

Table 1 Materials used in present study

| Series number | Variety name | Origin | Subspecies ^a | Series number | Variety name | Origin | Subspecies ^a |
|---------------|----------------|--------|-------------------------|---------------|------------------------|-------------|-------------------------|
| 1 | Minghui86 | China | i | 29 | Pusa | India | i |
| 2 | Shuhui527 | China | i | 30 | Basmati | India | i |
| 3 | 9311 | China | i | 31 | IRAT352 | Indonesia | i/j |
| 4 | Minghui63 | China | i | 32 | Khazar | Iran | i |
| 5 | Fuhui838 | China | i | 33 | Domsiah | Iran | i/j |
| 6 | Gui99 | China | i | 34 | IR64 | IRRI | i |
| 7 | Fengaizhan | China | i | 35 | Teqing | China | i |
| 8 | Zhong413 | China | i | 36 | IR24 | IRRI | i |
| 9 | Zihui100 | China | i | 37 | IR65600-27-1-2-2 | IRRI | i |
| 10 | Aizidao | China | i | 38 | FUJISAKA5 | Japan | i |
| 11 | Diantun502 | China | i | 39 | MR167 | Malaysia | i |
| 12 | Jiangxisimiao | China | i | 40 | Pokhrel | Nepal | i/j |
| 13 | Mengguandamagu | China | i | 41 | PSB RC 66 | Philippines | i |
| 14 | Yunhui72 | China | i | 42 | Milagrosa, Zawa Banday | Philippines | i/j |
| 15 | Yetuosui | China | i | 43 | IR6 | IRRI | i |
| 16 | ZDZ057 | China | i | 44 | BJ1 | Philippines | i/j |
| 17 | Luhui17 | China | i | 45 | Bg90-2 | Sri Lanka | i |
| 18 | Hanhui10 | China | i | 46 | Lemont | USA | i |
| 19 | Han3 | China | i | 47 | 2818 | China | i |
| 20 | Han4 | China | i | 48 | 3008 | China | i |
| 21 | Han5 | China | i | 49 | 9014 | China | i |
| 22 | Han297 | China | i | 50 | 2004 | China | i |
| 23 | Han277 | China | i | 51 | 829 | China | i |
| 24 | Dianjing | China | i | 52 | 3750 | China | i |
| 25 | Wangyangzhan | China | i | 53 | Duonieai | China | i |
| 26 | Hangxiang10 | China | i | 54 | XL1018/XL998-1 Xuanxi | China | i |
| 27 | Dali | China | i | 55 | P88 | Philippines | i |
| 28 | TKM9 | India | i | | | | |

Note: a: i denoted indica, j denoted japonica, i/j denoted the medium type of indica and japonica