

**Table S8. Inter-varietal SNPs in non-coding regions among the three cultivars.**

| Site   | SNP   | Khalas/Fahal/Sukry        |              |              |
|--------|-------|---------------------------|--------------|--------------|
| 130104 | G/A/A | 64.59%(4436) <sup>a</sup> | 51.99%(1637) | 52.42%(3018) |
| 130123 | T/G/G | 58.09%(4784)              | 58.14%(1646) | 55.51%(3311) |
| 130138 | A/G/G | 56.83%(5091)              | 59.74%(1560) | 55.41%(2994) |
| 130185 | T/C/C | 52.69%(5456)              | 64.48%(2024) | 66.26%(3610) |
| 130194 | A/C/C | 53.45%(5297)              | 59.69%(1868) | 62.29%(3386) |
| 130290 | A/A/G | 51.40%(4706)              | 53.45%(1420) | 64.79%(2491) |
| 130471 | T/C/C | 50.02%(2205)              | 62.51%(891)  | 50.71%(1053) |
| 130610 | G/T/G | 62.84%(2764)              | 54.71%(1773) | 56.69%(1494) |
| 130836 | G/G/T | 56.34%(4347)              | 56.21%(1772) | 53.24%(2866) |
| 130839 | G/G/A | 55.42%(4219)              | 54.47%(1722) | 53.71%(2793) |
| 131268 | T/C/C | 50.52%(4016)              | 56.67%(1454) | 53.54%(1963) |
| 131283 | G/A/A | 53.22%(4083)              | 61.54%(1820) | 66.30%(2561) |
| 179700 | C/C/A | 66.84%(2343)              | 65.85%(1025) | 59.17%(2716) |
| 179965 | A/C/C | 60.66%(2260)              | 54.30%(1070) | 70.96%(2400) |
| 179967 | T/T/C | 65.57%(2045)              | 51.80%(998)  | 63.56%(2212) |
| 180069 | C/C/N | 51.11%(2473)              | 53.79%(673)  | 56.40%(1711) |
| 180141 | C/T/C | 66.80%(3274)              | 52.54%(1420) | 68.02%(3136) |
| 180223 | C/C/G | 60.32%(2180)              | 77.63%(1180) | 51.49%(2476) |
| 180455 | T/C/T | 80.68%(2427)              | 53.66%(1297) | 61.51%(1577) |
| 180462 | A/G/G | 61.01%(2888)              | 59.66%(1336) | 58.83%(1926) |
| 302636 | C/C/A | 64.23%(2217)              | 52.48%(909)  | 56.29%(993)  |
| 302786 | A/A/C | 54.45%(7012)              | 59.33%(2186) | 50.72%(4073) |
| 302989 | G/T/T | 52.04%(3180)              | 60.57%(1395) | 65.47%(1390) |
| 303071 | T/A/A | 55.42%(4924)              | 65.93%(2090) | 71.40%(2566) |
| 303118 | C/A/A | 64.05%(3302)              | 64.68%(1308) | 55.86%(1033) |
| 303390 | T/T/G | 54.65%(3045)              | 57.59%(962)  | 59.05%(2127) |
| 303545 | C/A/C | 100%(3755)                | 50.74%(1417) | 100%(1583)   |
| 303744 | G/T/T | 69.76%(2844)              | 53.09%(1309) | 55.04%(1468) |
| 304135 | A/C/C | 66.40%(3152)              | 50.77%(1298) | 51.29%(969)  |
| 328988 | G/T/G | 72.10%(2907)              | 51.38%(975)  | 55.01%(1847) |
| 328999 | G/T/T | 53.48%(3654)              | 55.37%(1452) | 54.10%(2547) |
| 329219 | A/G/G | 51.61%(4811)              | 51.57%(1842) | 71.46%(4100) |
| 329649 | T/G/G | 53.03%(3485)              | 66.86%(1919) | 58.05%(2596) |
| 346007 | C/T/T | 55.33%(3656)              | 64.97%(1556) | 64.98%(2096) |
| 346020 | G/T/T | 58.79%(3116)              | 53.34%(1318) | 53.60%(1554) |
| 347238 | T/T/A | 83.46%(1953)              | 59.56%(586)  | 51.47%(851)  |
| 347241 | A/A/C | 79.13%(2592)              | 57.64%(713)  | 51.68%(1486) |
| 347672 | T/T/N | 80.83%(8626)              | 77.52%(4218) | 79.93%(6288) |
| 348528 | T/T/N | 70.99%(4967)              | 69.83%(1959) | 77.55%(2040) |
| 349869 | T/G/G | 63.15%(2646)              | 71.47%(1276) | 70.17%(1361) |
| 350109 | T/T/G | 58.86%(2569)              | 52.35%(1062) | 57.41%(1578) |
| 350115 | A/A/C | 67.17%(2824)              | 58.88%(1036) | 52.25%(1378) |
| 350160 | A/A/T | 72.23%(2204)              | 50.84%(1481) | 55.66%(1396) |
| 431867 | C/A/A | 56.91%(5475)              | 65.40%(2049) | 72.67%(3875) |
| 431873 | C/A/A | 58.69%(5461)              | 66.50%(1824) | 71.80%(3834) |
| 431896 | T/C/C | 52.02%(4815)              | 64.84%(1584) | 68.52%(3094) |
| 433326 | T/T/G | 50.97%(2770)              | 60.39%(775)  | 51.09%(685)  |
| 433701 | G/T/T | 58.45%(2676)              | 64.24%(1138) | 53.67%(1105) |
| 433707 | C/A/C | 65.42%(2429)              | 59.14%(1028) | 55.79%(846)  |
| 454198 | G/T/T | 65.05%(3099)              | 54.50%(1490) | 52.93%(820)  |
| 454206 | T/C/C | 55.01%(3932)              | 54.63%(1726) | 60.85%(1009) |
| 454334 | A/C/C | 57.06%(1395)              | 58.66%(1195) | 77.44%(1064) |
| 455564 | C/T/T | 61.76%(3787)              | 56.74%(1165) | 64.72%(1743) |
| 455855 | A/T/A | 61.63%(503)               | 54.77%(283)  | 75.29%(170)  |
| 456181 | G/T/T | 65.06%(2038)              | 57.25%(896)  | 67.18%(1109) |
| 456197 | C/T/T | 50.31%(3182)              | 59.78%(1161) | 76.80%(1517) |
| 456430 | G/T/T | 55.12%(1593)              | 61.36%(295)  | 59.37%(507)  |
| 456436 | C/A/A | 52.67%(1817)              | 62.86%(447)  | 69.47%(750)  |
| 456615 | G/C/C | 50.31%(5136)              | 61.99%(2628) | 54.39%(2721) |

|        |       |              |              |              |
|--------|-------|--------------|--------------|--------------|
| 456814 | A/A/T | 61.77%(1444) | 58.95%(760)  | 52.50%(821)  |
| 461888 | C/A/A | 69.60%(3832) | 51.25%(839)  | 57.84%(1632) |
| 461894 | C/C/A | 73.12%(4133) | 51.63%(827)  | 50.65%(1777) |
| 461901 | C/A/A | 56.73%(5794) | 65.33%(1298) | 72.92%(3567) |
| 461926 | G/T/T | 63.81%(5717) | 64.46%(1435) | 69.12%(3138) |
| 461934 | T/C/C | 76.99%(4833) | 56.99%(1151) | 52.52%(2020) |
| 462658 | G/G/T | 56.66%(5549) | 53.45%(1667) | 56.01%(2730) |
| 462970 | T/C/C | 58.15%(6017) | 50.23%(1955) | 56.01%(3403) |
| 462975 | C/C/A | 57.86%(5600) | 50.46%(1956) | 52.92%(3324) |
| 462982 | A/C/C | 52.05%(6455) | 55.80%(2319) | 63.05%(4390) |
| 463720 | C/A/A | 52.52%(2102) | 76.86%(1033) | 77.83%(821)  |
| 463745 | A/G/G | 60.19%(2615) | 64.24%(727)  | 58.78%(1407) |
| 463754 | C/A/A | 69.13%(1788) | 64.37%(581)  | 54.72%(1155) |
| 475901 | T/G/T | 100%(120)    | 59.49%(79)   | 77.32%(97)   |
| 476015 | A/G/A | 51.42%(3553) | 54.33%(1202) | 64.32%(2060) |
| 476082 | T/A/A | 53.66%(5117) | 65.67%(2986) | 64.92%(4769) |
| 477191 | T/G/G | 53.71%(3070) | 54.24%(1475) | 65.11%(1201) |
| 478667 | T/A/N | 59.10%(2687) | 50.99%(755)  | 59.51%(773)  |
| 478963 | C/A/A | 51.44%(5688) | 76.14%(1626) | 74.19%(2949) |
| 478975 | C/A/A | 58.57%(4067) | 61.51%(1156) | 61.36%(1602) |
| 478997 | G/A/A | 61.25%(3533) | 52.64%(1233) | 53.00%(1232) |
| 479756 | A/C/A | 75.70%(930)  | 61.92%(323)  | 58.42%(380)  |
| 479759 | G/T/G | 100%(1107)   | 58.57%(321)  | 63.86%(368)  |
| 479924 | A/A/T | 100%(602)    | 67.23%(235)  | 53.82%(249)  |
| 481139 | C/A/C | 51.60%(4273) | 52.19%(1481) | 62.17%(1681) |
| 481556 | C/T/T | 52.12%(3509) | 54.48%(1173) | 70.61%(1354) |
| 481607 | G/T/T | 50.97%(1085) | 52.77%(902)  | 50.20%(255)  |
| 500621 | G/A/G | 58.28%(5050) | 54.31%(1392) | 62.23%(3741) |
| 500665 | T/A/T | 58.46%(3134) | 54.72%(1462) | 62.60%(3120) |
| 500669 | T/A/T | 55.41%(3151) | 56.91%(1497) | 58.11%(2996) |
| 523821 | G/T/G | 76.60%(4696) | 60.90%(2087) | 66.96%(2128) |
| 523842 | G/C/G | 77.61%(4497) | 50.45%(1338) | 51.45%(2037) |
| 523846 | T/C/C | 71.46%(4713) | 53.37%(1482) | 53.45%(2348) |
| 524061 | T/T/A | 58.53%(5773) | 50.16%(2464) | 67.98%(4750) |
| 524064 | T/T/G | 58.06%(5174) | 51.25%(2394) | 67.47%(4460) |
| 524198 | A/G/G | 71.53%(3463) | 53.97%(1877) | 58.96%(2773) |
| 524201 | A/G/G | 74.68%(3167) | 50.28%(1635) | 55.88%(2532) |
| 524217 | T/T/C | 71.58%(3631) | 50.76%(1966) | 50.68%(2887) |
| 524317 | A/T/T | 71.48%(4285) | 57.32%(2069) | 52.85%(2545) |
| 524544 | A/A/C | 100%(2540)   | 60.27%(1329) | 55.03%(1074) |
| 524556 | C/C/A | 68.95%(3388) | 56.66%(1735) | 66.42%(1772) |
| 529680 | C/A/C | 59.87%(2696) | 61.77%(1823) | 61.31%(1331) |
| 535955 | A/G/G | 50.32%(4545) | 58.71%(1073) | 72.06%(2785) |
| 550142 | G/G/T | 58.75%(2727) | 51.78%(1010) | 61.47%(1591) |
| 631799 | C/T/T | 57.02%(4579) | 51.09%(1658) | 68.23%(2820) |
| 631904 | G/A/G | 58.34%(2746) | 56.85%(1372) | 60.24%(1333) |
| 633350 | T/T/C | 61.40%(2635) | 61.05%(783)  | 60.76%(1073) |
| 633771 | C/C/T | 60.52%(3260) | 54.79%(1482) | 56.29%(2018) |
| 664930 | G/A/A | 58.41%(3825) | 70.04%(1759) | 68.85%(2931) |
| 665242 | A/T/T | 58.83%(2475) | 52.96%(1029) | 66.42%(1358) |
| 665617 | A/A/C | 56.94%(3407) | 61.76%(1224) | 62.10%(1409) |
| 666534 | C/T/T | 50.70%(3730) | 68.70%(1457) | 67.28%(3044) |
| 666550 | G/T/G | 75.47%(3473) | 52.41%(1120) | 50.49%(2238) |
| 714937 | A/A/G | 57.59%(3777) | 64.35%(1882) | 72.09%(1677) |

<sup>a</sup>Major genotype in percentage and number in parenthesis indicates read coverage of that base site.