**Supplementary Table S1**: List of genotypes used in this study

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Name of the genotype** | **Place of landraces / wild spp collection.** | **S. No.** | **Name of the genotype** | **Place of landraces/ wild spp collection.** | |
| 1 | Nipponbare |  | 43 | AC-9080 | Manipur | |
| 2 | ARC-10322 | Assam | 44 | AC-9082 | Manipur | |
| 3 | ARC-10176 | Assam | 45 | AC-9100 | Manipur | |
| 4 | ARC-10606 | Assam | 46 | AC-9139 | Manipur | |
| 5 | ARC-10436 | Assam | 47 | AC-9190 | Manipur | |
| 6 | ARC-10397 | Assam | 48 | AC-9211 | Manipur | |
| 7 | ARC-10301 | Assam | 49 | AC-9216 | Manipur | |
| 8 | ARC-10247 | Assam | 50 | AC-9220 | Manipur | |
| 9 | ARC-10762 | Assam | 51 | AC-9235 | Manipur | |
| 10 | ARC-10474 | Assam | 52 | AC-9242 | Manipur | |
| 11 | ARC-10522 | Assam | 53 | AC-9246 | Manipur | |
| 12 | AC35713 | Assam | 54 | AC-9256 | Manipur | |
| 13 | AC35714 | Assam | 55 | AC-9265 | Manipur | |
| 14 | AC34715 | Assam | 56 | AC-9273 | Manipur | |
| 15 | AC35716 | Assam | 57 | AC-9279 | Manipur | |
| 16 | AC35717 | Assam | 58 | AC-9302 | Manipur | |
| 17 | AC35718 | Assam | 59 | AC-9321 | Manipur | |
| 18 | AC35719 | Assam | 60 | AC-9340 | Manipur | |
| 19 | AC-35720 | Assam | 61 | AC-9346 | Manipur | |
| 20 | AC-35721 | Assam | 62 | AC-9393 | Manipur | |
| 20 | AC-35722 | Assam | 63 | AC-9414 | Manipur | |
| 22 | AC-35723 | Assam | 64 | AC-9418 | Manipur | |
| 23 | AC-35725 | Assam | 65 | AC-43242 | | Arunachal Pradesh |
| 24 | AC-35726 | Assam | 66 | AC-43255 | Arunachal Pradesh | |
| 25 | AC-35727 | Assam | 67 | AC-43268 | Arunachal Pradesh | |
| 26 | AC-35728 | Assam | 68 | AC-43278 | Arunachal Pradesh | |
| 27 | AC-35734 | Assam | 69 | AC-43282 | Arunachal Pradesh | |
| 28 | AC-35735 | Assam | 70 | IR 64 | *Indica* rice | |
| 29 | AC-35740 | Assam | 71 | PM-41 | *O.rufipogon* | |
| 30 | AC-35750 | Assam | 72 | PM-43 | *O.rufipogon* | |
| 31 | AC-5601 | Assam | 73 | PM-56 | *O.rufipogon* | |
| 32 | AC-43102 | Assam | 74 | PM-62 | *O.rufipogon* | |
| 33 | AC-43103 | Assam | 75 | PM-83 | *O.rufipogon* | |
| 34 | AC-43106 | Assam | 76 | PM-91 | *O.rufipogon* | |
| 35 | AC-9024 | Manipur | 77 | PM-106 | *O.rufipogon* | |
| 36 | AC-9025 | Manipur | 78 | PM-111 | *O.rufipogon* | |
| 37 | AC-9035 | Manipur | 79 | PM-124 | *O.rufipogon* | |
| 38 | AC-9053 | Manipur | 80 | ZA/BCP-10 | *O.rufipogon* | |
| 39 | AC-9056 | Manipur | 81 | PM-28 | *O.nivara* | |
| 40 | AC-9059 | Manipur | 82 | PM-29 | *O.nivara* | |
| 41 | AC-9069 | Manipur | 83 | PM-67 | *Weedy rice* | |
| 42 | AC-9076 | Manipur | 84 | PM-68 | *O.nivara* | |
| 85 | PM-69 | *O.nivara* |
| 86 | PM-71 | *O.nivara* |
| 87 | PM-72 | *O.nivara* |

**Supplementary Table.2** Primer sequence used in this study

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Marker** | **Forward Sequence** | **Reverse sequence** |
| 1 | Orf29 | GCAGCCCAAGCGAGACT | AAGGCTCGGCGATACTG |
| 2 | Orf100 | GTGGACCTGACTCCTTGAA | AGCCGAGGTCGTGGTAA |
| 3 | Rcl04 | GTTAAAAGTGGCACCAAT C | GATTTATGTCGTGCCAATC |
| 4 | cRM5 | GCATTCCTACGCAAACCAAT | GGCGTGGACGAATTAGAGTC |
| 5 | cRM7 | CCCAGGATGATGGTGTCATT | ATATATGGTAATCGCCCCGC |
| 6 | cRM9 | GACATGTGGATGCGTTTTTG | AAATTGGGGGAATTCGTACC |

**Supplementary Table.3** List of North East accessions in the major cluster I (Nipponbare cluster) and Cluster II (IR64)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cluster Ia | | AS13,AS31;MN27  MN28;AR2, AR3,AR5  AS10,AS28,AS29 | | Cluster Id | | AS21,MN1  MN8 | |
| Cluster Ib | | MN2,MN9,MN10  MN15,MN23  AS12,AS32, AS17,AS18 | | Cluster Ie | | AS2,AS3 AS9,  AS23,AS25  MN16,MN21,MN24  MN30, AR1,AR4 | |
| Cluster Ic | | AS1,AS24  AS26,AS27(**Nipponbare**)  MN13, MN17 | |  | |  | |
| Cluster IIa | AS7,AS11,AS15,AS30  MN4,MN6,MN14,MN18,  MN19,(**IR64**),  MN20 | | ClusterIIe | | AS5,AS14,AS16  MN12 | |
| ClusterIIb | AS6,AS20,MN29 | | ClusterIIf | | AS8,AS19, ,AS22  AS33,  MN3,MN5, MN7MN11,MN26 | |
| ClusterIIc | AS4,MN22,MN25 | |  | |  | |

**Supplementary Table. 4** Wild rice grouping in different clusters

|  |  |  |  |
| --- | --- | --- | --- |
| ClusterIa | WD3, WD5, WD6,WD7  Niv5 | ClusterIIb | Ruf1,Ruf2,Ruf3,Ruf4  WD2,IR64,Nipponbare |
| ClusterIIa | Ruf5, Ruf10  Niv1, Niv2, Niv4,Niv6  Niv7,Niv8,Niv9 | ClusterIIc | Ruf6, Ruf7,Ruf8,Ruf9  Niv3,WD4,WD8 |

**Supplementary Table 5.** List of wild and weedy rice in the major cluster I (Nipponbare cluster) and cluster II (IR64 Cluster)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ClusterIa | | AS1,AS10,AS13,AS24  AS26,AS27,AS28  AS29,AS31;MN17,MN27  MN28;AR2,AR3,AR5  Nipponbare | ClusterIc | | | AS3,AS12,AS32  MN2,MN9,MN10  MN15,MN21,MN23  MN24  Niv5,WD3,WD5  WD6,WD7 | |  |
| ClusterIb | | AS2,AS9,AS23,AS25  MN16,MN30  AR1,AR4 | ClusterId | | | AS17,AS18.AS21  MN1,MN8 | |
| ClusterIIa | MN22,MN25 | | | ClusterIId | AS7,AS11,AS15,AS30  MN4,MN6  MN14.MN18,MN19  **IR64** | |
| ClusterIIb | AS5,AS6,AS14,AS16,AS20  MN12,MN29  Ruf5,Ruf10,Niv1,Niv2,Niv4,  Niv6,Niv7,Niv8,WD1, | | | ClusterIIe | AS4,AS8,AS19,AS22  AS33,  MN3,MN5,MN7,  MN11,MN13,MN26  Ruf3,Ruf4,Nin9,WD2 | |
| ClusterIIc | MN20  Ruf6,Ruf7,Ruf8,  Ruf9, Niv3,WD4,WD8 | | |  |  | |