

## Supplementary Table S7

Table S7 QTLs that overlapped with cloned panicle-related genes

| The QTLs identified in this study |     |               |           | Genes related to ear development that previous studies have cloned |     |                 |                 |                                     |  |
|-----------------------------------|-----|---------------|-----------|--|-----|-----------------|-----------------|-------------------------------------|--|
| Loc                               | Chr | Start         | End       | Gene-ID  | Chr | start           | end             | Function                            | reference  |
| Sub-pop3_19DH                     | 1   | 13961614<br>9 | 252952675 | GRMZM2G011357  | 1   | 239,608,<br>944 | 239,612,26<br>7 | TF                                  | Colasanti et al.                                   |
|                                   |     |               |           | GRMZM2G081554  | 1   | 241,218,<br>603 | 241,226,85<br>4 | Kaurene synth.<br>(GA synthesis)    | Bensen et al.,<br>1995                             |
|                                   |     |               |           | Zm00001d032961   | 1   | 244,858,<br>795 | 244,867,41<br>7 | ent-copy<br>diphosphate<br>synthase | Dellaporta et al<br>1994<br>Bensen et al.<br>1995  |
|                                   |     |               |           |  |     |                 |                 |                                     | McSteen et al.<br>2001                             |
|                                   |     |               |           | Zm00001d031068   | 1   | 175,807,<br>851 | 175,809,43<br>2 | serine-threonine<br>protein kinase  | McSteen et al.<br>2007<br>Skirpan et al.<br>2008   |
|                                   |     |               |           | Zm00001d032922   | 1   | 243,201,<br>405 | 243,204,86<br>5 | indeterminate<br>domain protein     | Skirpan et al.<br>2009<br>Colasanti et al.<br>1998 |

|               |   |            |             |                |   |             |             |                              |                               |
|---------------|---|------------|-------------|----------------|---|-------------|-------------|------------------------------|-------------------------------|
|               |   |            |             | Zm00001d031459 | 1 | 190,964,811 | 190,978,369 | RNA polymerase IV            | Erhard et al. 2009            |
|               |   |            |             | Zm00001d031451 | 1 | 190,382,866 | 190,386,589 | SBP-box transcription factor | Chuck et al. 2014             |
| <hr/>         |   |            |             |                |   |             |             |                              |                               |
|               |   |            |             | GRMZM2G104925  | 4 | 133,662,510 | 133,664,998 | LRR receptor-like protein    | Taguchi-Shiobara et al., 2001 |
| Sub-pop3_21JH | 4 | 75,627,569 | 151,339,536 |                |   |             |             |                              | Taguchi-Shiobara et al 2001   |
|               |   |            |             | Zm00001d051012 | 4 | 136,765,871 | 136,767,712 | LRR protein kinase           | Bommert et al. 2013b          |
| <hr/>         |   |            |             |                |   |             |             |                              |                               |
|               |   |            |             | GRMZM2G104925  | 4 | 133,662,510 | 133,664,998 | LRR receptor-like protein    | Taguchi-Shiobara et al., 2001 |
| Sub-pop4_22YS | 4 | 46,403,895 | 172,368,609 |                |   |             |             |                              | Taguchi-Shiobara et al 2001   |
|               |   |            |             | Zm00001d051012 | 4 | 136,765,871 | 136,767,712 | LRR protein kinase           | Bommert et al 2013b           |
| Sub-pop4_21YS | 5 | 76615734   | 181154647   | Zm00001d016075 | 5 | 142,503,737 | 142,509,129 | Negatively regulating KRN    | An YX et al 2022              |