.  | Dr. Kuldeep Singh  | Director, ICAR-National Bureau of Plant Genetic Resources,<br>Pusa Campus, New Delhi                 | Member   |
| 9.  | Dr. GP Singh       | Director, Indian Institute of Wheat and Barley Research,<br>Karnal, Haryana                          | Member   |
| 10. | Dr. NP Singh       | Director, ICAR-Indian Institute of Pulses Research, Kanpur,<br>Uttar Pradesh                         | Member   |
| 11. | Dr. KV Prasad      | Director, ICAR-Directorate of Floricultural Research, Pune,<br>Maharashtra                           | Member   |
| 12. | Dr. TK Behera      | Director, ICAR-Indian Institute of Vegetable Research,<br>Varanasi, Uttar Pradesh                    | Member   |
| 13. | Dr. M. Sujatha     | Director (Acting), ICAR-Indian Institute of Oilseeds Research<br>Rajendranagar, Hyderabad, Telangana | Member   |
| 14. | Dr. D. Subramaniam | Director (Acting), ICAR-Indian Institute of Rice Research,<br>Hyderabad, Telangana                   | Member   |
| 15. | Dr Manoj Kumar     | Director (Acting), ICAR-Central Potato Research Institute<br>Shimla, Himachal Pradesh                | Member   |
| 16. | Dr. Shiv Sewak     | Project Coordinator (Acting), AICRP on MULLaRP, ICAR-<br>IIPR, Kanpur, Uttar Pradesh                 | Member   |
| 17. | Dr. BC Patra       | Representative of Director, ICAR-National Rice Research<br>Institute, Cuttack, Odisha                | Member   |

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| 18. | Dr. Arun Gupta      | ICAR-Indian Institute of Wheat and Barley Research,<br>Karnal, Haryana  | Invitee             |
|-----|---------------------|---|---------------------|
| 19. | Dr. RM Sundaram     | ICAR-Indian Institute of Rice Research, Hyderabad,<br>Telangana   | Invitee             |
| 20. | Dr. Raj Kumar       | ICAR-Central Potato Research Station, Jalandhar, Punjab   | Invitee             |
| 21. | Dr. Ashok Kumar     | Head (Acting), Division of Germplasm Evaluation, ICAR-<br>National Bureau of Plant Genetic Resources, Pusa Campus,<br>New Delhi         | Special invitee     |
| 22. | Dr. Anjali Kak Koul | Principal Scientist, Division of Germplasm, Conservation,<br>ICAR-National Bureau of Plant Genetic Resources,<br>Pusa Campus, New Delhi | Special<br>invitee  |
| 23. | Dr. Veena Gupta     | Head (Acting), Division of Germplasm Conservation, ICAR-<br>National Bureau of Plant Genetic Resources, Pusa Campus,<br>New Delhi       | Member<br>Secretary |

The **XXXXIV<sup>th</sup>**meeting of Plant Germplasm Registration Committee was held under the Chairmanship of Dr. TR Sharma, DDG (CS) in virtual mode. Dr. Kuldeep Singh, Director, ICAR-NBPGR welcomed the Chairman and all the experts and appreciated the efforts of the committee in streamline the proposals and conducting the meeting at quarterly intervals. Dr.TR Sharma said that Plant Germplasm Registration is an important committee of ICAR promoting the registration and conservation of trait specific germplasm.

The minutes of the XXXXIII<sup>rd</sup> meeting of PGRC were adopted as such after the confirmation of the Chairman.

Following recommendations emerged during the discussion in PGRC meeting:

- Action to be taken on the recommendations of the XXXXIII<sup>rd</sup> meeting which could not be undertaken because of the lockdown.
- Proceeding of PGRC should be sent to all other ICAR institutes to promote utilization of trait specific germplasm in their breeding programmes.

A total of 43 proposals were received for registration. Out of these 24 (where comments were received and completed in all respect) were considered for registration along with comments received from the respective PD/PC or experts to ascertain their unique feature (s) and potential values, which formed the basis for registration. Each proposal was discussed in detail and recommendations of PGRC for each proposal has been summarized in the enclosed table. Finally, 21 proposals belonging to nine species were approved for registration and three were deferred for want of additional data. Next meeting of PGRC meeting will be held in September 2021.

The meeting ended with vote of thanks by Dr. Veena Gupta, Member-Secretary.

(Veena Gupta) Member Secretary, PGRC ICAR-National Bureau of Plant Genetic Resources Pusa Campus, New Delhi-110 012 (TR Sharma) DDG (CS) &Chairman, PGRC Indian Council of Agricultural Research Krishi Bhawan, New Delhi-110 001

# XXXXIV<sup>th</sup> Germplasm Registration Committee Meeting, June 30, 2021: Summary of New Proposals with Recommendations

| S.<br>No. | App. No./<br>National<br>Id.            | Other<br>Identity           | Crop/<br>Botanical<br>Name     | Pedigree   | Potentially valuable<br>features  | Corresponding<br>author                                    | Recommendations of PGRC   |
|-----------|---|-----------------------------|--------------------------------|--|---|--|---|
| Cerea     | ls                                      | •                           | •                              |  |   | ·  |   |
| 1.        | 20256;<br>IC0637547<br><b>INGR21091</b> | Introgression<br>lineIL 274 | Rice/<br>Oryza sativa          | Pusa44/O.<br>glaberrima<br>IRGC102600b//3*P<br>usa44           | Bacterial Blight Resistance.<br>The genetic stock carries<br>bacterial blight resistance gene<br>xa-45 (t) from <i>Oryza</i><br>glaberrimma accession IRGC<br>102600b on the long arm of<br>chromosome 8 of rice.<br>Agronomicaly good plants with<br>apparently no linkage drag. | Dr. KumariNeelam,<br>PAU,<br>Ludhiana, Punjab              | Recommended   |
| 2.        | 21046;<br>IC0597237<br>INGR21092        | IC0597237                   | Rice/<br>Oryza sativa          | Pure line selection<br>from landrace<br>Minatik Charang.       | High grain protein content (12-14%).  | Dr. Torit B. Bagchi,<br>ICAR-NRRI,<br>Cuttack, Odisha      | Recommended   |
| 3.        | 21087;<br>IC0 639794<br>INGR21093       | Phougak<br>(D82)            | Rice/<br>Oryza sativa          | Landrace   | Tolerance to sheath blight.<br>Resistance to neck blast.<br>Resistance to leaf blast.   | Dr. Jyothi Badri,<br>ICAR-IIRR,<br>Hyderabad,<br>Telangana | Recommended   |
| 4.        | 21061;<br>IC0638868<br>INGR21094        | DT-RIL110                   | Wheat/<br>Triticum<br>aestivum | Inbred line  | Drought tolerance.  | Dr. Sonia Sheoran,<br>ICAR-IIWBR,<br>Karnal, Haryana       | Recommended   |
| 5.        | 21042;<br>IC0638872                     | pau 16073                   | Wheat/<br>Triticum<br>aestivum | BC1F9PDW274/<br><i>T. boeticum</i><br>acc.pau4992 //<br>PDW274 | Pau 16073 has high grain Fe<br>(53.8ppm) and Zn (89.5 ppm)  | Dr. Parveen Chhuneja,<br>PAU,<br>Ludhiana, Punjab          | <b>Deferred:</b> Should<br>generate one more year<br>data at multilocations<br>including recently<br>developed high Fe/Zn<br>lines. |

| 6.  | 21075;<br>IC0638871              | pau 16074 | Wheat/<br>Triticum<br>aestivum | BC1F10 PDW274 /<br><i>T.boeticum</i> acc. Pau<br>42549 // PDW 274  | pau 16074 has high grain Fe (46.0ppm) and Zn (91.2 ppm).   | Dr. Parveen Chhuneja,<br>PAU,<br>Ludhiana, Punjab           | <b>Deferred:</b> Should<br>generate one more year<br>data at multilocations<br>including recently.<br>developed high Fe/Zn<br>lines |
|-----|----------------------------------|-----------|--------------------------------|--|--|---|---|
| 7.  | 21077;<br>IC0638870              | pau16072  | Wheat/<br>Triticum<br>aestivum | BC1F10<br><i>T.durum</i> var<br>Aconchi89/<br><i>Triticum</i><br><i>monococcum//</i><br><i>T.durum</i> Aconchi<br>89 | pau 16072 has high grain Fe<br>67.3ppm and Zn 46.7ppm  | Dr. Parveen Chhuneja,<br>PAU,<br>Ludhiana, Punjab           | <b>Deferred:</b> Should<br>generate one more year<br>data at multilocations<br>including recently<br>developed high Fe/Zn<br>lines. |
| 8.  | 21078;<br>IC0638869<br>INGR21095 | pau16071  | Wheat<br>/Triticum<br>aestivum | BC3F10 T. duram/<br>Ae. tauschii acc.<br>pau 14195//4*<br>WH542  | pau16071 has leaf rust<br>resistance (LrT) and gluconess<br>(IwT)  | Dr. Parveen Chhuneja,<br>PAU,<br>Ludhiana, Punjab           | Recommended   |
| 9.  | 21079;<br>IC0638873<br>INGR21096 | pau 16068 | Wheat/<br>Triticum<br>aestivum | BC2F2 PBW114/<br>T. <i>boeticum</i> acc. Pau<br>5088//3* PBW621  | Pau 16068 is resistant to<br>powdry mildew. Two powdry<br>mildew resistance genes<br>PmTb7A.1 and PmTbA.2<br>mapped on chromosome 7AL.   | Dr. Parveen Chhuneja,<br>PAU,<br>Ludhiana, Punjab           | Recommended   |
| 10. | 21098;<br>IC0252458<br>INGR21097 | IC252458  | Wheat/<br>Triticum<br>aestivum | Germplasm<br>collection  | Consist of three minor/adult<br>plant rust resistance genes<br>(APR) for leaf rust, <i>Lr34</i> +<br>( <i>Lr34</i> / <i>Sr57/Yr18</i> /<br>/ <i>Pm38/Ltn1</i> ),<br><i>Lr46</i> +( <i>Lr46/Sr58/Yr29/Pm39</i> /<br><i>Ltn2</i> ) and <i>Lr67</i> +<br>( <i>Lr67/Yr46/Sr55/Pm46/Ltn3</i> )<br>which is linked to stem, stripe<br>and powdery mildew resistance<br>genes. Resistant to the<br>prevailing leaf rust pathotypes<br>of India due to the synergistic<br>combination of minor leaf rust | Dr. Vikas VK,<br>ICAR-IARI RS,<br>Wellington,<br>Tamil Nadu | Recommended   |

|     |   |          |                                |                         | resistance genes. Presence of<br>leaf tip necrosis (LTN) on the<br>flag leaves, a phenotypical<br>marker that is linked to adult<br>plant resistance (APR) genes.   |   |             |
|-----|---|----------|--------------------------------|-------------------------|---|---|-------------|
| 11. | 21099;<br>IC0290150<br>INGR21098        | IC290150 | Wheat/<br>Triticum<br>aestivum | Germplasm<br>collection | Consist of three minor/adult<br>plant rust resistance genes<br>(APR) for leaf rust, <i>Lr34</i> +<br>( <i>Lr34/ Sr57/Yr18/</i><br>/ <i>Pm38/Ltn1</i> ),<br><i>Lr67</i> +( <i>Lr67/Yr46/Sr55/Pm46/</i><br><i>Ltn3</i> ) and Lr68 which is linked<br>to stem, stripe and powdery<br>mildew resistance genes.<br>Resistant to the prevailing leaf<br>rust pathotypes of India due to<br>the synergistic combination of<br>minor leaf rust resistance<br>genes. Presence of leaf tip<br>necrosis (LTN) on the flag<br>leaves, a phenotypical marker<br>that is linked to adult plant<br>resistance (APR) genes. | Dr. Vikas VK,<br>ICAR-IARI RS,<br>Wellington,<br>Tamil Nadu | Recommended |
| 12. | 21100;<br>IC0279875<br><b>INGR21099</b> | IC279875 | Wheat/<br>Triticum<br>aestivum | Germplasm<br>collection | Consist of two minor/adult<br>plant rust resistance genes<br>(APR) for leaf rust, Lr34+<br>(Lr34/Sr57/Yr18//Pm38/Ltn1)<br>and Lr68 which is linked to<br>stem, stripe and powdery<br>mildew resistance genes.<br>Resistant to the prevailing leaf<br>rust pathotypes of India due to<br>the synergistic combination of<br>minor leaf rust resistance<br>genes. Presence of leaf tip   | Dr. Vikas VK,<br>ICAR-IARI RS,<br>Wellington,<br>Tamil Nadu | Recommended |

|        |   |                          |   |   | necrosis (LTN) on the flag<br>leaves, a phenotypical marker<br>that is linked to adult plant<br>resistance (APR) genes.                          |   |             |
|--------|---|--------------------------|---|---|--|---|-------------|
| 13.    | 21041;<br>IC0638874<br><b>INGR21100</b> | DWRB206(TestedasDWRNB17) | Barley/<br>Hordeum<br>vulgare                     | ZIGZIG/4/TOCTE/<br>HIGO/LINO/3/PET<br>UNIA1                       | Resistant to stripe rust at APR<br>under artificial inoculation in<br>naked barley.  | Dr. Jogendra Singh,<br>ICAR-IIWBR,<br>Karnal, Haryana                 | Recommended |
| 14.    | 21002;<br>IC0638875<br><b>INGR21101</b> | BCLA11-6                 | Barley/<br>Hordeum<br>vulgare                     | BCU390/Alfa93   | Corn Leaf Aphid Resistance Genotype.   | Dr. Rekha Malik,<br>ICAR-IIWBR,<br>Karnal, Haryana                    | Recommended |
| 15.    | 21044;<br>IC0638876<br><b>INGR21102</b> | BCLA3                    | Barley/<br>Hordeum<br>vulgare                     | EB921/Alfa93  | Corn Leaf Aphid Resistance<br>Genotype   | Dr. Rekha Malik,<br>ICAR-IIWBR,<br>Karnal, Haryana                    | Recommended |
|        | legumes                                 |                          |   |   |  |   |             |
| 16.    | 20131;<br>IC0340947<br>INGR21103        | IC340947                 | French Bean/<br>Phaseolus<br>vulgaris             | Selection from<br>DARL/BK/1136/                                   | Resistant to BCMV disease.   | Dr. Basavaraja T<br>ICAR-IIPR<br>Kanpur,<br>Uttar Pradesh             | Recommended |
| 17.    | 21069;<br>IC0639796<br><b>INGR21104</b> | IPM 604-1-7              | Mung Bean /<br>Vigna<br>radiata                   | IPM99-125/<br>Sona Mung   | Yellow seed coat colour. Early maturity (55 days).   | Dr Aditya Pratap,<br>ICAR-IIPR,<br>Kanpur, Uttar Pradesh              | Recommended |
| Vegeta | ables                                   |                          |   |   |  |   |             |
| 18.    | 21065;<br>IC0638877<br><b>INGR21105</b> | S-208                    | Cabbage/<br>Brassica<br>oleracea var.<br>capitata | Singleplantselection from PusaDrum Head, an OPvariety of cabbage. | Self-Incompatible (SI) line.<br>Flat compact head. Shorter<br>stalk length.  | Dr. Chander Parkash,<br>ICAR-IARI RS,<br>Katrain, Himachal<br>Pradesh | Recommended |
| 19.    | 21071;<br>IC0638878<br>INGR21106        | S-681                    | Cabbage/<br>Brassica<br>oleracea var.<br>capitata | SingleplantselectionfromGolden Acre, an OPvariety of cabbage      | Self-Incompatible (SI) line.<br>Round and very compact head.<br>Smaller plant spread and height<br>with minimum number of non-<br>wrapper leaves | Dr. Chander Parkash,<br>ICAR-IARI RS,<br>Katrain,<br>Himachal Pradesh | Recommended |

| Oilsee | ds                                      |                    |   |  |  |   |             |
|--------|---|--------------------|---|--|--|---|-------------|
| 20.    | 21022;<br>IC0638879<br>INGR21107        | IPC-21<br>(DPC-21) | Castor/<br>Ricinus<br>communis                | DPC-9 x DCS-45                                       | Pistillate line (female line) with<br>good combining ability.<br>Normal plant type with<br>elongated internodes, divergent<br>branching, flat leaves   | Dr. C Lavanya<br>ICAR-IIOR<br>Hyderbad, Telangana     | Recommended |
| Ornar  | nentals                                 | •                  |   |  |  | L   |             |
| 21.    | 21031;<br>IC0638881<br><b>INGR21108</b> | DFR C-1            | Chrysanthemum/<br>Chrysanthemum<br>morifolium | Half-sib selection<br>from the variety<br>"PAU D-1"  | Florets spatulate in shape. Long peduncle (8-12 cm).   | Dr. Tarak Nath Saha,<br>ICAR-DFR<br>Pune, Maharashtra | Recommended |
| 22.    | 21053;<br>IC0638882<br>INGR21109        | DFR C-2            | Chrysanthemum/<br>Chrysanthemum<br>morifolium | Half-sib selection<br>from the variety<br>"PAU D-1". | Its flowers possess mild<br>fragrance. The plant bears<br>cream white coloured (RHS<br>NN155B, White Group)<br>ligulate type flowers.  | Dr. Tarak Nath Saha,<br>ICAR-DFR<br>Pune, Maharashtra | Recommended |
| 23.    | 21054;<br>IC0638883<br><b>INGR21110</b> | DFR C-3            | Chrysanthemum/<br>Chrysanthemum<br>morifolium | Half-sib selection<br>from the variety<br>"PAU A-64" | It is spray chrysanthemum and<br>suitable for pot mums and<br>garden decoration. The plant<br>bears attractive yellow<br>coloured (RHS colour 7C-<br>Yellow group) single type<br>flower. Plant gives an<br>appearance of leaflessness and<br>dome shape during flowering" | Dr. Tarak Nath Saha,<br>ICAR-DFR<br>Pune, Maharashtra | Recommended |
| Tuber  |   | 1                  |   |  |  |   | 1           |
| 24.    | 21052;<br>IC0638884<br><b>INGR21111</b> | N/9-42             | Potato/<br>Solanum<br>tuberosum               | JN 2207 x<br>KufriPukhraj                            | Better nitrogen use efficiency than popular cultivars.   | Dr Raj Kumar<br>ICAR-CPRI RS,<br>Jalandhar, Punjab    | Recommended |

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